Western New England University

Academic Catalog 2023-24

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A Message from the President

This is your time—a time to explore, to discover, and to imagine the unlimited possibilities that lie before you when you choose to earn your degree at Western New England University. This catalog provides a roadmap for that journey.

We prepare students to adapt and succeed in a dynamic future by honoring the best in traditional education while being responsive to and invigorated by the challenges of the future.

All of that is possible because of our varied academic offerings. With Colleges of Arts and Sciences, Business, Engineering, Pharmacy and Health Sciences, and a School of Law, you can customize your WNE academic experience. Majors, minors, concentrations, and cross-disciplinary learning enable you to pursue your passions and your greatest ambitions and help you realize your unique value proposition. Every step along the way, we will be here for you with community-wide support from your professors, University staff, and your peers.

With a professionally-focused education, enhanced by the liberal arts and humanities, you will hone the skill sets and mindsets prized by today's employers—divergent thinking, social and emotional intelligence, empathy, and a sense of humanity. You will develop an entrepreneurial outlook as an innovator and problem-solver while creating value in all you do, no matter your major. You will apply what you learn through hands-on experiential learning—internships, field work, research, travel, and in service to others.

Above all, you will graduate work-ready and world-ready. WNE is ranked among National Universities by *U.S. News & World Report* in its "Best National Universities 2022" and among the Top Undergraduate Engineering programs. We have also been ranked 4th in Top Performers on Social Mobility among National Universities in Massachusetts, and among the 2022 Best Online Programs.

Your education here will not only equip you for your first job, but also prepare you to navigate a career path spanning jobs both known and those that do not yet exist, all while continuously creating value.

At WNE, we are ready for the future. Let us take you there.

Robert E. Johnson, PhD

About the University

Western New England University (WNE) is a private, nationally-ranked, comprehensive institution with a focus on preparing work-ready and world-ready graduates. Founded in 1919 in Springfield, Massachusetts as a division Northeastern College, WNE's 215-acre suburban campus serves more than 4,000 students each year, including over 2,500 full-time undergraduates. More than 47,000 alumni have earned degrees through its 100+ undergraduate, graduate, and professional programs at Colleges of Arts and Sciences, Business, Engineering, and Pharmacy and Health Sciences, and School of Law. Students come from 42 U.S. states and territories and 22 countries. Of over 45,000 living alumni, about 30% remain within the region, residing in the four western Massachusetts counties and northern Connecticut.

WNE is classified among nationally-ranked universities in *U.S. News & World Report,* and among its Top Undergraduate Engineering programs, and in the Doctoral/Professional Universities category in the Carnegie Classification of Institutions of Higher Education.

Programs, Colleges, Faculty and Students

Western New England University offers a wide range of undergraduate degree programs as well as graduate and doctoral programs in Arts and Sciences, Business, Engineering, Law, Occupational Therapy, and Pharmacy. There are 213 full-time faculty members in the University's four Colleges and School of Law.

The University serves 4,018 students: 2,578 full-time undergraduates; 175 part-time undergraduates; 539 graduate students; and 413 doctoral-level professional practice students in law, 208 in pharmacy, and 105 in occupational therapy.

Our Mission

The hallmark of the Western New England experience is an unwavering focus on and attention to each student's academic and personal development, including learning outside the classroom. Faculty, dedicated to excellence in teaching and research, and often nationally recognized in their fields, teach in an environment of warmth and personal concern where small classes predominate. Administrative and support staff work collaboratively with faculty in attending to student development so that each student's academic and personal potential can be realized and appreciated. Western New England develops leaders and problem-solvers from among our students, whether in academics, intercollegiate athletics, extracurricular and cocurricular programs, collaborative research projects with faculty, or in partnership with the local community.

At Western New England, excellence in student learning goes hand in hand with the development of personal values such as integrity, accountability, and citizenship. Students acquire the tools to support lifelong learning and the skills to succeed in the global workforce. Equally important, all members of our community are committed to guiding students in their development to become informed and responsible leaders in their local and global communities by promoting a campus culture of respect, civility, tolerance, environmental awareness, and social responsibility. We are positioned well to accomplish these goals as a truly comprehensive institution whose faculty and staff have historically collaborated in offering an integrated program of liberal and professional learning in the diverse fields of arts and sciences, business, engineering, law, pharmacy, and occupational therapy.

Our Core Values

- Excellence in Teaching, Research, and Scholarship
- Student-centered Learning
- A Sense of Community
- Cultivation of a Pluralistic Society
- Innovative Integrated Liberal and Professional Education
- Commitment to Academic, Professional, and Community Service
- Stewardship of our Campus

About the University

A Brief History

A Brief History

The Springfield Division of Northeastern College, known as Springfield-Northeastern, was established in 1919. Evening classes, held in the YMCA building on Chestnut Street in Springfield for students studying part-time, were offered in law, business, and accounting. The first 13 graduates were recognized in 1922 with the degree of Bachelor of Commercial Science. In 1923, the first seven law graduates were recognized.

On July 17, 1951, the Springfield Division of Northeastern University was chartered and became Western New England College.

On April 26, 1956, 34 acres for the current Wilbraham Road campus were purchased. The first building, originally known as East Building, and later renamed Emerson Hall in recognition of the University's first trustee chairman, Robert R. Emerson, opened in 1959.

Western New England received institutional accreditation in 1965 and has been continuously accredited since then.

The University flourished on its new campus. The decades of the sixties, seventies, eighties, and nineties saw Western New England's academic programs expanding, its student body growing, and the addition of a number of buildings including the D'Amour Library, the Blake Law Center, the St. Germain Campus Center, the Alumni Healthful Living Center, and the LaRiviere Living and Learning Center. In 2001, the Evergreen Village townhouses opened for seniors. In 2002, the Kevin S. Delbridge Welcome Center opened, housing the admissions offices. Commonwealth Hall was added in 2003, along with the Golden Bear Stadium. The George Trelease Memorial Baseball Park was completed in 2004. A $1.9 million addition to the D'Amour Library was completed in 2005 and a $5.5 million addition and renovation of the Blake Law Center in 2008.

In 2008, Western New England launched its first PhD program in Behavior Analysis. The following year, the institution opened Southwood Hall, a new eco-friendly residence hall for upperclassmen. The $40 million Center for the Sciences and Pharmacy opened in 2011.

On July 1, 2011, the institution officially became a university. The Schools of Arts and Sciences, Business, and Engineering became known as "Colleges," while the School of Law retained its name.

In 2011, the Western New England University College of Pharmacy welcomed its first class to the PharmD program. The College of Engineering added the University's second doctoral program: the PhD in Engineering Management in 2012.

The period of 2012-2014 saw a major renovation to Arts and Sciences' Herman Hall, and modernization and expansion to Engineering's Sleith Hall designed to elevate our classroom and laboratory environments.

In 2017, the College of Pharmacy was restructured to become the College of Pharmacy and Health Sciences, as it welcomed the first cohort to the Doctor of Occupational Therapy Program.

In 2018, the University completed the largest construction project in its history: the University Commons.

In 2019, Western New England University celebrated its Centennial. Currently, WNE is entering its second century with a vision to create a "New Traditional University."

In 2021, Western New England University was ranked among national universities by *U.S. News & World Report* in its Best National Universities 2021 and among the Top 100 Undergraduate Engineering programs. Also in 2021, the University officially dedicated the Anthony S. Caprio Alumni Healthful Living Center in honor of our fifth president, Anthony S. Caprio, following his retirement from the University.

About the University

Educational Opportunities

Educational Opportunities

The University provides students with an impressive range of educational options. Each program is unique in its integration of liberal arts and professional education, theory, and practice. Our programs prepare students for successful careers in business, industry, and for continued study in graduate school. Students receive hands-on, experiential learning through internships, research work with faculty, and interactions with community organizations. Technology is integrated in all programs. International perspectives prepare our students for work in today's global economy.

The faculty and staff are dedicated to personal interaction with students and to fostering an open environment conducive to personal growth. Western New England University provides academic and other support services for students needing assistance in their studies and for those with accessibility challenges.

The University is located in an urban community with rich educational and cultural resources, and it participates in the Cooperating Colleges of Greater Springfield (CCGS) and Acadeum, consortia of colleges and universities in which educational opportunities are enhanced through the sharing of resources and course cross-registration.

About the University

Campus & Facilities

Campus and Facilities

The campus is located in a residential section of Springfield at 1215 Wilbraham Road, about four miles east of downtown Springfield.

The campus includes 28 major buildings and numerous athletic and recreational fields.

The University Commons features a Starbucks® Café, Spirit's Sandwiches and Subs, a food court and convenience store, Faculty/Staff Bear's Den, meeting rooms, and two levels of student food stations.

The St. Germain Campus Center is home to the Blue & Gold Bookstore and the offices of Academic Success, International Students, Dean of Students, Spiritual Life, Inclusive Excellence, Student Involvement and Leadership, and the Career Center.

The University maintains 10 residence halls and apartment complexes that accommodate students in varied housing styles.

Facilities for intramural and intercollegiate athletics are available on the campus. Included are tennis courts, softball and baseball diamonds, and soccer fields. The University's multipurpose turf stadium serves varsity sports including football, field hockey, and lacrosse. The George E. Trelease Memorial Baseball Park provides an outstanding facility for the Golden Bears. A variety of athletic, recreational, and health-related activities are conducted in the Caprio Alumni Healthful Living Center, which serves the entire University community. The Golden Bear Pavilion, opened in 2015, includes training and equipment rooms, a concession stand, and a public restroom.

D'Amour Library

The D'Amour Library, which opened in 1983 and was expanded in 2005, offers users an inviting atmosphere for research and group and individual study. There is abundant study space in the library. In addition to individual and group tables and soft seating, there are several individual study rooms as well as several group rooms for collaborative projects. Sixty public computers located throughout the library's three floors provide access to the internet and to a variety of software applications. Three computer classrooms, including the Business Analytics Center constructed in the summer of 2016 provide access to computing resources when not in use for teaching. The 38-seat computer classroom on the ground level of D'Amour serves as a 24/7 computer lab for all current students who use their student IDs to access the building whenever the library is closed. The campus wireless network is accessible throughout the library.

The library offers the undergraduate and graduate students a curriculum-based collection of over 115,000 book, journal, and media titles and provides online access to over 739,600 digital books, streaming media, and e-journal titles; all resources are findable using the library's online discovery system Find It! @ D'Amour. In addition to the resource-rich discovery platform, D'Amour Library subscribes to 96 electronic databases, including 25 health sciences-related ones, that provide access to general and discipline-specific content, with the full text of many of the resources available online. Articles from the databases and from other online resources may be printed in the library at one of the seven available network printers. Off-campus access to the online databases is available to current students, faculty, and staff of Western New England University 24 hours a day.

D'Amour's professional staff offers a full range of information services. Information literacy classes are offered by instruction librarians at the request of faculty to support research and writing assignments in their disciplines as well as to fulfill the general University information literacy requirement. In addition to formal instruction, librarians provide reference assistance 66 hours per week, including weeknights and weekends, during the academic year. Longer, individual reference appointments may be scheduled for more in-depth research.

The library is open seven days a week during the academic year. Holidays, summer hours, and exception days are posted in the library and on the library's website.

The Law Library

Renovated and expanded in 2008, the three-story School of Law Library offers an extensive collection of print and electronic resources, as well as a highly trained and dedicated staff to assist students and faculty members in their research. The Library's collection of approximately 364,000 volumes includes current research and reference resources; reprints of important historical texts; electronic databases including LexisNexis, Westlaw, and Bloomberg Law; microforms; and selected audio and video materials. The Library is also a selective depository for federal government publications.

The Library is open more than 90 hours per week. As the only academic law library in western Massachusetts, this rich resource is valued by students, professors, and area legal professionals.

About the University

Accreditations

Accreditations

The New England Commission of Higher Education (NECHE) regionally accredits Western New England University and all of its programs. In addition, our professional programs are accredited by the following organizations:

Accreditation Board for Engineering and Technology (ABET)
Accreditation Council for Occupational Therapy Education (ACOTE)
Accreditation Council for Pharmacy Education (ACPE)
American Bar Association (ABA)
Association to Advance Collegiate Schools of Business (AACSB)
Massachusetts Department of Education (Mass DOE)

In Arts and Sciences:

Programs in Education are approved by the Massachusetts Department of Elementary and Secondary Education, doe.mass.edu, and meet the standards of reciprocity of the Interstate Certification Compact.

In Business:

The College of Business is accredited by the Association to Advance Collegiate Schools of Business (AACSB), aacsb.edu.

Western New England University is the only private AACSB International-accredited university in western Massachusetts. With accreditation, Western New England University is among an elite company of accredited business schools, which comprise 5% of business programs worldwide.

In Engineering:

The Bachelor of Science in Engineering degrees with majors in Biomedical, Civil, Computer, Electrical, Industrial and Mechanical Engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), abet.org.

In Law:

The School of Law is accredited by the American Bar Association (ABA), americanbar.org, and is a member of the Association of American Law Schools (AALS), aals.org.

In Pharmacy:

The Western New England University Doctor of Pharmacy program is accredited by the Accreditation Council for Pharmacy Education (ACPE), acpe-accredit.org.

In Occupational Therapy:

The entry-level Doctor of Occupational Therapy Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), acoteonline.org.

Memberships

Western New England University is a member of the Association of American Colleges and Universities, the College Entrance Examination Board, the Association of Governing Boards of Universities and Colleges, the Council of Independent Colleges, the National Association of Independent Colleges and Universities, and the Association of Independent Colleges and Universities of Massachusetts.

About the University

Technology Services

Technology Services

The Office of Information Technology (OIT) provides a full range of technology and technology-related services to the University.

The University boasts the latest state-of-the-art technology, including fully digital classrooms, laboratories, and equipment. Over 500 public computers are available for use throughout campus. In addition, a wireless network is available in all residence halls and campus buildings, as well as most outdoor areas on campus.

There are numerous learning technologies available for faculty and students to enhance instructional capabilities including a learning management system, lecture capture solutions, distance learning capabilities, and numerous University software licenses supporting our various disciplines.

For a printable document describing technology services please view the University's OIT Handbook.

A complete list of all Information Technology resources, policies, and services is available at https://www1.wne.edu/information-technology/index.cfm.

About the University

Administrative Officers, Trustees, Faculty, & Emeriti

Administrative Officers

ROBERT E. JOHNSON, President

A. MARIA TOYODA, Senior Vice President for Academic Affairs and Provost

VEATRICE CARABINE, Interim Vice President for Advancement

KRISTINE GOODWIN, Vice President for Student Affairs

MERCEDES MASKALIK, Vice President for Marketing and External Affairs

GREGORY MATTHEWS, Vice President for Enrollment Management

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Professor Emeritus of Social Work (2005)
JOHN M. CLAFFEY
A.S., B.S., J.D.
Professor Emeritus of Criminal Justice (2023)
AMY B. COHEN
B.A., J.D.
Professor Emerita of Law (2014)
WALTER P. COOMBS JR.
B.A., M.A., Ph.D.
Professor Emeritus of Biology (2009)
STEPHEN C. CRIST
B.S., M.S., Ph.D.
Professor Emeritus of Electrical Engineering (2011)
KATHLEEN M. DILLON
B.S., M.A., Ph.D.
Professor Emerita of Psychology (2008)
SAID DINI
B.S., M.S., Ph.D.
Professor Emeritus of Mechanical Engineering (2022)
ARTHUR W. DOWNES
B.S., M.B.A.
Professor Emeritus of Physical Education (2000)

JOHN W. DRAWEC
A.S., B.S., J.D.
Associate Professor Emeritus of Physical and Biological Sciences (2019)
LISA DRNEC-KERR
B.A., M.A., M.LS., Ph.D. Professor Emerita of English (2021)
RENE L. DUBE
B.S.E.E., M.S.E.E., Ph.D.
Professor Emeritus of Electrical Engineering (1994)
GLEN A. EBISCH
A.B., M.A., M.A., Ph.D.
Professor Emeritus of Philosophy (2012)
RUSSELL FANELLI
B.S., M.A., Ph.D.
Professor Emeritus of Management (2005)
WILLIAM P. FERRIS
A.B., M.A., Ph.D.
Professor Emeritus of Management (2016)
LARRY F. FIELD
B.A., M.A., Ph.D., J.D.
Professor Emeritus of Sociology and Criminal Justice (2010)
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B.A., M.A., Ph.D.
Associate Professor Emeritus of English (2002)
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B.A., Ph.D.
Professor Emeritus of Chemistry (2001)
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B.A., M.A., Ph.D.
Professor Emerita of Arts and Humanities (2013)
ANNE B. GOLDSTEIN
B.A., J.D. Professor Emerita of Law (2022)
JAMES W. GORDON
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Professor Emeritus of Law (2015)
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RICHARD HABER
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Professor Emeritus of English (2002)
ERIC W. HAFFNER
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Professor Emeritus of Industrial Engineering (2014)
LAURA HANSEN
B.S., M.A., Ph.D. Professor Emerita of Criminal Justice (2021)
LEORA HARPAZ
B.A., J.D., LL.M.
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JERRY A. HIRSCH

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Professor Emeritus of Chemistry (2014)
Provost and Vice President for Academic Affairs Emeritus (2014)
ROBERT H. HOLDSWORTH
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JEANNE M. KAISER
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Professor Emerita of Legal Research and Writing (2022)
HOWARD I. KALODNER
A.B., LL.B.
Dean Emeritus, School of Law (2006) and Professor Emeritus of Law (2006)
ALAN K. KARPLUS
B.S.M.E., M.S., Ph.D.
Professor Emeritus of Mechanical Engineering (2001)
ROBERT R. KLEIN
B.A., M.A., M.Div., Ed.M., Ed.D.
Professor Emeritus of Education (2015)
JAMES KNITTEL
B.S., Ph.D. Professor Emeritus of Medicinal Chemistry (2021)
STANLEY E. KOWALSKI JR.
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Dean Emeritus, School of Business (2006) and Professor Emeritus of Business Information Systems (2007)
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ARTHUR B. LEAVENS
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EDWARD J. LECUYER JR.
B.A., M.A., Ed.D.
Professor Emeritus of Mathematics (2000)
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Professor Emeritus of Business and Information Systems (2022)
DENNIS LUCIANO
B.S., M.S., Ph.D.
Professor Emeritus of Mathematics (2018)
ROBERT A. LUSARDI
A.B., J.D.
Professor Emeritus of Law (2012)
WILLIAM MACANKA
B.A., M.S., Ph.D.
Professor Emeritus of Chemistry (2018)
JAMES V. MASI
B.S., M.S., Ph.D.
Professor Emeritus of Electrical Engineering (1999)
MICHAEL A. MEEROPOL
B.A., B.A., M.A., Ph.D.
Professor Emeritus of Economics (2009)

WILLIAM D. METZGER
B.S., J.D., LL.M.
Professor Emeritus of Law (2018)
BRUCE K. MILLER
A.B., J.D.
Professor Emeritus of Law (2020)
JAMES MORIARTY
B.S., M.S., Ph.D.
Professor Emeritus of Electrical and Computer Engineering (2021)
MOLLY MUNKATCHY
B.S., Ph.D.
Professor Emerita of Education (2017)
RICHARD S. MURPHY
B.A., M.S.
Associate Professor Emeritus of Physical and Biological Sciences (2001)
RONALD E. MUSIAK
B.S.E.E., M.S.E.E., Ph.D.
Professor Emeritus of Electrical Engineering (2014)
MARILYN PELOSI
B.S., M.S., Ph.D.
Professor Emerita of Business Information Systems (2016)
RICHARD S. PELOSI
Sc.B., M.S.I.E.O.R., Ph.D.
Professor Emeritus of Mathematics (2012)
BURTON PORTER
B.A., Ph.D. Professor Emeritus of Philosophy (2021)
CHARLES R. POLLOCK B.S., M.A., Ed.D.
Vice President for Enrollment Management Emeritus (2014)
WALTER M. PRESZ
B.S., M.S., Ph.D.
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SHELLY H. REGENBAUM
B.A., M.A., Ph.D.
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DAVID L. RUSSELL
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LORRAINE S. SARTORI
A.B., M.S., Ph.D.
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DAVID SAVICKAS
B.A., M.S, Ph.D. Professor Emeritus of Physics (2021)
JEFFREY SCHRENZEL
B.A., M.S.W., Ph.D. Professor Emeritus of Social Work (2021)
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B.S., M.B.A., J.D.
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JULIE SICILIANO
B.S.B.A., M.B.A., Ph.D.
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Professor Emerita of Sociology 2023

THEODORE SOUTH

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JOSHUA J. SPOONER

M.S., Pharm.D. Professor Emeritus of Pharmacy Practice (2022)

SAMUEL STONEFIELD

A.B., J.D.

Professor Emeritus of Law (2017)

LEH-SHENG TANG

B.S., Ph.D.

Professor Emeritus of Computer Sci

College of Arts & Sciences

Dean Marcus Davis

Associate Dean Jonathan Beagle

Associate Dean Jason Seacat

Assistant Dean Karl Martini

Programs of Study

The College of Arts and Sciences has three primary objectives:

1. To provide academic major and minor programs within the College as career preparation and as concentrations in the various fields of the liberal arts.
2. To provide the courses that satisfy General University requirements in keeping with the founding purpose of the College and consistent with the ongoing role of Arts and Sciences and the academic expertise of the faculty.
3. To provide required courses for its own majors and minors, foundation courses for majors in the Business and Engineering Colleges, and elective courses for the enrichment of students across the University.

In this way the College of Arts and Sciences fulfills its educational purpose in accordance with the mission statement of Western New England University. This Mission Statement calls for integrated professional and liberal education. Arts and Sciences contribute to that mission through providing major programs, General University courses, and service and elective offerings.

The College of Arts and Sciences offers courses and programs leading to a Bachelor of Arts degree with majors in American studies, communication, creative writing, economics, elementary education, English, history, integrated liberal studies, international studies, liberal studies, law and society, political science, psychology, and secondary education in the fields of English and history. The College also offers programs leading to a Bachelor of Science degree with majors in actuarial science, biology, chemistry, criminal justice, computer science, forensic biology, chemistry, health sciences (including a pre-physician's assistant concentration), health studies (including a pre-OTD concentration), information technology, mathematical sciences, neuroscience, psychology, and secondary education in the fields of biology, chemistry and mathematics. Majors in elementary and secondary education are approved by the Massachusetts Board of Education and lead to teacher certifications. Also offered is an Associate of Arts degree in Liberal Studies.

To graduate with a bachelor's degree, students must complete a minimum of 120 semester hours in academic courses, although some programs have additional credit requirements. Students must complete the requirements of a major program, the General University requirements, and certain area requirements. The balance of the academic program is composed of electives, which are courses chosen entirely by the student with guidance from an advisor.

Most students attempt to complete the General University requirements during their first two years in college. Such planning provides added flexibility during the junior and senior years, enabling students to concentrate on major programs or to participate in internships or off-campus programs such as the Washington Semester, the New England Center for Children internship program, or study abroad.

College of Arts & Sciences Requirements

Students in the College of Arts and Sciences are required to satisfy the General University Requirements. All students majoring within the College of Arts and Sciences must also fulfill the following requirements:

1. Complete at least 120 credit hours of courses in order to graduate. Note: No more than 15 credit hours of ROTC courses may be counted within this 120;
2. Complete the requirements for a major;
3. Complete at least seven Perspectives of Understanding courses, including two natural science courses and one course from each of the remaining five Perspectives of Understanding;
4. Writing Intensive Requirement (WIC). Complete at least six additional credit hours in courses designated as “Writing Intensive,” one at the 200- or 300-level and one at the 300- or 400-level. Courses designated as Writing Intensive can also fulfill other requirements, including General University Requirements and requirements for specific majors. All Writing Intensive courses are approved by the Department of English; and
5. Complete at least 30 credit hours in advanced courses (numbered 300-400) that may include those in the major and other areas, or complete the requirements for a major and a minor. No ROTC courses may count as advanced courses.

Please note that non-business majors can apply no more than 25% of business coursework to their graduation requirement.

Minors

The course work for a degree may include one or more of the minors offered by the University. A minor may not be completed in the same discipline as the major. See the descriptions of the requirements for minors listed in this catalog. Students wishing to take a minor must complete a form in the Office of the Dean, College of Arts and Sciences, no later than the beginning of the final semester.

College of Arts & Sciences

College of Arts & Sciences Special Academic Opportunities

College of Arts and Sciences Special Academic Opportunities

Honors Program

The Honors Programs are intended to give academically qualified and motivated students the opportunity to join a community and participate in challenging courses taught by some of the University's best faculty. The programs allow students to broaden their education by taking courses in a variety of disciplines with Honors students from other majors and by exploring topics that cross disciplinary boundaries. The programs also encourage students to take an active part in leadership activities related to Honors. Students in the College of Arts and Sciences may participate in the Honors Program.

Global Scholars Program

The Global Scholars program provides Western New England University students with the opportunity to distinguish themselves by developing an understanding of another region or nation outside of the United States through University coursework and international study experiences. While the structure of each Global Scholars program is determined and overseen by the College in which the student is enrolled, all Global Scholars programs include the following elements:

- An introductory experience or course
- A period or periods of international study abroad
- Completion of a sequence of courses in international issues, area studies, or foreign language
- An integrating or capstone experience or course

All Global Scholars are encouraged to participate in globally-focused opportunities on campus.

University Global Scholars in the College of Arts and Sciences

The College of Arts and Sciences encourages all students to understand regions and nations outside of the United States through University courses and international experiences. The Global Scholars program helps students prepare for and reflect upon their pre-departure, international, and re-entry processes to cultivate their intellectual and intercultural learning.

Global Scholars supports students in connecting their international and intercultural courses and experiences to their academic, professional, and personal endeavors. It is open to students from any major in the College of Arts and Sciences. Students who satisfy all requirements will receive the Global Scholar designation on their University transcript and at Commencement.

To earn the College of Arts and Sciences Global Scholar designation, a student must complete successfully:

1. International and Intercultural Orientation and Reflection (INST 100, 2 credits, to be completed by the end of the sophomore year), which aims to develop students' skills in learning about and reflecting on cultural differences in education and work abroad. It serves as a pre-orientation to international and intercultural education. This course is open to any University student.

2. Minimum six credits of study outside the United States that are completed in one or more international study experiences. This may be accomplished in many ways: through participation in a faculty-led travel seminar, a semester program, or a summer program. Exceptions to the international study experience may be granted for a student pursuing intensive language training (i.e. 15 credits of a foreign language may replace three credits of study abroad).

3. Minimum six credits of University or international courses on foreign languages, regions, or cultures, or on global issues relevant to a student's international and intercultural focus.

4. A capstone experience completed in the senior year (1-3 credits) that provides Global Scholars with active reflection on their international or intercultural experiences and how that learning connects to their University studies. The capstone will follow the international or intercultural experience and must be developed in consultation with the Coordinator of Global Scholars. This requirement may be aligned with the Honors Program and/or major program requirements in the College of Arts and Sciences.

Students must be in good academic standing to participate in study abroad and to graduate with Global Scholars recognition. Particular study abroad programs may require higher standards of admission.

Contact Dr. Meri Clark (meri.clark@wne.edu), the Coordinator of the University Global Scholars College of Arts and Sciences Program for more information.

College of Business

Dean Sharianne Walker

Associate Dean Paul Costanzo

Assistant Dean Ginger Coffey

Mission and Vision

As the founding program of Western New England University, the College of Business prepares students with the professional skill sets and mindsets they need to navigate the future of work and succeed in a dynamic global business environment.

Through business partnerships and relevant industry-aligned experiential learning, we foster business acumen, career readiness, data and technology literacy, and entrepreneurial thinking.

We facilitate the development of business citizens who instinctually utilize their abilities to create value for their organization and their community.

Career Preparation

To guide students in selecting an appropriate career path, faculty in each department in the College of Business designed a variety of classroom and outside of the classroom activities to guide the students through the process of a) Career Exploration in the freshman year, b) Career Investigation in the sophomore year, c) Career Determination in the junior year and finally d) Career Implementation in the senior year. In these progressive exercises students link their interests and skills with career paths culminating with activities designed to help the student to enter the field of choice.

Requirements

Students earning a Bachelor of Science in Business Administration must select a major by the end of their sophomore year. Complete requirements for each of the majors in the College of Business are specified under a separate section of this catalog. They are accounting, business analytics and information management, finance, general business, human resource management, management and leadership, marketing, marketing communication/advertising, pharmaceutical and healthcare business, and sport management. Each undergraduate major in the College of Business includes a general education component that normally comprises at least 50 percent of the student's four-year program. Requirements common to all majors are:

1. Complete at least 30 credit hours of course work at the 300-400 level.
2. Complete at least 12 credit hours of course work at the 300-400 level in the major at Western New England University. The identification of these upper-level courses are listed under each major.
3. Apply no more than 12 credit hours of ROTC courses towards the graduation requirements.
4. Meet all requirements specified under Academics, Undergraduate Policies, Procedures, Requirements, and General University Requirements in this catalog.

College of Business

College of Business Special Academic Opportunities

College of Business Special Academic Opportunities

Delbridge Business Honors Program

The College of Business provides academically qualified and motivated students with the opportunity to distinguish their academic career through participation in the Delbridge Business Honors Program. Business Honors courses are distinguished by the type of work required, pace of study, and opportunities for broader consideration of core course themes. In addition, Business Honors courses emphasize critical and independent thinking to produce creative applications of ideas.

Admission

Entering College of Business first-year students with a minimum high school GPA of 3.800 are automatically eligible for the Delbridge Business Honors Program. In addition, other first-year students who present remarkable GPAs or SAT/ACT scores may be invited to join the Business Honors Program. Admission decisions will be made by the Honors Committee so that students may be registered for the first honors course during Summer Orientation and Registration Program (SOAR).

Requirements

To receive the College of Business Honors designation on their transcript, a student must:

1. Complete 18 credits of honors courses: 12 of these 18 credits must be taken from honors courses in the College of Business; 6 of these 12 Business honors credits must be at the 300- or 400-level.
2. Complete an honors project (HONB 495) as approved and overseen by the Honors Committee in the College of Business.

Certificates

Students in the College of Business have the opportunity to choose from a number of certificates to add to their academic credentials. Current certificates include:

- Certificate in Diversity Management
- Certificate in Human Resource Management Fundamentals
- Certificate in Innovation & Entrepreneurship
- Certificate in Leadership
- Certificate in Project Management
- Certificate in Remote Work Skills
- Certificate in SAS
- Certificate in Socially-Conscious Management
- Certificate of SAP Student Recognition Award

College of Business

Master of Business Administration

MBA PROGRAM STRUCTURE

The MBA degree, earned after 36 credit hours of study, comprises core and elective coursework. Each area of coursework requires the following:

Core requirements: 27 credit hours

Elective requirements: 9 credit hours

Students who meet the admission standards for entry into the MBA program but have not completed the core knowledge requirement will be admitted under Tentative Status. Applicants to the MBA program who are in the process of completing the admission process may take two graduate business courses and work on satisfying the core knowledge requirement concurrently. If core knowledge requirements are not completed, students may not continue to take any additional 600 level courses (beyond two) until the requirements have been completed.

There is an option for students currently enrolled, or accepted to, the Western New England University School of Law to complete both the Juris Doctorate and the MBA in a unique combined degree program. Interested students should contact the School of Law Admissions Office and the College of Business Associate Dean's Office for specific information. There is also an option for students currently enrolled in the Western New England University College of Pharmacy and Health Sciences to complete both the PharmD and the MBA. Students enrolled in Western New England University College of Engineering Master of Science in Engineering Management (MSEM) can complete both the MSEM and the MBA.

DEGREE REQUIREMENTS

CORE COURSE REQUIREMENTS 27 CREDIT HOURS

Completion of the following courses is required:

MAN 605	Leadership, Problem Solving and Decision Making	3 cr.
BUS 610/MAN 611	Business and Its Environment	3 cr.
AC 630	Accounting for Decision Makers	3 cr.
FIN 630	Managerial Finance	3 cr.
BUS 610	Information Technology Management and Applications	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
BAIM 620	Decision Modeling for Analytics	3 cr.
MK 640	Marketing Management	3 cr.
BUS 680	Strategic Management	3 cr.
Total Credit Hours:		**27**

The final course in the program is designed to integrate the knowledge learned in the core coursework to enhance student understanding of management practice.

Each course is three credits.

Elective Course Requirements 9 credit hours

Students may choose to take elective courses based on their individual interests and professional needs. Throughout the program, students will be provided with a variety of elective course offerings in accounting, business information systems, finance, general business, management, and marketing. Elective courses can be taken at any time during the program. It is best, however, for students to plan on taking electives later in their MBA study after completing the majority of their foundation coursework.

College of Engineering

Dean S. Hossein Cheraghi

Assistant Dean Richard Grabiec Jr.

The College of Engineering has been preparing students for successful engineering careers for over 50 years. Over that time we have been guided by an operating philosophy that acknowledges that our graduates will play significant roles fundamental to the health of our nation and of our globe. Throughout their careers they and their professional colleagues will advance the technological basis of our nation's economic health, defend our nation, and our way of life with the products of our craft; provide for the improved health and welfare of our citizenry; and improve the quality of life for all humankind—as the engineering profession has always been charged to do. Our graduates assume serious obligations upon beginning their careers.

The faculty is committed to seeing students succeed, with overall excellence in the teaching/learning enterprise being the primary goal. It is the faculty of the College of Engineering that is primarily responsible for developing and maintaining the environment supportive of learning for each student and for encouraging each student to reach for and achieve the highest goals possible.

The Mission of the College of Engineering

The College of Engineering's mission is to provide undergraduate and graduate students an outstanding education in engineering through an environment of individual attention and support, dedicated and qualified faculty who are recognized in their fields, and modern facilities. Our graduates will possess the education and learning skills that enable them to put theory into practice, be professionally responsible engineers, and be leaders within the global community.

The Vision of the College of Engineering

The College of Engineering will be recognized as a premier engineering institution with an emphasis on a contemporary undergraduate education, preferred by undergraduate and graduate students, faculty, prospective employers, and graduate schools nationally and internationally.

The Core Values of the College of Engineering

We support the core beliefs of Western New England University and in particular we value:

- Student Centered Learning: Promoting a learning environment based on a student-first approach to ensure the success of our students.
- Discovery: Contributing to the research, development, dissemination, and application of engineering knowledge, integrating theory, and practice
- Holistic Engineering and Leadership: Providing an active learning pedagogy integrating knowledge across disciplines to cultivate leadership and decision making in solving complex problems to better serve humanity
- Responsibility: Demonstrating integrity and accountability in all of our dealings
- Ethics and Professionalism: Leading by actions characterized by ethics and professionalism
- Teamwork: Providing pedagogy and opportunity for the development of successful teaming skills
- Community: Being an active and collaborative part of Western New England University and the local, national, and global community
- Diversity and Internationalism: Respecting the diversity of humankind, including but not limited to cultural, gender, and nationality differences
- Continuous Improvement: Demonstrating successful continuous improvement processes of our College and its programs

Programs of Study

The College of Engineering offers curricula leading to a Bachelor of Science in Engineering degree with majors in biomedical, civil, computer, electrical, industrial, and mechanical engineering and to a Bachelor of Science degree in construction management.

The undergraduate engineering degree programs are accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

The faculty realizes the typical tentativeness with which an entering freshman declares a major upon entry. Accordingly, all of the curricula share a common set of courses during the first two semesters of study. Students utilize this time to explore potential career directions and make informed decisions, declaring a degree objective before beginning their second-year studies.

All curricula are based on mathematics and the basic sciences coupled with engineering sciences, with specialization beginning in the second year. Each program is structured to build upon preceding coursework, with successively more challenging courses, culminating with a capstone design experience during the fourth year. Each program is intended to prepare students for either entry into professional practice or advanced formal studies. With 40% of required coursework taught by faculty in the College of Arts and Sciences, each program also integrates liberal and professional learning to provide the balance needed by modern engineering practitioners.

The College of Engineering believes that engineering as a discipline is better learned than taught, and that much of the maturing of students into engineers comes through personal hands-on experiences acquired in laboratory, project, and formal internships at industry sites throughout the Northeast. Through these avenues modern practice plays vital roles in the student's education. Senior projects are very often suggested by, and sometimes conducted in association with, the technical community. The programs are quite flexible in arranging for joint industry-student efforts and in accommodating the needs of full-time and part-time students. In addition, undergraduate research projects are arranged by the faculty of the College of Engineering.

While undergraduate courses are occasionally offered in the evenings, it is not possible to complete an entire degree program in the evening.

Transfer Agreements

Recognizing the important role of community colleges in the overall system of higher education and of cooperation among four-year colleges and universities with different emphases, the College of Engineering is making every effort to coordinate its programs with those of other institutions offering programs, such as engineering science, that provide the first two years of engineering study.

To date, joint admission agreements and/or transfer advising guides have been developed with the following community colleges: Greenfield, Holyoke, Berkshire, Hudson Valley, Manchester Technical, Quinsigimond, Asnuntuck, and Springfield Technical. Other agreements are being developed.

Admission to the College of Engineering

The admission to any undergraduate program in the College of Engineering at Western New England University is based on the undergraduate admission criteria for the College. A student may be admitted to the College of Engineering in two ways: directly into a major or as a Pre-engineering student. A student is admitted directly into a major only if all College of Engineering admission criteria are met.

Engineering Major

Incoming students who meet all admission criteria will be admitted into one of the College's majors. A student who meets the requirements for entering into a major within the College of Engineering, but is unsure of which major to pursue, may be admitted as an undeclared (ENGR) engineering student. A common curriculum for the first two semesters is provided for all engineering majors. Since the actual time required for completion of the curriculum will depend on the individual student's ability and prior preparation, personal consultations with engineering faculty advisors permit students to participate in both the determination of their current status and the planning and scheduling of further coursework.

College of Engineering Requirements

College of Engineering Requirements

A common curriculum for the first two semesters is provided for all engineering students. Since the actual time required for completion of the curriculum will depend on the individual student's ability and prior preparation, personal consultations with engineering faculty advisors permit students to participate in both the determination of their current status and the planning and scheduling of further coursework.

Course prerequisites are used to identify the competencies required for enrollment in a course. As a result, enrollment in any course is contingent upon successful completion of all course prerequisites. A student may, however, petition the course instructor for a waiver of prerequisite(s). Applications for requesting an exception are available in the Dean's Office. The application must be completed and signed by the student, faculty instructor, chair of the department that offers the course, and the Dean of Engineering.

Engineering majors can apply no more than 25% of business coursework to their graduation requirements.

Mathematical Analysis

MATH 133 (Calculus I) and MATH 134 (Calculus II) have been designated as the two mathematics foundation courses by the College of Engineering. A minimum grade of C is required in MATH 133 in order to be allowed to continue into MATH 134. Furthermore, a minimum grade of C is required in MATH 134 in order to proceed into the sophomore level engineering courses ME 202 and EE 205.

Degree Requirements

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 133	Calculus I	4 cr.
PHYS 133	Mechanics	4 cr.
Total Credit Hours:		**16**

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.
Total Credit Hours:		**16**

Total Credit Hours: 32

Individual curricula in Biomedical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering are given in the major programs section of the Catalog.

Design Experience

During the freshman year, students are introduced to engineering design, entrepreneurship, and product development and innovation in the Introduction to Engineering courses. Sophomore and junior courses and laboratories provide progressively more sophisticated design experiences within the student's discipline. All programs culminate in a capstone Senior Design Project course in which students work on projects under the supervision of a faculty advisor. Topics for some projects are supplied by industry. Students who select one of these topics have the opportunity to work with the industrial sponsor in an actual engineering setting.

General University Requirements (Undergraduate Programs)

General University Requirements (GURs) supplement the engineering student's technical program. These courses must be selected in such a way that all GUR "perspectives of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. An assigned departmental faculty advisor must approve selection of electives from Engineering, Arts and Sciences, or Business.

College of Engineering

College of Engineering Special Academic Opportunities

College of Engineering Special Academic Opportunities

Honors Program

The Honors distinction in the College of Engineering at Western New England University gives students added depth and breadth to their engineering education by taking introductory level courses with an Honors cohort of like-minded engineering students, then selecting interdisciplinary courses or research experiences in their engineering major. This distinction on your academic record is an ideal way to show graduate schools and potential employers that you are a person who takes the extra step to learn and excel.

The College of Engineering Honors Program at Western New England University is not a major in itself, but is open to students in any engineering field. It provides academically qualified and motivated students with a challenging pace of study, opportunities for broader consideration of core course themes, and advanced work in their areas of interest, which can be done individually and/or with the cohort, and under mentorship of the faculty.

Admission

Entering freshmen who have met the GPA and SAT and/or ACT recommendation will automatically be invited to apply to the College of Engineering Honors Program. Students who do not meet these criteria but still strongly wish to be considered for acceptance into the Program are also encouraged to apply. Qualified students will receive an invitation from the Honors Program Coordinator requesting confirmation of interest. Students accepting this invitation will subsequently be notified of admission to the College of Engineering Honors Program and then, be registered for the first engineering Honors course during Summer Orientation and Registration Program (SOAR).

Requirements

Students who have been admitted to the College of Engineering Honors Program must complete a selection of HON or HONE courses to meet the 18 semester-hours minimum, plus an honors project/thesis in their senior year in order to graduate with the University Honors. All honors students will be part of the cohort taking the following core courses:

- HONE102 HON First Year Engr Sem First Year Engineering Seminar
- HONE105 Computer Programming for EngrsComputer Programming for Engineers
- HONE110 Data Acquisition & Proces Data Acquisition and Processing
- HONE202 Mechanics I-StaticsMechanics I - Statics
- HONE205 Circuits I Electrical Engr Circuits I- Electrical Engineering

Students, sophomore status and above, also have the option of taking a faculty-directed research course (HONE 240, HONE 340) and/or Independent Study Course (HON 333/HONE 333) as two of their six honors courses, in additional to the honors-by-contract courses in their engineering major. Honors-by-contract courses are arrangements between the student and the sponsoring faculty to allow the student to go above and beyond the regular topics covered in the standard course and increase their depth of knowledge in the subject area.

Senior Honors Project/Thesis

Each College of Engineering Honors program senior works closely with a faculty advisor to develop a final project. Students must submit an honors project as approved and overseen by the Honors Committee in the College of Engineering.

Grand Challenges Scholars Program

The Grand Challenges Scholars Program (GCSP) was envisioned by the National Academy of Engineering as the foundation of a new educational paradigm that prepares engineers to be innovators for change in an increasingly globalized society. This emerging educational paradigm is expected to yield a generation of engineers who are uniquely qualified and motivated to address the most challenging problems facing the nation and the world. The program is also expected to serve as a method to pilot innovative educational approaches that will become mainstream educational programs for all engineering students at universities across the nation.

Program Components

The GCSP stipulates that to earn the GCS designation, a student must engage with their engineering education from multiple perspectives that guide the development of an entrepreneurial and global perspective to society's greatest challenges. These perspectives are integrated as five components in which the candidate will immerse at differing levels of experience depending on each candidate's history and research interests. How the candidate fulfills the specific requirements is negotiated with the Western New England University Program Director in two stages.

The first stage has the student apply as a tentative candidate to the program during their freshman year. At this time the student is offered guidance on how to integrate the GSCP requirements with their University curricular and extracurricular activities. In the second stage, the student applies for full admittance into the program in the Fall of their junior year. This admittance is based on the portfolio of courses and activities the student has engaged in during their freshman and sophomore years, as well as maintaining a 3.300GPA. The GCSP committee assesses the student's portfolio for likelihood of meeting the program requirements by the end of their senior year, and at this time will offer further guidance for program completion to earn the Grand Challenges Scholar designation. The five components are:

1. Hands-on Project OR Research Experience Related to a Grand Challenge 14 Thematic Area:

- Advance Personalized Learning
- Make Solar Energy Economical
- Enhance Virtual Reality
- Reverse-Engineer the Brain
- Engineer Better Medicines
- Advance Health Informatics
- Secure Cyberspace
- Restore and Improve Urban Infrastructure
- Provide Access to Clean Water
- Provide Energy from Fusion
- Prevent Nuclear Terror
- Develop Carbon Sequestration Methods
- Manage the Nitrogen Cycle
- Engineering Tools for Scientific Discovery

2. Interdisciplinary Curriculum: A curriculum that complements engineering fundamentals with courses in other fields, preparing the engineering candidate to work at the overlap with public policy, business, law, ethics, human behavior, risk, and the arts, as well as medicine and the sciences.

3. Entrepreneurship: Prepares students to translate invention to innovation and to develop market ventures that scale to global solutions in the public interest.

4. Global Dimension: Develops the candidate's global perspective necessary to address challenges that are inherently global as well as to lead innovation in a global economy.

5. Service Learning: Develops and deepens the candidate's social consciousness and their motivation to bring their technical expertise to bear on societal problems through mentored experiential learning with real clients

For more information, visit the National Academy of Engineering (NAE) Grand Challenge Scholars Program website.

College of Pharmacy & Health Sciences

Dean John Pezzuto

Senior Associate Dean for Academic Affairs Beth Welch

Assistant Dean for Student Affairs Amy Burton

The College of Pharmacy and Health Sciences at Western New England University is known for excellence in health sciences education and in the preparation of professional healthcare professionals.

Undergraduate Programs

Bachelor of Science (BS) in Neuroscience

Neuroscience is a field of study that integrates psychology, biology, physics, and chemistry for the common goal of understanding the structure, development, and function of the brain and nervous system. Through research, neuroscientists are able to describe the normal function of electrical tissue. For example, improving our understanding of the brain allows us to understand and find ways to prevent or treat many devastating neurological and psychiatric disorders. Students majoring in neuroscience will have access to a range of tools including behavioral testing, electrophysiology, histology, and molecular biology, as they participate first-hand in basic exploratory research. Students are involved in all stages of research including project design, data collection, and results reporting. This major is housed in a research-rich environment that supports a curriculum steeped in scientific investigation, where students and faculty work as partners in research and education. Students who receive an undergraduate degree in Neuroscience typically continue their studies at the master's or doctoral level or pursue advanced degrees in a variety of medical professions (e.g. MD, DDO, DDS, VDM, or OD). Career options include positions within neuroscience, psychiatry, medicine, academia, pharmaceuticals, forensic science, health and allied health professionals, science writing and communications, and state and federal government science agencies (e.g. CIA, FBI, NIH, CDC, or FDA).

Bachelor of Science (BS) in Pharmacy Studies

The Pharmacy Studies curriculum prepares students for pharmacy-related careers and enables a strong foundation in the biomedical, pharmaceutical, administrative/social/behavioral, and clinical sciences required in pharmacy. In addition, the curriculum prepares students for other health-related fields as well as graduate programs in biomedical or pharmaceutical sciences. Students who receive an undergraduate degree in Pharmacy Studies typically continue their studies at the doctoral level in Pharmacy (PharmD) or other advanced degrees in health-related professions or biomedical/pharmaceutical sciences. Graduates with this undergraduate degree may directly enter careers as pharmacy technicians or other pharmaceutical fields.

Transfer Agreements

Recognizing the important role of community colleges in the overall system of higher education and in cooperation with other four-year colleges and universities, the College of Pharmacy and Health Sciences makes every effort to coordinate its programs with those of other institutions offering preliminary and related programs.

Minors

The course work for a degree may include one or more of the minors offered by the University. A minor may not be completed in the same discipline as the major. Students interested in a minor should see related information in the Undergraduate Academic Information section of this catalog.

Professional and Graduate Programs

Doctor of Pharmacy (PharmD)

The Doctor of Pharmacy curriculum is designed to prepare learners to enter the practice of pharmacy as general practitioners in a variety of practice settings and deliver optimal patient care to diverse populations. The primary intention of this comprehensive educational program is to transition dependent learners into independent professional practitioners who are dedicated to serving the community in which they live. The curriculum provides learners opportunities to develop the knowledge, skills, and attitudes necessary to become licensed professionals who will provide optimal patient care in a caring, collaborative, safe, and culturally aware manner. Students may be admitted as freshmen into the 0-6 program. Students complete the first two years of pre-professional coursework as undergraduates. A cumulative GPA of 3.100 following the first three semesters of the pre-professional curriculum is required to maintain seat assurance in the professional phase (years 3-6) of the curriculum. The admissions decision is based on a thorough review of submitted application materials, including GPA for required prerequisite coursework, PCAT composite score (if submitted), letters of recommendation, and other considerations relevant to the mission, vision, and values for the College of Pharmacy and Health Sciences (including service, advocacy, and leadership). Qualified applicants will be invited to participate in an admissions interview and timed writing sample, both of which must be successfully passed by the student. For individuals seeking admission to the Doctor of Pharmacy program outside of the 0-6 admissions pathway, a GPA of 3.000 in the required prerequisite courses is preferred.

The curriculum entails a competency-based framework, using integrated content and teaching, problem-based approaches when appropriate, integrated technology, and experiential exposure threaded throughout. The program is available through two different pathways: a campus-based and a distance learning pathway (DLP). The curriculum is designed to incrementally develop strong scientific foundations (in the biomedical, pharmaceutical, social and administrative, and clinical sciences) and professional skills. During pharmacy practice experiences, learners have many opportunities to demonstrate and apply these skills in progressively advanced methods.

Doctor of Occupational Therapy (OTD)

The OTD program at Western New England University is responding to the national and international call for changing the way healthcare is delivered and the way healthcare professionals are educated. This program emphasizes population health perspectives that focus on community health, wellness and prevention, and health literacy; interprofessional practice models in traditional and community-based health settings that focus on collaborative teams; and practitioner, leader, and scholar roles and competencies to revolutionize the delivery of inclusive, equitable, client-centered, evidence-based, culturally-competent, and distinctive occupational therapy. Rapidly changing healthcare systems are demanding more entry-level practitioners. The OTD curriculum is meeting this call by providing academic preparation beyond a generalist level, including advanced graduate knowledge, skills, and fieldwork/experiential opportunities. The OTD program is a full-time program completed over eight consecutive semesters including summers. The program combines opportunities for classroom learning, the development of performance laboratory skills, and on-site practice experience. The program integrates sequential course content with a series of five Level I Fieldwork experiences (Year 1 and 2), providing a strong foundation for Level II Fieldwork (Years 2 and 3), and the Doctoral Experiential Capstone (Year 3, Semester 8). Level II Fieldwork must be completed within two years of completing entry-level OTD coursework. The curriculum permits students to develop entry-level skills in current and emerging occupational therapy practice areas. The doctoral experiential capstone takes place at an off-campus site and provides students with advanced skills beyond generalist practice in areas of leadership, research, advocacy and program development/implementation/evaluation.

Master of Science (MS) in Pharmaceutical Sciences

This 38-credit degree program can be completed in five full-time semesters (fall, spring, summer, fall, spring). Students can customize the focus area of their research degree through available elective courses and by the selection of a thesis advisor in a specific field of medicinal chemistry, pharmacology, pharmaceutics, immunology, neuroscience, pharmacogenomics, toxicology, oncology, biomedical engineering, or cosmeceutical sciences. The available research focus areas for this MS degree are: Pharmacological and Biomedical Sciences, Pharmaceutics and Drug Delivery, Medicinal Chemistry and Drug Development, and Pharmacoeconomics and Healthcare Data Analytics.

Master of Science (MS) in Pharmacogenomics

The 41-credit MS in Pharmacogenomics (MSPGx) program can be completed in as few as three full-time semesters (fall, spring, summer). With this degree from WNE, students are ready to make the most of emerging opportunities from basic or industrial research to clinical implementation through a well-rounded program that aligns with their personal career goals. Pharmacogenomics is a fast-growing field that helps medical practitioners prescribe personalized treatment plans to patients based on how they may respond to medications due to their DNA sequence. Pharmacogenomics supports personalized or precision medicine, which explores a patient's genetics, environment, and lifestyle as a way to design a treatment plan that will best suit the patient. The goal of this modern approach to medication therapy is to limit adverse effects while optimizing response and beneficial outcomes. The design of the WNE Master of Science in Pharmacogenomics has purposely integrated all major aspects of this field, from basic genetics to clinical implementation.

College of Pharmacy and Health Sciences (COPHS) Student Handbook

The COPHS Student Handbook is the authoritative handbook for Academic Standards and the Honor Code for students enrolled in professional programs.

College of Pharmacy & Health Sciences

College of Pharmacy & Health Sciences Special Academic Opportunities

College of Pharmacy and Health Sciences Special Academic Opportunities

The College of Pharmacy and Health Sciences offers several unique dual degree programs.

Undergraduate Dual Degrees:

- 3+1 BS in Biology or Health Sciences/MS in Pharmacogenomics
- 3+1 BS in Neuroscience/MS in Pharmacogenomics
- 3+2 BS in Biology, Chemistry or Health Sciences/MS in Pharmaceutical Sciences
- 3+2 BS in Neuroscience/MS in Pharmaceutical Sciences
- 3+3 BS in Neuroscience/OTD
- Five-Year BSE in Biomedical Engineering /MS in Pharmaceutical Sciences

Graduate/Doctor's-Professional Practice Dual Degrees:

- PharmD/MBA
- PharmD/MS in Organizational Leadership

- PharmD/MS in Pharmaceutical Sciences
- PharmD/MS in Pharmacogenomics

School of Law

Dean Zelda Harris

Associate Dean for Academic Affairs Erin Buzuvis

The School of Law at Western New England University attracts students who are passionate, entrepreneurial, and driven by a desire to right social injustice, fight for equality for all, and preserve the rule of law at home and abroad. Many of our students are the first in their families to pursue a law degree and appreciate our generous scholarship awards. Our students enjoy unparalleled access to externships and clinical experiences in state and federal courts, major law firms, corporations, nonprofits, and government agencies. Western New England University School of Law seeks students who are up for the challenge of both rigorous academics and immersive applied learning.

The School of Law offers programs leading to a Juris Doctor (JD) degree and a Master of Laws (LLM) in Elder Law and Estate Planning.

Juris Doctor (JD)

Western New England University will inspire and support students to become a true student of law and a skilled practitioner. In the JD program, students will learn the science of legal study as a methodology to analyze legal and social issues.

Students will develop the ability to perform careful research and write thorough and precise legal memoranda and scholarly papers. Students will be prepared to artfully articulate persuasive legal arguments and apply them in a professional context through clinics, externships, and moot court experiences. In small classes, students will be taught by full-time faculty who teach all required day and evening courses. Students will graduate prepared to use your law degree to make an impact on your profession and society.

The JD program is structured to prepare students for the practice of law in any American jurisdiction. Students will begin with several **required courses** that form the foundation for more advanced legal studies. Lawyering Skills is a required first-year course that teaches the basic techniques of legal research, writing, and analysis. While students are not required to pursue a **concentration**, they may choose to do so to focus their studies on a specific practice area. The **experiential learning** requirement provides opportunities to gain real-world legal experience. All students are required to complete 20 hours of *pro bono* legal work prior to graduation. Study options include full-time, part-time day, or part-time evening.

Master of Laws (LLM) in Elder Law and Estate Planning

The only live, interactive, online LLM in Elder Law and Estate Planning in the U.S., our program offers a unique opportunity for students to take their practice in a new direction or strengthen your expertise to advocate for elders and their families. In this 30-credit program, students will gain an extensive knowledge of and training in a number of diverse areas of law, including wills and trusts, estate and fiduciary administration, income taxation, federal wealth transfer taxation, and the use of various entities and products (particularly trusts and insurance products) in wealth planning and management. The program also develops expertise in social security law, Medicare, Medicaid, and other federal and state laws and regulations that directly affect these clients.

The aging of the population provides an unprecedented need for informed advisors who can help individuals and families navigate healthcare legal issues, provide for special needs children, and plan for the largest intergenerational transfer of wealth in history. According to the Insured Retirement Institute, Baby Boomers will retire at a rate of 10,000 per day through at least 2030, when almost 73 million Americans, comprising more than 20 percent of the U.S. population, will be age 65 or older.

The program teaches the practical aspects of drafting estate plans, administering the settlement of estates, and representing elderly clients and families. In their final project, students will create a complex plan and develop their own set of planning documents. The in-depth knowledge gained from this experience will help students distinguish their practice and help them to inform and educate their clients on a very personal level. Students will receive personalized attention from our stellar faculty who are recognized experts in Elder Law, Estate Planning, and Special Needs, including current and past presidents of the National Academy of Elder Law Attorneys and the National Elder Law Foundation.

A pioneer in live, online Elder Law and Estate Planning education, Western New England University School of Law is accredited by the ABA. Taught live, not asynchronously, by leading experts, our program's unique online delivery experience makes the LLM available to busy professionals nationwide who are looking to enhance their skills while studying part-time in just two or more years. Students have attended class from Alaska, Hawaii, while serving in the military in Germany, and while traveling in India. Students can enroll part-time or full-time in the fall or spring; a one-year full-time option is also available.

Law Student Handbook

The Law Student Handbook is the authoritative handbook for Academic Standards and the Honor Code.

University Handbook

Western New England University's Student Handbook is designed to assist both new and returning students with information pertaining to campus departments and services, resources for daily and emergency use, and policies and regulations. It is designed to reflect the educational mission of the University, with intentional focus on inclusivity and respect for the rights of others. The material in the Handbook is designed to be a resource and guide for students pertaining to the University's policies and required standards for conduct. Students agree to comply with University policies and conduct standards as enacted by appropriate University officials.

Legal Matters

Western New England University is required by various state and federal statutes to publish information about certain legislation that may affect some or all of our students. That information is presented below.

Student Absence Due to Religious Beliefs

The General Laws of Massachusetts, Chapter 151C, Section 213 states the following: "Any student in an educational or vocational training institution, other than a religious or denominational educational or vocational training institution, who is unable, because of his religious beliefs, to attend classes or to participate in any examination, study, or work requirement on a particular day shall be excused from any such examination or study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which he may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school. No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any students who avail themselves of the provisions of the section."

Controlled Substances Act

Part of the federal omnibus drug legislation is the "Drug-Free Workplace" Act of 1988. Under the provisions of this legislation federal grants or contracts must certify that they will provide drug-free workplaces; individuals receiving funding directly from the federal government will also have to certify that their conduct will be drug free. In the case of colleges and universities, the Department of Education has said individual Pell Grant recipients will have to certify that they are drug free to receive their student aid awards.

If colleges and universities do not promote drug-free workplaces, drug-free awareness programs, or establish procedures for reporting violations, they are subject to sanctions including suspension of payments, suspension or termination of grants, or debarment, thus ineligible to receive grants or awards from a federal agency during the term of debarment.

Students applying for financial aid involving federal funding must certify that they are drug free, and that they will remain drug free, in order to receive such federally-funded student aid awards. Appropriate forms for such certification are available in Enrollment Services.

No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any students who avail themselves of the provisions of this section.

Confidentiality of Student Records

The Family Educational Rights and Privacy Act (FERPA) of 1974 (revised 1988, 1993) assures students the right to inspect and review all University records, files, and data directly related to them, with the exception of medical and psychiatric records, confidential recommendations submitted before January 1, 1975, records to which a student has waived the right of access, and financial records of the student's parents. The Privacy Act also prohibits the distribution of grades to parents or guardians without the prior written consent of the student, or a statement of dependency from the parent when the student is a dependent under the criteria of the Internal Revenue Code.

The Privacy Act requires the University to respect the privacy of education records but provides the right to make public at its discretion, without prior authorization from the individual student, the following personally identifiable information: name of student; local and permanent addresses and telephone numbers (including cellular telephone numbers); email address; class year; school or division of enrollment and major field of study; enrollment status; date and place of birth; dates of attendance at Western New England University, nature and dates of degrees, honors and awards received; weight and height of student athletes; participation in officially recognized sports and activities; and high school and any institution of higher learning previously attended.

A student may limit the release of the above information by submitting a written request to Enrollment Services. However, drug- and alcohol-related incidents, which violate federal, state, or municipal laws, or any University policy related thereto, may be disclosed to parents under the following circumstances: (1) the student is under the age of 21, and (2) the University determines that the student has committed a disciplinary violation with respect to the use or possession of alcohol or drugs. Further details on the issue of privacy are also available at Enrollment Services.

Discrimination/Harassment/Sexual Misconduct/Title IX Policy

Western New England University is committed to the principle of equal opportunity in education and employment. The University prohibits discrimination against any employee, applicant for employment, student or applicant for admission on the basis of any protected class. Protected classes include age, color, creed, disability, ethnicity, gender identity, gender expression, genetics, national origin, pregnancy, race, religion, ancestry, sex, sexual orientation, genetics, active military or veteran status or any other protected category under applicable federal and state or local law.

The University provides equal access and participation in all University activities without regard to sex. Sexual misconduct including sexual harassment, sexual assault and sexual exploitation are forms of sex discrimination and prohibited under Title IX of the Higher Education Amendments of 1972, Title VII of the Civil Rights Act of 1964, and Chapters 151B and 151C of the Massachusetts General Laws. If this conduct occurs off campus, it may fall under the purview of Title IX and Title VII and the University reserves the right to act on incidents occurring off campus.

In addition to the above-mentioned regulations, the University also complies with the Violence Against Women Reauthorization Act of 2013 (VAWA reauthorized in 2022), the Clery Act, and the Campus SaVE Act.

Because the University takes allegations of discrimination/harassment seriously, the University will respond promptly to complaints of discrimination/harassment and will take appropriate action where it is determined that such inappropriate conduct has occurred. Furthermore, the University will act promptly to eliminate the conduct and impose such corrective action and sanctions as necessary.

This policy applies to any individual of either sex who participates in the University community as a student, faculty, staff member, visitor, or any other persons having dealings with the institution.

The Chief Human Resource Officer (CHRO) serves as the EEO Officer and ADA 504 Coordinator and oversees the University's compliance efforts with discrimination and equal opportunity. The Title IX & Compliance Officer serves as the Title IX Coordinator.

Internal inquiries or reports about violations of this policy may be made to:

Title IX Coordinator
Sarah C. Butterick
Title IX & Compliance Officer
Rivers Memorial, Room 109
(413) 782-1216
sarah.butterick@wne.edu

ADA/504 Coordinator, Equal Employment Opportunity Officer
Lucinda Donnelly
Associate VP of Human Resources
Rivers Hall, Room 104
(413) 782-1343

Deputy Title IX Officers

Lori Mayhew-Wood
Associate Athletic Director (Operations) and Senior Woman Administrator
Email: lori.mayhew@wne.edu
Phone: (413) 796-2230
Office: The Caprio Alumni Healthful Living Center (CAHLC)

Jordan G. Hall
School of Law Associate Dean of Student Affairs
Email: jordan.hall@law.wne.edu
Phone: (413) 782-1376
Office: Law School Dean Suite

Beth Hill
Director of Community Standards and Education
Email: beth.hill@wne.edu
Phone: (413) 782-1368
Office: Student Affairs, Campus Center, Room 225

Michelle Clark
Assistant Registrar
Email: michelle.clark@wne.edu
Phone: (413) 796-2078
Office: Enrollment Services, D'Amour Library

Amy Burton
Assistant Dean for Student Affairs, Assistant Professor of Occupational Therapy
Email: amy.burton@wne.edu
Phone: (413) 796-2010
Office: College of Pharmacy & Health Sciences

Michael Vallee
Head Athletic Trainer
Email: michael.vallee@wne.edu
Phone: (413) 782-1599
Office: The Caprio Alumni Healthful Living Center (CAHLC)

Inquiries may be made externally to Office for Civil Rights (OCR)

US Department of Education 400 Maryland Ave SW Washington, DC 20202-1100
Customer Service Hotline # (800) 421-3481
Facsimile (202) 453-6012
TDD# (877) 521-2172
Email: OCR@ed.gov
Web: http://www.ed.gov/ocr

Office for Civil Rights,
Boston Office
U.S. Department of Education
8th Floor
5 Post Office Square
Boston, MA 02109-3921
Telephone: (617) 289-0111
Facsimile: (617) 289-0150
Email: OCR.Boston@ed.gov

Boston Office-EEOC
John F. Kennedy Federal Building 475 Government Center
Boston, MA 02203
Phone: 1-800-669-4000
Fax: 617-565-3196
Complaints can be filed Monday through Friday, from 8:30am to 3:00 pm.

Massachusetts Commission Against Discrimination (MCAD)
436 Dwight Street, Room 222
Springfield, MA 01103

Accommodation of Disabilities

The University is committed to full compliance with the American with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against qualified persons with disabilities.

The Associate Vice President of Human Resources has been designated as the ADA/504 Coordinator for the University, responsible for coordinating efforts to comply with all disability laws.
Employees requesting reasonable accommodation should complete the ADA Accommodation Request Form found on the Human Resources web page.

Students requesting accommodation should contact the Office of Student Accessibility Services located in Herman Hall, Room 105.

Firearms Possession

The General Laws of the Commonwealth of Massachusetts "(MGLC. 269 Section 10 (j))" prohibit the unauthorized possession of any firearm on the campus of any college or university within the Commonwealth. Students should be aware that the Commonwealth of Massachusetts strictly enforces its firearm laws. In Massachusetts, conviction for the illegal possession of a firearm carries a mandatory one-year jail sentence.

Hazing

Under Massachusetts General Laws, Chapter 269, Sections 17, 18, and 19, any form of "hazing" is considered to be a criminal offense punishable by a fine and/or imprisonment. Furthermore, persons who witness or have knowledge of hazing incidents and fail to report them are also subject to similar penalties.

Each Western New England University student organization and athletic team, at the beginning of the academic year, and every student, at the time of registration, is provided with a copy of the Massachusetts General Laws concerning hazing. The officers of student clubs and organizations are required to sign a formal statement acknowledging receipt of such regulations and verifying their adherence to refrain from any harassment or activities which may serve to cause embarrassment to prospective members, initiates, or pledges. Any student organization found to be involved in such hazing or harassment of members or prospective members will have its recognition immediately withdrawn and be required to disband. Individual organizers and participants in hazing will be subject to strong disciplinary action, including immediate dismissal from the University.

Immunizations and Health Record Requirements

The laws of the Commonwealth of Massachusetts and Western New England University Health Services require all full-time students to present evidence of immunization against measles, mumps, rubella, diphtheria, tetanus/pertussis, hepatitis B, varicella and meningitis. This requirement may be met by credible medical documentation or laboratory confirmation of immunity known as titers.

Immunizations may be received in Health Services and will be billed to insurance. Immunization history is included in the admission physical examination documentation and is to be submitted to Health Services by August 1. Students may not be allowed to move on campus, and or, begin classes without the required admission document and immunization record.

Selective Service Registration

All male students who have not served either on active military duty or are not members of the Reserves and/or National Guard, or are not citizens of specific Federated States or Trust Territories, within 30 days of their 18th birthday must register with Selective Service. Furthermore, under Federal Regulations, Subpart C-Statement of Educational Purpose and Selective Service Registration Status, Sections 668.31, .32 and .33, appropriate registration with Selective Service is necessary before receiving any funds under Title IV, Higher Education Act Programs. The student can register for Selective Service during the FAFSA application process or by going online to www.sss.gov. Until this has been done, he is ineligible to receive Title IV funding, including Perkins Loans, Ford Direct Loans, Supplemental Loans, Pell Grants, Work-Study, and similar federal monies.

Smoke-Free Environment

In compliance with Massachusetts Smoke Free Workplace Law, M.G.L. Ch. 270 §22, the University is instituting a new smoking policy. This policy prohibits the use of any smoking paraphernalia, including electronic cigarettes and/or vapor smoking devices, within 25 feet of any University building, its entrance or windows. Furthermore, no smoking is permitted within any University building, academic or residential. The University anticipates the full cooperation of its students, faculty, staff, vendors, and visitors as to their compliance with this policy.

Student Right-to-Know and Campus Security Act (Clery Act)

The University is in compliance with the federal Student Right-to-Know and Campus Security Act which requires colleges to disclose graduation rates for students and to make available certain statistics and campus security policies. According to the requirements, data in these areas were tabulated beginning July 1, 1991, and reported during the summer of 1992 and each summer thereafter. It is the University's policy to provide information concerning security services available on campus. The University also practices the policy of notifying the University community as soon as possible after the commission of any crime that might portend personal danger to either students or employees. Campus crime statistics are available from the University's Department of Public Safety. Enrollment Services makes available data on graduation rates, athletic participation rates, and financial support.

Pursuant to the Campus Sex Crimes Prevention Act, any member of the Western New England University community may obtain information provided by the Commonwealth of Massachusetts as to any registered sex offender who may be enrolled or working at the University by contacting the Department of Public Safety.

Universal Health Care

The Commonwealth of Massachusetts passed the Universal Health Care Act in 1988. Its provisions require that all full-time and three-quarter-time students be covered by health insurance that contains comprehensive, specified areas. Students must either enroll in the policy provided by the University or negotiate a hard waiver stipulating that the personal coverage already possessed contains all of the required coverage. No student can be admitted to class until one of the above options has been exercised.

Catalog Disclaimer

The academic requirements and regulations of Western New England University are published in this official University catalog and in other University announcements. This catalog was prepared with information available at the time of publication and is subject to change. The University reserves the right to terminate programs or change its program requirements, content and sequence of courses, and program offerings. The University also reserves the right to change without notice its fees and charges, course offerings, academic policies, calendars, regulations, and other provisions cited in this publication.

The Provost and Senior Vice President for Academic Affairs is the official representative of the University in matters pertaining to the scholastic life of the student body.

Regulations made by the Provost, in concert with the faculty, in addition to, in abrogation of, or in interpretation of the regulations stated herein have the same force as the regulations themselves. Further information and advice regarding academic regulations may be secured by inquiring in the Office of the Provost and Senior Vice President for Academic Affairs or the Office of the Registrar.

The requirements to be met by students are stated in the University catalog current at the time of the student's initial matriculation or declaration of a major. Students are responsible for the information contained in the University catalog; they are to be acquainted with and assume responsibility for all requirements of their degree program. Failure to read and comply with University regulations will not exempt students from those regulations. In case of ambiguity, discrepancy, or disagreement, the regulations stated in this catalog and any subsequent modifications or interpretations by the Provost and Senior Vice President for Academic Affairs will prevail.

Students separating from the University completely for one year or more are bound by the catalog in effect when they re-enroll.

The University is an Affirmative Action/Equal Opportunity Employer.

Catalog Errata and Addenda

This page summarizes catalog changes that have been made to the 2023-2024 Western New England University Academic Catalog since the initial release on July 1, 2023.

1. Updates to the active faculty listing.
2. Changes to Advising for Transfer Students.
3. Academic Integrity policy information added to the Graduate Academic Information page.
4. Clarifying language change to the Undergraduate/Graduate or Doctoral Professional Practice Degree Programs page.
5. Correction to MATH281 Foundations of Mathematics (title change); MATH 282, MATH 369 and MATH 380 deactivated.
6. Corrections to the BSE in Biomedical Engineering program's Software Engineering Sequence.
7. Reactivating PSY-105.
8. Changes to the Procedure of Withdrawing.
9. Changes to the LSOC.BA - Missing program program.
10. Updates to the Program Educational Objectives for undergraduate civil, electrical and computer engineering programs in accordance with ABET accreditation. Impacted programs include the BSE in Civil Engineering, the BSE in Civil Engineering/Environmental Engr Conc, the BSE in Civil Engineering/Railway Engr Conc, the BSE in Computer Engineering, and the BSE in Electrical Engineering.
11. Clarification that the 15-week refund policy also applies to the 16-week spring Law term.
12. Updates to the Undergraduate Admissions Advanced Placement (AP) page to include exams, minimum scores and credits awarded at WNE.
13. Pages or sections omitted in the migration have been added for the College of Arts & Sciences Requirements, College of Engineering Requirements, and the MBA Program Structure.
14. Laboratory Fees added to the Fees, Room & Meal Plan page.
15. BSE/MSE in Civil Engineering omitted in the migration have been added.

Undergraduate Admissions

Prospective students and parents are encouraged to visit the campus and to avail themselves of the opportunity for a personal tour and information session. Students and parents also have the opportunity to attend a series of Open House programs. These programs are held on selected Saturdays and Sundays and include a tour of the campus. Currently enrolled students conduct the tours and can provide applicants with a personal perspective of the University and student life.

In addition to a campus visit and the University literature, information is available electronically at www.wne.edu/admissions.

The Admissions Office can be contacted through the following means:

- Telephone: 800-325-1122, ext. 1321 or 413-782-1321
- Fax: 413-782-1777
- Email: learn@wne.edu

Undergraduate Admissions

Applying for Full-time Admission

Applying for Full-time Admission

The following procedure should be completed for admission as a freshman or transfer student for full-time study (12 credit hours or more per semester).

1. Students should submit a completed application. An application can be submitted online through our website (www.wne.edu/admissions) or students can complete the Common Application.
2. The completed application form should be returned with the nonrefundable $40 application fee.
3. Students should forward to the Admissions Office an official high school transcript(s). First term senior grades may be required for some students. Transfer students should forward official transcripts of final secondary work, as well as any previous undergraduate study, to the Admissions Office. Students can also submit the GED or HISET.
4. WNE is test optional for all programs. However, results of the SAT I or ACT examinations should be forwarded to the Admissions Office if students would like them to be considered. The CEEB number for the SAT is 3962; the college code for the ACT is 1930

Application Procedure for International Students

International students who are proficient in the English language and who wish to be considered for admission should comply with the following procedure:

1. Students should submit a completed application. An application can be submitted online through our website (www.wne.edu/admissions). Students can also complete the Common Application.
2. The completed application form should be returned with the nonrefundable $40 application fee (U.S. dollars).
3. Students should have their school forward to the Admissions Office an official English translation of the high school transcript(s) as well as an official transcript of first term senior grades when available. Transfer students should have their school forward to the Admissions Office an official English translation of transcripts of final secondary school work as well as any previous undergraduate study.
4. Proof of English proficiency is required for admission. This can be done through submission of the Test of English as a Foreign Language (TOEFL), IELTS, EIKEN, or PTE Academic. SAT or ACT scores can be submitted instead of the other assessments. English proficiency can also be shown by submitting proof of completion of an Intensive English program that we have an agreement with or schooling within the US or other English-speaking countries. Students can find a list of the ways to meet the English language requirement on our website.
5. An Affidavit of Support form must be submitted to the Admissions Office.
6. An official bank statement declaring that the financial sponsor has sufficient funding to support the student's education at Western New England University should be submitted on the bank's stationery.
7. A copy of the student's passport should be provided.

The I-20 Form will be issued to an accepted international student.

Undergraduate Admissions

Specific College Requirements

Specific College Requirements

Persons admitted as regular degree-seeking candidates must have graduated from an approved secondary school or have obtained a General Equivalency Diploma (GED) or HISET. They must also have successfully completed the following minimum preparatory units:

College of Arts and Sciences

The College of Arts and Sciences requires four units English; one unit of laboratory science; and two units mathematics equivalent to two of the following: algebra I, geometry, or algebra II.

1. One unit of chemistry and one unit of biology are required for prospective majors in biology, chemistry, health sciences, health studies, forensic biology, forensic chemistry, neuroscience, pre-occupational therapy, undergraduate pharmacy, and pre-physician assistant. In addition, one unit of physics is recommended for prospective majors in chemistry, forensic chemistry, health sciences, neuroscience, undergraduate pharmacy and pre-physician assistant.
2. Prospective majors in biology, health studies, pre-occupational therapy, computer science, information technology, and neuroscience are required to present three units of mathematics; a fourth year is recommended.
3. Prospective majors in chemistry, forensic biology, forensic chemistry, health sciences, mathematics, undergraduate pharmacy, and pre-physician assistant are required to present four units of mathematics. Students must arrive calculus ready.

College of Business

The College of Business requires four units English; one unit of laboratory science; three units mathematics equivalent to algebra I, geometry, and algebra II; and one unit United States history.

College of Engineering

The College of Engineering requires four units English; four units mathematics equivalent to algebra I, geometry, algebra II, and an additional year beyond algebra II (such as precalculus) which includes trigonometry; one unit of laboratory science; and one unit of physics or chemistry (preferably both). Students must arrive calculus-ready.

Undergraduate Admissions

Admission Decisions & Enrollment Deposits

Admission Decisions and Enrollment Deposits

When Admission Decisions are Made

Western New England University begins accepting first-year students for the fall semester in September. Transfer students are accepted for the fall semester beginning in December/January once final grades have been submitted for that current semester. The Undergraduate Admissions Office continues to review applications until the class is filled. The University also enrolls students midyear. Acceptance for the January semester begins in early fall.

When it is Necessary to Declare Enrollment Intentions

A nonrefundable tuition deposit of $200 is required by May 1 from each student who has been accepted. The deposit will be deducted from total charges due for the first semester enrolled. After the tuition deposit has been paid, the following are required prior to the beginning of classes:

1. Physical examination form including immunization verification completed by the applicant's healthcare provider.
2. Verification of health insurance coverage in compliance with Massachusetts state law, or participation in the University's insurance program.

Undergraduate Admissions

Advanced Placement (AP)

Advanced Placement (AP)

The University will normally grant credit for AP subjects taken in high school and for which a student scores a 3 or higher on the standardized AP exam. A score of 4 or 5 may be required to obtain credit for a specific course. Appropriate credit depends on the specific academic program to which the credit is applied. In some circumstances, the credit will be applied to an elective rather than a course required for the major. A maximum of 30 AP credits can be used to satisfy degree requirements.

The Dean's office of each college determines how the credits will be applied for courses taught in that college.

Course and Examination	Minimum score for Awarding Credit	Semester Hours
Art History	3	3 (Art Elective)
Biology	3	3 (BIO 101)
	4	4 (BIO 107 & 117)
Calculus AB	3	3 (MATH 123 for all majors, excluding those requiring MATH 133.)
	4	4 (MATH 133)
Calculus BC	3	4 (MATH 133)
	4	8 (MATH 133 & 134)
Calculus AB Subscore	3	3 (MATH 123 for all majors, excluding those requiring MATH 133.)
	4	4 (MATH 133)
Chemistry	3	3 (CHEM 101)
	4	4 (CHEM 105)
Chinese Language & Culture	3	6 (General Elective)
Computer Science A	3	3 (General Elective)
	4	4 (CS/IT 102)
Computer Science Principles	3	3 (CS 132)
Economics/Macroeconomics	3	3 (EC 112)
Economics/Microeconomics	3	3 (EC 111)
English/Language and Composition	3	3 (ENGL 132)
English/Literature and Composition	3	3 (ENGL 133)
Environmental Science	3	3 (BIO 153)
European History	4	6 (History Elective)
French Language & Culture	3	6 (General Elective)
German Language	3	6 (General Elective)
Government and Politics/Comparative	3	3 (POSC 201)
Government and Politics/U.S.	3	3 (POSC 102)
Human Geography	3	3 (GEOG 190)
Italian Language & Culture	3	6 (General Elective)
Japanese Language & Culture	3	6 (General Elective)
Latin	3	6 (General Elective)
Music Theory	3	3 (Music Elective)
Physics 1	3	3 (PHYS 101)
	4	4 (PHYS 133)
Physics 2	0	N/A
Physics 1 + 2 Combined	3 (on both)	6 (PHYS 101 and PHYS 15X) (Natural Science Perspective)
	4 (on both)	8 (PHYS 123 & 124)
Physics C: Electricity & Electromagnetism	3	4 (PHYS 134)
Physics C: Mechanics	3	4 (PHYS 133)
Precalculus	3	3 (MATH 109)
Psychology	3	3 (PSY 101)
Research	3	3 (General Elective)
Seminar	3	3 (General Elective)
Spanish Language & Culture	3	6 (SPAN 101 & 102)
Spanish Literature & Culture	3	3 (General Elective)
Statistics	3	3 (QR 112 or MATH 120 or MATH 121)
Studio Art: Drawing	3	3 (Art Elective)
Studio Art: 2D Design	3	3 (Art Elective)
Studio Art: 3D Design	3	3 (Art Elective)
United States History	4	6 (HIST 111 & 112)
World History	4	6 (HIST 205 & 206)

Transfer Articulation Agreements

Transfer Articulation Agreements

Transfer articulation agreements have been arranged between Western New England University and various community and junior colleges. Associate's degree graduates who have followed the prescribed programs of study at these specific institutions may be able to complete requirements for baccalaureate degrees in two years at Western New England University.

Joint Admissions

The Joint Admissions Program is offered in collaboration with the following community colleges: Berkshire, Greenfield, Holyoke, and Springfield Technical. The program is designed to facilitate the transfer of students earning an associate's degree from a designated community college. Eligible students are conditionally accepted to Western New England University upon enrolling in the program. An emphasis is placed on advisement to ensure the maximum transfer credit is applied towards an approved major, and to ensure a smooth transition to Western New England University. Participating students must earn a minimum 2.300 cumulative grade point average (based on a 4.000 scale) and either the associate's degree or a minimum of sixty (60) semester hours. Students are subject to the same transfer credit restrictions that apply to traditional applicants.

Undergraduate Admissions

Transfer Credit Evaluation

Transfer Credit Evaluation

The number of transfer credits is based upon work completed at previous accredited institutions. The status of transfer students is not automatically determined by the number of credit hours already earned or by the nomenclature of courses taken. Rather, each transcript is evaluated on a course-by-course basis. Normally, credit is allowed for each course that is equivalent to a corresponding course at Western New England University provided the earned grade is C- or above. Within a few weeks of acceptance, the Undergraduate Admissions Office sends each transfer student a degree audit, which shows how each previous course applies to the student's specific degree program at Western New England University.

Up to 70 credits are acceptable in transfer from two-year colleges, and up to 90 credits from four-year colleges and universities (including any applicable two-year college credits and AP, CLEP, or IB credits).

The College of Business requires that the majority of credits, contact hours, or other metric in traditional business subjects counted toward the degree fulfillment be earned at Western New England University.

Undergraduate Admissions

Credit for Prior Learning

Credit for Prior Learning

Undergraduate students may satisfy up to 30 credit hours of their degree requirements through demonstration and documentation of prior learning. Outlined below are several vehicles through which prior learning may be assessed.

College-Level Examination Program (CLEP)

This nationwide program allows undergraduate students to demonstrate academic competence and obtain college credit by examination. Several general and subject area examinations are available. The subject matter of the examination taken must be applicable to the student's curriculum, but may not include foreign language in the student's native language. The student's academic Dean must be notified of the intent to take such examinations. The scores must be submitted to the appropriate school for evaluation. CLEP credit may not be used to meet upper-level course requirements.

Credit for Nontraditional Educational Experience

The University will review for possible credit, educational programs sponsored by non-collegiate organizations such as business, industry, government, professional, voluntary associations, and workplace experience. Decisions to award transfer credit are based primarily upon *The National Guide to Educational Credit for Training Programs*, published by American Council on Education, and *The Directory of the National Program on Non-collegiate Sponsored Instruction*, published by the Board of Regents of the State of New York. In addition, courses and training obtained through the Armed Services will be reviewed on the basis of the recommendations made by the American Council on Education in *The Guide to the Evaluation of Educational Experiences in the Armed Services*.

Portfolio-based Credit

The Deans may award transfer credit for portfolio-based credits for prior learning that have been assessed by Charter Oak State College or other regionally accredited colleges or universities.

Students who are interested in obtaining more information about portfolio assessment should contact the Admissions office for referral to Charter Oak State College where appropriate.

Undergraduate Admissions

Transfer Student Degree Requirements

Transfer Student Degree Requirements

Customarily, a student who has received an associate's degree in an approved program from an accredited college and who is accepted for admission will be granted junior status. Although it is often possible for such a student to complete a program in a chosen field within two years at the University, the specific requirements of some majors may require a longer period of study. It is necessary for a transfer student to complete at least one year (30 credit hours) of study at Western New England University in order to be granted a degree. Students transferring to Western New England University may follow the requirements of their chosen major using the year when they become a student at Western New England University or the year when they first matriculated at their first college if less than four years prior to the transfer to Western New England University. This decision will be made by the student and approved by the chairperson of the major program.

Undergraduate Admissions

Advising for Transfer Students

Advising for Transfer Students

Transfer students are assigned an academic advisor by the academic dean's office of the college in which they are enrolled and where the desired major is administered. Prior to actual enrollment, transfer students are advised by this advisor or by an alternative academic advisor designated by the student's academic dean's office. In most cases, formal communication begins in early summer for fall admission and in December for spring semester entry. The academic dean's office also serves as the point of contact for initial course registration. In addition, general transitional guidance may be sought from University Advising within the Vanech Family University Advising Center. Issues pertaining to changing a major prior to matriculation should be directed to the Admissions Office.

Undergraduate Admissions

Applying for Part-time Study

Applying for Part-time Study

The Admissions Office oversees admission to part-time study. Students are accepted on a rolling admissions basis.

1. The application for part time study can be completed online at www.apply.wne.edu.
2. A completed application includes:
   - The completed, signed application form
   - The nonrefundable $40 application fee
   - An official high school transcript or proof of the achievement of high school equivalency
   - An official transcript from each institution of higher education attended
3. Students admitted to part-time status may register for day, evening, or online courses.

Western New England University has a long tradition of providing continuing education for students who seek part-time day study and those who are beginning or returning to higher education after spending time in other pursuits.

Graduate Admissions

Admission to all graduate degree programs at Western New England University requires an earned baccalaureate from an accredited college or university and additional materials as described below. Applicants to a number of the master's programs may be admitted for any term on a rolling admissions basis. However, some graduate programs will have specific entry points for when candidates will begin their studies. Please reference the graduate studies website for further information.

The application process and admission to the JD and LLM programs in the School of Law are described here.

The application process and admission to graduate and doctor's-professional practice programs in the College of Pharmacy and Health Sciences, including the PharmD and OTD programs, are described here.

Graduate Transfer Credit

Students who have earned graduate credit before they apply to Western New England University may request the transfer of a maximum of six credit hours for 30-credit master's programs or 12 credit hours for master's programs comprising at least 36 credits. The minimum required grade for transfer is B (3.000). Final award of graduate transfer credit is at the discretion of the dean responsible for the applicant's degree program.

Credit Earned in Nondegree Graduate Status

Graduate credit earned at Western New England University in nondegree graduate status may be applied toward graduate degree requirements up to a normal limit of six credit hours. The minimum grade is B (3.000).

Time Limits

Accepted graduate credits may be applied toward graduate degree requirements for no more than eight years. For example, an acceptable graduate course completed in the fall term of 2021 counts toward graduation only until the end of the 2029 summer term.

Graduate Admissions

Applying for Graduate Programs

Applying for Graduate Programs

Apply online at wne.edu/gradapp.

1. Arrange to have official college/university transcripts sent directly to Graduate Admissions from all institutions attended.
2. Arrange to have other documents, such as letters of recommendation or official test score reports, sent directly from the reporting person or agency as described below for the specific degree programs.
3. Completed applications are reviewed by the Graduate Admissions Committee of the appropriate College.

College of Arts and Sciences

Master of Arts in Mathematics for Teachers and Master of Arts in English for Teachers

The MA in Mathematics for Teachers and MA in English for Teachers programs are designed primarily for secondary and middle school teachers in the specific disciplines. These programs are also available to candidates with an interest in further study in either mathematics or English in nonteaching fields.

The requirements for these degrees are:

1. A baccalaureate degree from an accredited college or university
2. An overall undergraduate grade point average (GPA) of at least 2.500 (a GPA of 3.000 in the major is preferred for both programs)

3. An academic or professional background equivalent to at least a minor in mathematics for the MA in Mathematics for Teachers program or in English for the MA in English for Teachers program. Further, it is preferable that applicants have either a Provisional or Initial License in teaching. Applicants lacking an undergraduate major in mathematics or English may have to take more than ten courses in order to complete the corresponding program
4. A minimum of two letters of recommendation, at least one of which must be from the candidate's supervisor
5. A current curriculum vitae
6. Submission of a personal statement

Master of Science in Applied Behavior Analysis

Developed in response to the increasing demand for teachers and practitioners trained in best practices for the education and treatment of individuals with autism and related disabilities, the MS in Applied Behavior Analysis at Western New England University will give working professionals the skills needed to work with this population. Through a combination of coursework and supervised practical experiences, students completing this program will earn a Master's degree in Applied Behavior Analysis and meet the Behavior Analysis Certification Board (BACB) requirements for taking the exam to become Board Certified Behavior Analysts.

The requirements for the MS in Applied Behavior Analysis are:

1. A minimum of a bachelor's degree, and at least a 3.000 grade point average in their bachelor's program
2. Three letters of recommendation
3. Submission of a personal statement
4. A current curriculum vitae

Master of Science in Computer Science

Computer Science is a rapidly changing field, where professionals working in the computing disciplines must constantly keep abreast of emerging theory, technologies, and techniques in order to keep pace with industry practices. The MS in Computer Science provides increased exposure to a breadth of computing content areas including machine learning, cybersecurity, and software development. Graduates will be positioned to improve their professional credentials and take on roles in more specialized areas including leadership roles as project managers.

The requirements for the MS in Computer Science are:

1. A minimum of a bachelor's degree from an accredited college or university
2. Two letters of recommendation
3. A current curriculum vita

Doctor of Philosophy in Behavior Analysis

Developed in response to the increasing demand for scientists and practitioners of evidence-based methods for the education and treatment of individuals with autism and related disabilities, the PhD in Behavior Analysis at Western New England University will give students the skills to become a leading voice in the field. Through a combination of coursework and supervised practical and research experiences, the aim of the Department of Psychology is to train researchers and scientist-practitioners in the discovery, translation, and application of knowledge toward solving human behavior problems of societal importance (e.g., autism and related disabilities). All classroom course work is done at the New England Center for Children.

The requirements for the PhD in Behavior Analysis are:

1. A master's degree in behavior analysis, or certification as a master's-level behavior analyst by the Behavior Analysis Certification Board
2. A minimum of a 3.600 grade point average (GPA) in master's degree program. (Tentative acceptance is allowed for having a GPA between 3.250 and 3.600)
3. Three letters of recommendation
4. Submission of a personal statement
5. A current curriculum vitae

College of Business

For the Master of Business Administration (MBA) or Master of Science (MS) degrees Accounting, Business Analytics, Organizational Leadership, and Sport Leadership and Coaching in the College of Business, the requirements are:

1. A baccalaureate degree from an accredited college or university
2. Two letters of recommendation
3. Submission of two essays
4. A current curriculum vitae
5. An official score report for the Graduate Management Admissions Test (GMAT) taken not more than five years prior to the application date, or satisfaction of exemption as indicated below:

   a. The completion of a graduate degree, master's or doctorate, from an accredited college or university with quantitative coursework (six or more credits), averaging a GPA of 3.000 or higher.

   b. Completion of a bachelor's degree from Western New England University or an AACSB accredited program with a GPA of 3.300 or higher. If students attended multiple institutions, GPA will be based on the cumulative GPA of all institutions attended. The waiver will be granted if the earned bachelor's degree is no more than five years prior to the application date. In order to be eligible for the waiver, if the student has taken Western New England University graduate courses as an undergraduate, the student must have a minimum "B" or 3.000 in each course (for Tentative GMAT Waiver and Admit Status: While finishing the Western New England University degree, the student must maintain an undergraduate GPA of 3.300 and a minimum of "B" or 3.000 in each Western New England graduate course if tentatively admitted during senior year.)

   c. Completion of a Juris Doctor degree from an ABA accredited program

   d. Acceptable Graduate Record Examination (GRE) score

   e. Current enrollment in the Western New England University School of Law JD program in good academic standing (Arrange for a copy of LSAT report to be sent from the School of Law to the Admissions Office.)

   f. Have passed all sections of the Uniform CPA Exam

g. Current approved professional certification: Certified Public Accountant (any state), Certified Management Accountant, Certified Network Engineer, Certified Professional Engineer, Certified Integrated Resource Manager, Certified in Production and Inventory Management, Certified Financial Planner, Certified Financial Analyst, Certified in Financial Management, Registered Pharmacist, Project Management Professional, Registered Nurse, Six Sigma Green Belt or higher, or Fellow of Society of Actuaries
h. A minimum of four years of professional experience which is reflected in a résumé and written statement that demonstrates:
i. Career progression toward senior levels of management (evidence of leadership, supervisory, and decision-making skills)
j. Increasing Budgetary Responsibilities (not tracking but oversight, planning, and revenue forecasting and resource allocation)
k. For the MS in Organizational Leadership, successful completion of the Leadership Certificate with a B (3.000) GPA and no grade lower than "B"
l. For the MS in Sport Leadership and Coaching, successful completion of the Sport Leadership Certificate with a B (3.000) GPA and no grade lower than a "B"

For the **Graduate Leadership Certificate** and **Graduate Sport Leadership Certificate**, the requirements are:
1. An undergraduate degree with GPA of 3.000 or higher
2. Personal statement

College of Engineering

Master's Programs

For programs leading to the Master of Science in Engineering in Civil, Electrical, Industrial, or Mechanical Engineering, and the Master of Science in Construction Management or Engineering Management, the requirements are:

1. Graduate programs in engineering require a baccalaureate degree in engineering, or a closely related field, from an accredited college or university. Those seeking admission to the master's programs without such a degree may petition to have their baccalaureate degree and professional experience accepted as a substitute;
2. A grade point average in the last half (usually 60 credit hours) of undergraduate work of a minimum of B (3.000);
3. Two letters of recommendation from persons acquainted with the applicant's business, professional, or academic achievements; and
4. A current curriculum vitae

Doctoral Programs

PhD in Engineering Management

This program focuses on developing skills needed to conduct rigorous research in areas related to the improvement, design, and management of projects and programs within complex human-technological systems. These systems include engineering systems, health care systems, service systems, and logistical/transportation systems. Through a combination of coursework and directed research, the Department of Industrial Engineering and Engineering Management will provide a solid foundation and depth of engineering management theory and practice, provide breadth and depth across multiple types of human technological systems, and contribute to the body and knowledge in engineering management.

The requirements for the PhD in Engineering Management are:

1. Possession (or nearing the completion) of a master's or bachelor's degree in engineering science, or a closely related discipline. Non-engineer applicants may gain conditional admittance that requires successful completion (B or better) of a set of leveling courses as determined by the PhD Admission Committee
2. Competence in at least one structured programming language: (R, Python, C++, etc.)
3. Evidence of completion of Probability and Statistics (C or better)
4. A minimum cumulative grade point average of a 3.500 in all graduate work or a minimum undergraduate cumulative grade point average of a 3.500. Tentative acceptance is allowed for candidates having a GPA between 3.000 and 3.500
5. A Graduate Record Exam (GRE) score from the last five years with a combined verbal and quantitative score of 300, and a quantitative score in at least the 50th percentile
6. A current curriculum vitae
7. Two letters of recommendation

PhD in Industrial Engineering

This program is a thesis-based, research-oriented degree for candidates who intend to pursue careers in Organizational Management, Research and Development, Research Management, or Academia. The program is intended to be versatile and tailored to support individual research initiatives. Course requirements are established by the doctoral committee. Areas of research include Manufacturing, Advanced Production and Inventory Modeling, Supply Chain, Advanced Manufacturing Systems, Quality Control and Analysis Systems, System Risk and Safety, as well as a wide breadth of topics that are defined by the student and advisor. A combination of coursework, milestone examinations, and independent research culminate into a dissertation in which candidates will gain the foundation and depth of industrial engineering theory and practice.

The requirements for the PhD in Industrial Engineering are:

1. Possession (or nearing the completion) of a master's or bachelor's degree in Industrial Engineering or closely related discipline with a GPA of 3.500 or greater (4.000 scale)
2. A Graduate Record Exam (GRE) score from the last five years, with scores that place the student in the 60% percentile in each of the three areas of testing (Candidates having scores below the established GPA and GRE requirements will be considered on a case-by-case basis upon petition.)
3. Evidence of completion of Probability and Statistics (B or better)
4. Competence in at least one structured programming language (R, Python, C++, etc.);
5. A current curriculum vitae
6. Two letters of recommendation

PhD in Mechanical Engineering

This program focuses on opportunities for candidates to develop levels of expertise and knowledge consistent with a career of technical leadership. One goal of the program is to prepare graduates with appropriate technical depth and breadth of knowledge and experience in order to become researchers and practitioners in mechanical engineering and technology. Areas of research include Mechatronics and Robotics, Thermo-fluids and Energy, Vibrations and Mechanics, Energy Systems, Novel Materials for energy and environmental applications, and Design and Manufacturing. A combination of coursework and independent research culminate into a dissertation in which a candidate will gain the foundation and depth of mechanical engineering theory and practice.

The requirements for the PhD in Mechanical Engineering are:

1. Possession (or nearing the completion) of a master's or bachelor's degree in Mechanical Engineering, or a closely related discipline (Students seeking admissions to the PhD program will have an undergraduate and/or graduate academic record that demonstrates outstanding performance.)
2. A Graduate Record Exam (GRE) score from the last five years with a combined verbal and quantitative score of at least a 300 with a quantitative score in at least the top 40th percentile (Candidates having scores below the established GRE requirement will be considered on a case-by-case basis upon petition.)
3. A current curriculum vitae
4. Two letters of recommendation

Graduate Engineering Certificates

1. A baccalaureate degree in engineering, or a closely related field, from an accredited college or university (Those seeking admission to a certificate program without such a degree may petition to have their baccalaureate degree and professional experience accepted as a substitute.)
2. A current curriculum vitae

College of Pharmacy and Health Sciences

The College of Pharmacy and Health Sciences (COPH) offers a full-time, four-year Doctor of Pharmacy program. A total of 146 academic credits are required for graduation. The College also offers a full-time, three-year entry-level Doctor of Occupational Therapy program. A total of 109 academic credits are required for graduation.

Additional information is available by contacting:
Office of Student Affairs
Western New England University College of Pharmacy and Health Sciences
1215 Wilbraham Road
Springfield, MA 01119
413-796-2113 or email: healthprofessions@wne.edu

Doctor of Pharmacy Program

The Doctor of Pharmacy curriculum uses today's best practices to enhance learning and provides first-hand experience in our technologically advanced labs, in various types of pharmacy settings, and through service opportunities in the community. Students will learn the technical, social, and administrative aspects of pharmacy as well as develop the skills needed to become a healthcare leader

How Admissions Decisions Are Made
The admissions decision is based on a thorough review of submitted application materials, including GPA for required prerequisite coursework, PCAT composite score (if submitted), letters of recommendation, and other considerations relevant to the mission, vision, and values for the College of Pharmacy and Health Sciences (including service, advocacy, and leadership).

For students admitted to the Doctor of Pharmacy program through the 0-6 admissions pathway, a cumulative GPA of 3.100 following the first three semesters of the pre-professional curriculum is required to maintain seat assurance in the professional phase (years 3-6) of the curriculum. Qualified applicants will be invited to participate in an admissions interview and timed writing sample, both of which must be successfully passed by the student.

Individuals admitted to the Doctor of Pharmacy program through the 0-6 admissions pathway who do not attain a cumulative GPA of 3.100 following the first three semesters of the pre-professional curriculum may also progress into the professional phase (years 3-6) of the curriculum, but their progression is no longer assured and is subject to seat availability. For individuals seeking admission to the Doctor of Pharmacy program outside of the 0-6 admissions pathway, a GPA of 3.000 in the required prerequisite courses is preferred.

Individuals who are not admitted to the professional phase of the Doctor of Pharmacy program may pursue the Bachelor of Science in Pharmacy Studies degree (years 3-4), subject to seat availability.

Combined PharmD/Masters Programs: PharmD/MBA and PharmD/MS in Organizational Leadership
Candidates for the program are required to apply to both the MBA or the MS in Organizational Leadership through the College of Business and the PharmD program through the College of Pharmacy and Health Sciences.

Doctor of Occupational Therapy Program

See the Admissions Requirements in the Doctor of Occupational Therapy Program in the Occupational Therapy section of the catalog.

The entry-level Doctor of Occupational Therapy program will allow students to become practitioner scholars and transformative leaders. As professional leaders equipped with research evidence and global health policy perspectives, students will be broadly positioned to impact all populations, advance community health outcomes, and influence the development of future occupational therapists as members of collaborative interprofessional practice teams in current healthcare settings and emerging practice areas.

Master of Science in Pharmaceutical Sciences

A 38-credit Master of Science in Pharmaceutical Sciences degree is offered by the Department of Pharmaceutical and Administrative Sciences in the College of Pharmacy and Health Sciences. This degree program can be completed in five full-time semesters (fall, spring, summer, fall, spring). Students can customize the focus area of their research degree through available elective courses and by the selection of a thesis advisor in a specific field of medicinal chemistry, pharmacology, pharmaceutics, immunology, neuroscience, pharmacogenomics, toxicology, oncology, biomedical engineering, or cosmeceutical sciences. The available research focus areas for the MS in Pharmaceutical Sciences degree are Pharmacological and Biomedical Sciences, Pharmaceutics and Drug Delivery, Medicinal Chemistry and Drug Development, and Pharmacoeconomics and Healthcare Data Analytics. See the Admissions Requirements and Career Opportunities for this degree in the College of Pharmacy and Health Sciences Professional Programs section in this catalog.

Master of Science in Pharmacogenomics

A 41-credit Master of Science in Pharmacogenomics degree is being offered by the Department of Pharmaceutical and Administrative Sciences in the College of Pharmacy and Health Sciences. This degree program can be completed in as few as three full-time semesters (fall, spring, summer). Graduating from the MS in Pharmacogenomics program from WNE, students will be ready to make the most of emerging opportunities, from basic or industrial research to clinical implementation through a well-rounded program that aligns with your personal career goals. See the Admissions Requirements and Career Opportunities for this degree in the College of Pharmacy and Health Sciences Professional Programs section in this catalog.

School of Law

The School of Law offers full- and part-time JD programs designed to be completed in three and four years respectively. A total of 88 academic credits is required for graduation.

Additional information and an application form are available by contacting:

Admissions Office
Western New England University School of Law
1215 Wilbraham Road
Springfield, MA 01119
800-782-6665, or email: admissions@law.wne.edu

The School also offers an LLM degree in Estate Planning and Elder Law that can be completed in one year by a student attending full-time, or for part-time students, in two or three years. The programs are offered online. A total of 24 academic credits is required for graduation. Additional information and an application form are available by contacting:

LLM Admissions Office
Western New England University School of Law
1215 Wilbraham Road
Springfield, MA 01119
413-782-1426, or email: calexander@law.wne.edu

Graduate Admissions

How Graduate Admission Decisions Are Made

How Graduate Admission Decisions Are Made

The admission decision is based on the applicant's undergraduate academic performance in combination with other evidence such as official test scores submitted as part of the application. Applicants judged by the graduate admissions committee to be deficient in verbal, quantitative, or general academic preparation may be granted permission to register at the discretion of the committee. These students are allowed to take up to two courses as a nondegree student. Upon satisfying specified conditions, a student will be reconsidered for admission. Conditions may include, but are not limited to, satisfactory completion of prerequisite courses; demonstrated academic performance in graduate courses at Western New England University, and satisfactory completion of undergraduate English and/or mathematics courses.

School of Law

Admission to the JD program in the School of Law is dependent upon an applicant's performance on the Law School Admissions Test (LSAT), undergraduate grade point average, and other information that would assist the Admissions Committee in assessing the applicant's ability to pursue a career in legal education. College courses that improve an applicant's writing, analytical, and critical thinking skills are especially important.

Dual JD/Masters Programs: JD/MBA, JD/MS in Accounting or JD/MS in Organizational Leadership

Candidates for these programs are required to apply to both the MBA, MS in Accounting, or MS in Organizational Leadership program through the College of Business and the JD program through the School of Law.

Dual PharmD/Masters Programs: PharmD/MBA & PharmD/MS in Organizational Leadership

Candidates for the program are required to apply to both the MBA or the MS in Organizational Leadership through the College of Business and the PharmD program through the College of Pharmacy and Health Sciences.

Dual MS in Engineering Management/MBA

Candidates for this program are required to apply to both the MS in Engineering Management program through the College of Engineering and the MBA program through the College of Business.

Graduate Admissions

Graduate Program Status Categories

Graduate Program Status Categories

Applicants to graduate programs in Arts and Sciences, Business, and Engineering at Western New England University can be admitted in one of the following categories.

Degree Status

Students who are admitted as fully qualified to undertake a program leading toward a degree are termed degree status students.

Tentative Status

Students may be permitted to enroll in courses leading to a degree under tentative status before the application and evaluation process is complete. The tentative status is valid for a maximum of seven credits in the first term or two consecutive terms of no more than four credits each. Upon the conclusion of the tentative status period, the student's application and academic record will be evaluated. The evaluation will result in termination, admission to degree status, or admission to nondegree status.

Nondegree Status

Students who wish to take graduate courses outside of a degree program may be approved as nondegree status students. Nondegree status students do not require as much supporting documentation but are required to provide proof of a baccalaureate degree from an accredited college or university. They may take courses subject to space availability and an advisor's approval. Continuing registration requires minimum grades of B (3.000) in all Western New England University graduate courses. Nondegree students may apply a maximum of seven WNE credits toward a degree if they complete the application process and are accepted as degree status students. Nondegree status students who take more than seven credits and complete the requirements for a certificate may apply for degree status and, upon their acceptance into a degree program, all courses common to both the certificate and the degree will be applied to the degree.

Nondegree Admissions

The University offers nondegree enrollment for students who wish to explore undergraduate or graduate study and earn credit before they are formally admitted to a degree program, and for visiting students from other institutions. Academic requirements may change over time so that courses completed in the nondegree status may not be applicable to the program chosen at the time of matriculation. Nondegree students are not eligible for most types of financial aid.

Undergraduate Nondegree Students

Temporary nondegree status is available for students who wish to explore new subject areas before entering a degree program or earn credit prior to formal admission. This is also an option for visiting students from other colleges and universities who satisfy admissions requirements. Students may enroll in a maximum of 36 credits under nondegree status. Advising and registration of nondegree students takes place in the Colleges.

Permission to register requires proof of high school graduation or its equivalent. Continuing registration requires a minimum cumulative grade point average of 2.000 in courses taken at the University. Nondegree students must satisfy published course prerequisites and may be required to submit official transcripts as proof of appropriate preparation. Advising of nondegree students is provided through the colleges.

The online application for part-time nondegree study can be found here.

Nondegree Admissions

Certificate Programs for Nondegree Students

Certificate Programs for Nondegree Students

Western New England University makes several Certificate Programs available to those who do not want a degree, but who do want specialized training. Undergraduate certificates are only available to matriculated students. Graduate certificate programs are available to nondegree seeking students in engineering and business.

Additional information is available through the Admissions Office.

Undergraduate Academic Information

At Western New England University, students typically enroll in programs designed to be completed in four academic years. Bachelor's degrees are earned by completing at least 120 credit hours in a structured program, though undergraduate degrees in engineering and certain other degree programs can require up to 129 credit hours.

Undergraduate Academic Information

Academic Advising & Student Responsibilities

Academic Advising and Student Responsibilities

Academic advising at Western New England University is framed against the University Mission Statement and is guided by a commitment to student academic progress and personal growth. Specifically, advising is intended to enhance and support student learning in an atmosphere of personal concern. Advising seeks to engage intellectual growth and self-discovery and is carried out through a consistent exchange between student and advisor. That shared relationship thereby attempts to prompt students to develop decision-making skills, set realistic expectations, and practice the necessary coping strategies to attain their educational, life, and career goals.

Each full-time student is assigned a faculty advisor. In the first year of full-time study, the academic advisor is normally assigned on the basis of enrollment in First Year Seminar. After the sophomore year and beyond, students are normally assigned or may choose an advisor according to the academic department in which the student's major is contained. Students who are undecided remain with their current advisor or are assigned to the Academic Success Center (Campus Center Room 137, or 413-796-2027) until a major is declared. Academic advising is provided for part-time students through the appropriate college. Although the advisor should be consulted on matters of curriculum, the ultimate responsibility for decision on the student's program of study remains with the student. Furthermore, each student holds the ultimate responsibility to understand degree requirements and to plan for orderly fulfillment.

It is important that students work with their academic advisors to develop an academic plan enabling them to complete many of the fundamental General University Requirements by the end of the sophomore, or second, full year of study. While this may not always be possible due to schedule limitations of certain programs or other schedule anomalies, students should strive to acquire the prerequisite skills and knowledge necessary to succeed in their major programs. For example, students will need to have skills in research and writing in order to understand and complete assignments in upper division courses in and outside of their major fields of study. Students should also consult their advisor to choose elective courses that both broaden and deepen their knowledge of disciplines that are important for success and well-being beyond the University experience.

Undergraduate Academic Information

Course Loads

Course Loads

The University considers 12-18 credit hours per semester to constitute a normal course load for full-time students.

Students who have earned President's or Dean's List standing in the previous semester may enroll for 19 credit hours without special permission. In other cases, each request for enrollment for 19 or more credit hours per semester requires the recommendation of the student's advisor and approval by the Dean of the academic college in which the student is enrolled.

Undergraduate Academic Information

Online Course Loads

Online Course Loads

In order to experience a wide range of pedagogy, undergraduate students at Western New England University may take courses in different modalities in consultation with their academic advisor and with the following guidelines.

First-year students are allowed to register for up to four credits of asynchronous online, limited online, or synchronous online coursework during fall and spring semesters. This allows students to take one three-credit course, and if needed, a one-credit lab in both fall and spring semesters.

Sophomores and juniors are allowed to register for up to seven credits of asynchronous online, limited online, or synchronous online coursework during fall and spring semesters. This allows students to take up to two three-credit courses (one of which may be one of the rare four-credit online courses) in both fall and spring semesters.

Seniors and Veterans have no restrictions with respect to course modalities other than what is offered through the schedule. Students in the PharmD program who transfer into the PharmD distance pathway during their junior year are also exempt from online course modality restrictions.

Course limitations for summer and winter sessions default to the credit limitation of those respective sessions. Due to the abbreviated schedule of these terms, all students are limited to nine credits during the summer and three credits during the winter.

There is no restriction to the number of online courses/credits a full-time student can apply toward a degree provided the courses are equivalent to Western New England University courses. Exceptions are at the discretion of the Provost after consultation with the student's faculty advisor, the department chairperson of the student's major, and/or the Dean of the College of the student's major.

Undergraduate Academic Information

Degree Audits

Degree Audits

An automated degree requirement system, known as My Progress (located in the Student Planning section of Self-Service), assists students and advisors in assessing the progress of a student's program of study. It enables students and advisors to project the orderly fulfillment of their curriculum plan. It includes a record of all the student's courses completed to date and their courses in progress and serves as an unofficial projection of courses remaining in a degree program.

My Progress can also be used to determine the progress status of degree programs other than the currently declared major. In other words, if a Marketing major wants to determine the viability of becoming a Management major, students can select "View a New Program" to see how their courses taken to date apply and what degree requirements remain.

While the Degree Audit is a useful tool for planning the orderly fulfillment of degree requirements, students and advisors must realize it is not a replacement for the official academic transcript, nor should it be used as a substitute for verifying official degree requirements. The University catalog that the student has matriculated under is the primary source.

Undergraduate Academic Information

Class Standing Designations

Class Standing Designations

Students are designated as either first-year, sophomore, junior, or senior in accordance with the number of credit hours they have completed at the University in a structured degree program.

First-year: 0 - 29 credit hours completed

Sophomore: 30 - 59 credit hours completed

Junior: 60 - 89 credit hours completed

Senior: 90 or more credit hours completed

Undergraduate Academic Information

Course Numbering

Course Numbering

All courses in the catalog have course designation numbers. In general, the numbers designate the level of the course offering within a four-year curriculum and within a major program of study.

First-year courses are numbered: 100 to 199 (Lower Division)

Sophomore courses are numbered: 200 to 299 (Lower Division)

Junior and Senior courses are numbered: 300 to 499 (Upper Division)

Major programs of study typically consist of one or two 100-level courses and two or three 200-level courses taken as prerequisites for first-year and sophomores, and the remaining 300- and 400-level courses taken in the junior and senior years.

Undergraduate Academic Information

Credit Hour System

Credit Hour System

Credit in all programs is awarded in accordance with regional accreditation standards based upon federal regulations.

One academic credit is equal to approximately three hours of student learning time per week and corresponds to 45 hours of work, inside and outside of class, over the semester. For a typical three credit course, three hours are earned for classroom instruction (typically three 50-minute sessions, or two 75-minute sessions, or--in the case of some evening courses--one 160-minute session) and six hours earned for individual study done outside of class each week.

In the usual 120-credit hour degree program students typically complete ten three-credit-hour courses per year.

Policy on the Credit Hour

WNE adheres to the definition of a credit hour established by the New England Commission on Higher Education (NECHE) (effective in 2011 and updated in 2021). A credit hour is:

An amount of work represented in intended learning outcomes and verified by evidence of student achievement that is consistent with commonly accepted practice in postsecondary education and that reasonably approximates not less than

(1) One hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or

(2) At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

For a standard 15-week semester at WNE, one credit hour approximates 2100 minutes over 14 weeks: approximately 700 minutes of in-class or direct faculty instruction delivered in meetings of at least 50 minutes plus a minimum of 1,400 minutes of out-of-class student work. The fifteenth week is reserved for exams. At least an equivalent amount of work is required for credits earned in courses that meet outside the standard 15-week semester.

Undergraduate Academic Information

Components of a Typical Undergraduate Degree

Components of a Typical Undergraduate Degree

Undergraduate students must follow the degree requirements outlined in the catalog in effect when they enroll at Western New England University. In the event of changes to degree requirements in their curriculum or the creation of a new academic program, students may select a subsequent catalog and must follow the requirements of that catalog. Students readmitted to the University after an absence of at least one year will follow the degree requirements outlined by the catalog in effect at the time of re-enrollment.

The courses required for a degree differ with the choice of major program and the College within which that program is offered. All students are subject to three classifications of course requirements:

1. General University Requirements
2. College requirements designed to broaden and deepen students' knowledge of disciplines outside of their majors
3. The requirements of a major

Undergraduate Academic Information

Requirements for a Baccalaureate Degree

Requirements for a Baccalaureate Degree

In order to qualify for a baccalaureate degree a student must:

1. Comply with the entrance requirements for normal matriculation
2. Meet the attendance requirement
3. Receive passing grades in all courses required for the degree

4. Attain a minimum grade point average of 2.000 for the entire curriculum. (Transfer students must maintain a 2.000 average in courses taken at the University. Transfer hours are not included in determining the Western New England University grade point average.)
5. Attain a minimum grade point average of 2.000 in the major
6. Complete at least 30 credit hours at Western New England University
7. Complete at least 24 of the last 30 credit hours used in satisfaction of the degree requirements with courses offered by programs of Western New England University
8. Complete an Application for Degree form, which will place the student's name on the list for May, August, or December degree conferral, as appropriate

Undergraduate Academic Information

Requirements for a Second Baccalaureate Degree

Requirements for a Second Baccalaureate Degree

In order to qualify for a second baccalaureate degree, a student must:

1. Complete thirty (30) additional credit hours
2. Meet the new requirements for the second degree
3. Allow a year to lapse between the awarding of the first degree and the second degree

When a student wishes to return for a second degree:

1. The student may return to the same College by simply requesting the same from Academic Dean
2. The student may transfer to a different College by using the Change of Major form. In this instance, the previous Dean will indicate the degree already earned.
3. Academic honors for the first degree will be based on the first 120 hours completed, or will be determined at the end of that semester in which the student completes 120 hours and fulfills the requirements for graduation.
4. The student may not earn academic honors for a second degree.

Undergraduate Academic Information

Award of Degrees & Posthumous Degrees Policies

Award of Degrees and Posthumous Degrees Policies

The University does not guarantee the award of a degree or a certificate of satisfactory completion of any course of study or training program to students enrolled in any instructional or training program. The award of degrees and certificates of satisfactory completion is conditioned upon satisfaction of all current degree and instructional requirements at the time of such award, compliance with all University policies and regulations, as well as meeting bona fide expectations of the faculty.

Policy on the Posthumous Conferral of Degrees

This policy establishes the criteria for Western New England University to recognize the academic achievements of students enrolled at the time of their death. A degree awarded posthumously acknowledges the completion of a significant part of the academic degree requirements and recognizes the student's good standing with the university.

Requirements for Awarding Posthumous Degrees

Western New England University will consider the posthumous awarding of a degree in the program that the student was pursuing at the time of death, provided that the deceased student completed at least 75% of credit hour requirements, with at least 30 credits taken at WNE.

Process and further criteria:

1. A request for the awarding of a posthumous degree may be initiated by the deceased student's family, or by the student's advisor, program chair, or academic dean. The request is made to the Provost.

2. The Registrar will review the student's record to determine whether the student has met the following criteria:
- Good academic standing
- Good disciplinary and social standing, as determined by the Office of Student Affairs
- Endorsement of the school/college Dean

3. The Provost shall have final approval of the awarding of a posthumous degree once the above criteria have been confirmed by the Registrar.

4. Upon approval by the Provost, the Provost will notify the Registrar, who shall coordinate with the Vice President of Student Affairs to make any arrangements with the student's family. If the family wishes, the appropriate degree will be awarded at the Commencement at which the student would have been otherwise recognized or at a similar ceremony acceptable to the University and the student's family. The student's family will be asked to identify an appropriate person to receive the diploma when the student is recognized at the appropriate time in the Commencement ceremony. Except for the fact that the individual receiving the diploma on behalf of the student shall not be attired in cap or gown, there shall be no other changes in the ceremony.

5. Existing balances in the student's account shall be forgiven.

6. The student's name in the commencement program shall be listed, parenthetically noted as "Posthumous". The diploma and transcript will say, "Awarded Posthumously."

Special Academic Opportunities

This section contains information about special academic opportunities for WNE undergraduates.

Special Academic Opportunities

Acadeum & CCGS Courses

Acadeum and CCGS Courses

Western New England University belongs to two different consortia that allow WNE students to take classes at other schools through cross-registration agreements. In both cases, courses taken are treated as WNE courses in that grades earned at the other schools apply and impact cumulative GPAs.

Acadeum

Western New England University offers a variety of online courses through Acadeum, a consortium of like-minded accredited colleges and universities that share online course offerings. A course taken through the consortium is considered institutional credit and will impact student grade-point averages just like a WNE course.

Cooperating Colleges of Greater Springfield (CCGS)

Western New England University, in cooperation with seven of the area's public and private institutions, has established a cooperative association designed to enhance the educational experience through the use of cooperative programs and services. Those services include inter-college library privileges, joint student activities, academic cooperation, and student activity calendars.

Known as the Cooperating Colleges of Greater Springfield (CCGS), the association was formed in 1970 by the presidents of the member institutions: American International University, Bay Path University, Elms College, Holyoke Community College, Springfield College, Springfield Technical Community College, Western New England University, and Westfield State University.

CCGS also sponsors an eight-college exchange program. Under this plan for curriculum enrichment, any full-time undergraduate who has paid tuition at their own home college may take up to two courses or up to eight credit hours per semester each semester at any one of the other CCGS institutions, provided that the courses are not offered at the home institution and that seats are available at the host institution. Part-time students attempting at least six credit hours in a degree program are also qualified to participate in the CCGS program. The above-stated conditions may not apply to summer sessions, evening classes, winter session, continuing education classes, and online courses.

Information concerning additional guidelines and registration procedures may be obtained on the **Enrollment Services** website.

Special Academic Opportunities

ROTC

ROTC

The University offers both Army and Air Force Reserve Officer Training Corps (ROTC) programs. The Army ROTC program is located on campus with a full-time staff. Air Force ROTC is through the University of Massachusetts at Amherst. Freshman and sophomore ROTC classes are open, with no obligation, to students interested in the development of leadership, study skills, and outdoor skills. Further ROTC training can lead to a commission as an officer in the Army or Air Force with service in the National Guard, Reserves, or on Active Duty.

Scholarships, which are merit-based and provide funds for two or three years, are available. For further information, see the Financial Aid section of this catalog. Any Army ROTC student who desires a commission in the National Guard or Army Reserves can obtain a guaranteed reserve forces duty scholarship.

The University encourages students who are interested in the ROTC programs to confer with ROTC staff to determine eligibility requirements.

Air Force/Army ROTC College Incentive

Western New England University will provide up to full (double occupancy) room and board to any student receiving a four-year ROTC scholarship. If the student selects Gateway, Evergreen, or Southwood for residence, they will receive full (double occupancy) room and $1,500. If the ROTC scholarship is less than full tuition, the incentive could be reduced accordingly.

Other students, including Advance Designees, who receive ROTC scholarships after enrolling at the University, will receive full (double occupancy) room during the period that they qualify for the ROTC scholarships.

The incentive will be considered part of all gift aid a student may receive from the University based on merit or need. In no case will the total gift aid provided by the University and external gift aid exceed the student's direct cost of education.

Air Force ROTC

Full-time undergraduate and graduate students may participate in the Air Force ROTC program at Western New England University. Upon successful completion of the program, students receive a commission as a Second Lieutenant in the U.S. Air Force or the U.S. Space Force. Classes are open to all students and may be taken for general education credits with no obligation. The University of Massachusetts Amherst is the host Detachment for Air Force ROTC and students attend classes at both UMass and WNE during their college career.

Students who contract and commit to pursuing a commission receive a tax-free $350-$500 per month stipend while participating in ROTC, based on their current academic level (first-year, sophomore, junior, senior). Four-, three-and-a-half, three-, and two-and-a-half year scholarships are available to students who apply and meet the requirement to contract into ROTC to pursue a commission. These tuition scholarships are worth at least $18,000 per year and some cover 100% of tuition at any university.

There are limits to the amount of ROTC credit that can be counted toward a degree. Students majoring within the College of Arts and Sciences are limited to 15 credit hours, College of Business students are limited to 12 credit hours, and College of Engineering students are limited to 3 credit hours, which must be at the 300-level or above.

For more information, please contact AFROTC Det 370 at (413) 545-2437 or by email at afrotc@acad.umass.edu

Army ROTC

Full-time undergraduate and graduate students may participate in the Army ROTC program at Western New England University. Upon successful completion of the program, students receive commissions as Second Lieutenants in the U.S. Army (Active or Reserve). Classes are open to all students and may be taken for general education credits with no obligation.

Students who contract and commit to pursuing their commission receive a $500 per month stipend while participating in ROTC, for the 10 months that they are in school each year. Four-, three- and two-year scholarships are available to students who apply and meet the requirement to contract into ROTC to pursue a commission. These scholarships cover 100% of tuition and fees, $1200 per year for books, and also pay each recipient a $500 per month stipend.

Special programs exist for students with four semesters remaining to earn their degree and for students who desire to pursue a four-semester master's degree. This program allows the student to complete all ROTC requirements in only two years and gain a commission as a Second Lieutenant. The classes for the first two years are waived in this option.

Any Army ROTC student who desires a commission in the Army National Guard or Army Reserves may be eligible for a Guaranteed Reserve Forces Duty Scholarship. For further information refer to contact listed below.

There are limits to the amount of ROTC credit that can be counted toward a degree. Students majoring within the College of Arts and Sciences are limited to 15 credit hours, College of Business students are limited to 12 credit hours, and College of Engineering students are limited to 3 credit hours, which must be at the 300-level or above.

For information contact an assistant professor of Military Leadership at the Western New England University ROTC building at 413-782-1332, or armyrotc@umass.edu.

Special Academic Opportunities

Early Admission

Early Admission

The high school student who is academically able and socially mature may combine the senior year of high school and the first year of college through Early Admission. At the end of the combined year, the student is granted a high school diploma and becomes a matriculating student.

Special Academic Opportunities

Exploratory Program

Exploratory Program

Recognizing that many students have not chosen a career path at the time of admission, the University offers direction and guidance through the Exploratory Program. Instead of pursuing a major course of study, students who prefer to defer such a selection may elect the Exploratory Program. The Exploratory Program has no specific course requirements. It provides special advising and guidance about career choices while completing General University Requirements needed for any undergraduate major.

The selection of a major course of study is made before the end of the sophomore year. After declaring a major, the student leaves the Exploratory Program and follows the regular curriculum of the chosen program.

Special Academic Opportunities

First Year Seminar

First Year Seminar

To enhance the first-year student's acclimation to collegiate study, the University provides opportunities to develop the skills and methods that will promote academic success and personal development. In the First Year Seminar courses LA 100, BUS 101, ENGR 102, and HONE 102, students explore such topics as goal setting and decision making, time management, problem solving, critical thinking, information literacy, public speaking skills, personal identity, and an introduction to a major or exploring fields of study.

Special Academic Opportunities

Global Scholars Program

Global Scholars Program

The Global Scholars program provides Western New England University students with the opportunity to distinguish themselves by developing an understanding of another region or nation outside of the United States through University coursework and international study experiences. While the structure of each Global Scholars program is determined and overseen by the College in which the student is enrolled, all Global Scholars programs include the following elements:

- An introductory experience or course
- A period or periods of international study abroad
- Completion of a sequence of courses in international issues, area studies, or foreign language
- An integrating or capstone experience or course

In addition, all Global Scholars are encouraged to participate in other globally-focused opportunities on campus.

Additional details regarding specific Global Scholars requirements are provided in each College's catalog section: the College of Arts and Sciences Special Academic Opportunities and the College of Business Special Academic Opportunities.

Please see the specific College's websites linked above for further details on applying to these special academic opportunities.

Global Scholars Courses

Recognizing the importance of a global perspective to the conduct of business today, the College of Business provides enhanced opportunities for its students to develop both intercultural competence and an expanded worldview. The Global Scholars program, which integrates intercultural course work and experiences, is open to students in any business major. Those students who satisfactorily complete all requirements will receive the Global Scholar designation on their University transcript and at Commencement.

Special Academic Opportunities

Grand Challenge Scholars Program

Grand Challenge Scholars Program

Western New England University is proud to be among an elite group of institutions in the nation to offer the Grand Challenge Scholars Program of the National Academy of Engineering (NAE) to our students.

For more information, visit Grand Challenge Scholars Program under College of Engineering's Special Academic Opportunities.

Special Academic Opportunities

Honors Programs

Honors Programs

Western New England University offers honors programs in the:

- College of Arts and Sciences
- College of Business
- College of Engineering

The honors programs are not majors in themselves but give students access to an education that adds depth, breadth, and complexity to a program of study in one of these Colleges. An honors program provides academically qualified and motivated students with opportunities to study with a cohort of like-minded peers, to pursue research and creative work in fields of interest, and to engage in interdisciplinary study with honors students from other majors and colleges. Honors distinctions on the academic record signal willingness to learn and excel to graduate schools and potential employers. The honors programs also encourage students to take an active part in leadership activities related to honors.

Admission

Entering first-year students who have met GPA standards will receive invitations to participate in an honors program at the time of admission. Students who accept the invitation will be registered for their first honors course at summer orientation. Students who do not meet criteria for an invitation but who strongly wish to be considered for acceptance into an honors program are encouraged to apply. These students as well as transfer students and continuing students who are interested in participating in an honors program should contact the honors director for their College. Each College may issue additional invitations at their discretion.

Requirements

Students who are in good standing with the University and who have completed a minimum of 18 honors credit hours (6 honors courses or the equivalent) including a senior project will be recognized with University honors at graduation.

College of Arts and Sciences

- Honors electives (HON, HONB, HONE, HONU)
- HON 495 or honors senior project

College of Business

- HONB courses (minimum of 9 credits, with at least 3 credits at the 300- or 400-level)
- HONB 495
- Honors electives (HON, HONB, HONE, HONU)

College of Engineering

- HONE 102 First Year Engineering Seminar
- HONE 105 Computer Programming for Engineers
- HONE 110 Data Acquisition and Processing
- HONE 202 Statics and/or HONE 205 Circuits I - Electrical Engineering I
- Honors electives (HON, HONB, HONE, HONU)

Students, sophomore status and above, also have the option of taking a faculty-directed research course (HONE 240, HONE 340) and/or Independent Study Course (HON 333/HONE 333) as two of their six honors courses.

Senior Honors Project/Thesis

Senior honors students work closely with their faculty advisor or honors director to develop and execute a final project that satisfies honors requirements in their College.

Honors Courses

All honors courses are designed to fit graduation requirements.

- HON
- HONB
- HONE
- HONU

Honors Pass-Fail (HPF) courses are one-credit HON / HONB / HONE / HONU courses that are graded Pass / Fail to encourage intellectual exploration. These courses welcome honors students from any College. Whatever the topic, honors courses offer unique educational experiences and engagement with a course subject that is deeper, broader, or more complex than a standard version of the same course.

Maintaining Honors Status

Students in an honors program must maintain a 3.300 overall GPA to graduate with University honors. Any student whose cumulative grade point average falls below 3.300 will be given two semesters during which to restore their cumulative GPA to 3.300 or better. Students whose GPA remains below 3.300 for a third semester will be dismissed from the program, although they may reapply if they subsequently raise their GPA to an acceptable level.

Special Academic Opportunities

Independent Study

Independent Study

A limited number of qualified students are accorded the opportunity to pursue coursework through supervised independent study. Students must have junior or senior standing plus a minimum grade point average of 3.000 overall or in the major field. In general, such study should be of mutual interest to the student and faculty supervisor, should be of an advanced nature, and should include work not normally covered in the classroom. Credit may vary from one to three credit hours. Only six credit hours of independent study credit may count toward the degree.

In order to enroll in an independent study course, the student must make arrangements prior to registration. Applications for independent study are available from the appropriate academic Dean. The application must be completed and signed by the student, the faculty supervisor, the faculty supervisor's department chair, and the student's advisor. If the student's academic Dean approves the application, the student is given a form authorizing registration for the study.

Special Academic Opportunities

Individualized Programs of Study

Individualized Programs of Study

The Integrated Liberal Studies program provides the opportunity to construct an individualized major. Such a program combines a selection of related courses from two or more disciplines according to the interests and goals of the student.

Students who wish to devise and pursue such a program should request permission and guidance from the academic departments in which they propose to do a substantial part of the work. Final approval of such a program rests with the Dean of the College of Arts and Sciences upon recommendation of the departments concerned. No request for an Integrated Liberal Studies major will be considered earlier than the end of the freshman year or later than the beginning of the senior year.

The following guidelines serve as minimum requirements for an Integrated Liberal Studies major:

1. The general course requirements for the BA degree shall apply.
2. An Integrated Liberal Studies major shall offer a minimum of 36 credit hours. At least 30 of these shall be courses at the 300-400 level.
3. Only courses at the 200-level or above may be counted toward fulfillment of the Integrated Liberal Studies major.
4. A minimum of the minor in Business Administration is required of any student desiring to do a substantial part of the work within the College of Business. However, no more than 25% of the total coursework can be College of Business courses.

Special Academic Opportunities

Internships

Internships

In any discipline, qualified juniors and seniors may undertake an internship for academic credit with an approved agency, organization, or business.

Internships have a single purpose: to further the student's knowledge in a specialized area in a way not customarily available within the regular classroom setting.

Credit for internships varies from one to three credit hours. There are limits to the amount of internship credit that may be counted toward the degree: in the College of Arts and Sciences and the College of Business, students are limited to six credit hours; and in the College of Engineering, students are limited to three credit hours. College of Business students are limited to one nonprofit board field experience. A student must have completed at least 60 credit hours and have a minimum GPA of 2.500 overall and in the major, except where an internship is required in the major, or obtain special permission of their Dean to undertake an internship.

To enroll in an internship for academic credit, a student must make arrangements with the Career Center prior to registration. An internship application must be completed and signed by the student, the academic advisor, the department chair, and the internship coordinator.

A student may also pursue a nonacademic internship to further enhance their knowledge in a specialized area.

Special Academic Opportunities

New England Center for Children Program

New England Center for Children Program

Western New England University students interested in applied psychology and the education of students with autism and other special needs have the opportunity to spend either a full semester or a full year at the New England Center for Children. This facility, located near Boston, offers courses in applied behavior analysis and provides students with supervised experience working with children with autism. Interested students should consult with the Chair of the Department of Psychology.

Selection of Students: Applications will be reviewed by the Department of Psychology and forwarded, along with the recommendations of the department, to the New England Center for Children. The Center will select the final participants.

Special Academic Opportunities

Physical Education, Health & Recreation

Physical Education, Health and Recreation

All majors are welcome to enroll in Physical Education, Health, and Recreation (PEHR) courses, if they are so interested. No more than two 100-level PEHR courses can be taken for academic credit or can be included in the calculation of a student's overall GPA.

PEHR 163 Games Children Play is mandatory for students pursuing licensure in Elementary Education.

Special Academic Opportunities

Pre-Law

Pre-Law

Western New England University has offered legal education for nearly a century, and the Western New England University School of Law provides an excellent opportunity for those who wish to pursue the graduate professional degree in law.

Preparation for law school is not a matter of taking prescribed courses or majors. Law schools customarily do not encourage undergraduates to major in any particular subject. Students are generally successful in law school if they succeed in any major that develops skills in reading, writing, and critical thinking, and if they do well on the Law School Admission Test (LSAT).

Pre-law students may choose any major including the pre-law curriculum within Integrated Liberal Studies. Students considering a legal education should pursue their individual interests through those courses that are most likely to foster success in American law schools (courses that improve written and oral communication, provide readings about a wide range of human experience, and develop reasoning skills).

The office of the pre-law advisor maintains files of reference materials on law schools, the Law School Admissions Test, and other subjects of interest to pre-law students. Regardless of major, students thinking about attending law school should consult with the pre-law advisor, Associate Professor Peter Fairman, Department of History and Political Science, at the earliest opportunity.

Special Academic Opportunities

Pre-Medical & Pre-Dental

Pre-Medical and Pre-Dental

Pre-medical and pre-dental students are not restricted to a specified major, but are encouraged to select a major that is most consistent with their interests and that offers as many alternatives for postgraduate study or employment as possible. Students in Arts and Sciences, Business, and Engineering are able to pursue a pre-med program. Students should consult with their Deans in selecting appropriate courses.

The suggested sequence of courses: BIO 107, BIO 108, BIO 117, BIO 118, CHEM 105, CHEM 106, CHEM 209, CHEM 210, CHEM 219, CHEM 220, PHYS 123, PHYS 124, MATH 123, MATH 121.

Additional suggested courses would include: sociology, psychology, and biochemistry.

As early as possible, all pre-medical and pre-dental students should consult the Dean of the College of Arts and Sciences, who will arrange for proper advising prior to the selection of courses. The recommended course sequence is designed to meet the requirements for entrance into most American medical and dental schools; it is the responsibility of the student to ensure that they take all requirements of a particular program. Students are cautioned, however, that admission to such schools is highly competitive.

Special Academic Opportunities

Pre-Science

Pre-Science

The Pre-Science program offered by the College of Arts and Sciences is a one-year program that provides an opportunity for students to work towards acceptance into one the College's science majors (Biology, Chemistry, Forensic Biology, Forensic Chemistry, Health Sciences, and Health Studies) offered by the Department of Physical and Biological Sciences.

Qualified first-year students can be admitted into the Pre-Science program by WNE Admissions for the fall semester of a given year.

The program is designed to prepare students for the rigor of major-level science courses, while at same time working on completing courses that will fulfill major and/or general University requirements.

The course sequence of the Pre-Science program is outlined below:
1. The lab science courses are specifically designed to introduce students to basic concepts in physics and chemistry with an emphasis on quantitative methods and laboratory investigations.
2. The choice of the English and math courses in the fall semester will be determined by the student's prior education and the student's performance on the WNE Math and English placement tests.
3. The courses in the spring semester will be determined in conference with the Pre-science advisor and will depend on the science major the student is interested in pursuing

and on which English and math courses were completed during the fall semester.

During the spring semester, students interested in:
• Biology should consider taking a PHYS 15X course, which (together with PHYS 103) will complete their physics requirements.
• Forensic Biology or Forensic Chemistry should consider taking CJ 101, which is a required course for these majors.
• Health Sciences or Health Studies should consider taking PSY 101, which is a required course for the major.

Students wishing to petition for a change of major to a science major after completing the Pre-Science program must:
1. Complete the Pre-Science course sequence as listed below.
2. Consult with their Pre-Science advisor with regards to their spring semester and sophomore year course choices.
3. Maintain an overall GPA of 2.500 and a Science GPA of 3.000.
4. Apply to their Pre-Science advisor at the end of the first year for acceptance into the desired science major.

After successfully completing the Pre-science program, students should expect to spend at the minimum an additional:
• Three years of courses to obtain a BS in Biology, a BS in Health Sciences, or BS in Health Studies.
• Four years of courses to obtain a BS in Chemistry, BS in Forensic Biology, or a BS in Forensic Chemistry.

The suggested sequence of courses:

First-year
Fall Semester—14-15 crs

PHYS 103 Elementary Physics 4
or
PHYS 101 Elements of Physics 3
CHEM 103 Elementary Chemistry 3
or
CHEM 101 Modern Chemistry I 3
LA 100 First Year Seminar 2
ENGL 132 English Composition I 3
MATH 109 Pre-Calculus 3
or
MATH 123 Calculus I 3

First-year
Spring Semester—16-17 crs

PHYS 15X Natural Science Perspective 3
or
CHEM 105 General Chemistry I 4
or
GEN XXX General Elective 3
ENGL 133 English Composition II 3
MATH 121 Stats & Probability 3
or
MATH 123 Calculus I 3
or
MATH 124 Calculus II 3
PSY 101 Introduction to Psychology 3
or
CJ 101 Introduction to Criminal Justice 3
GEN XXX General Elective 3

Special Academic Opportunities

Service Members Opportunity College

Service Members Opportunity College

Western New England University has been designated as an institutional member of Service Members Opportunity Colleges (SOC), a group of over 400 colleges and universities providing voluntary post-secondary education to members of the military throughout the world. As an SOC member, Western New England University recognizes the unique nature of the military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible academic residency requirements, and crediting learning from appropriate military training and experiences. SOC has been developed jointly by educational representatives of each of the Armed Services, the Office of the Secretary of Defense, and a consortium of 13 leading national higher education associations.

Special Academic Opportunities

Special Arrangement Courses

Special Arrangement Courses

A Special Arrangement course is designed for students who cannot fit a regularly offered course into their schedule. An arrangement is reached with a faculty member whereby the student can complete the course in a nontraditional format without sacrificing standards of requirements.

In order to enroll for a Special Arrangement course, the student must make arrangements prior to registration. Applications are available from the appropriate academic Deans. The application must be completed and signed by the student, the faculty supervisor, the faculty supervisor's department chair, and the student's advisor. If the student's academic Dean approves the application, the student is given a form authorizing registration for the course.

Special Academic Opportunities

Summer & Winter Sessions

Summer and Winter Sessions

Western New England University is in session throughout the year. To supplement the regular academic semesters, there is a summer session with 6-week, 8-week and 12-week courses offered during the day and evening, both on campus and online.

A winter session offering online courses is held prior to the spring semester. Information about these course offerings is customarily available by March for the summer session and November for the winter session.

Students may enroll for up to three credits in the 3-week winter term and up to nine credits in the 15-week summer term structure. These limits apply to credits earned through Western New England University and transfer credits earned at another college or university. Deans may grant an exception to exceed the established credit limit based on factors including their review of whether the student will be in compliance with the credit hour policy.

Schedule information may be obtained by contacting the Office of Academic Scheduling at https://www1.wne.edu/academic-affairs/academic-scheduling.cfm or Enrollment Services at https://www1.wne.edu/student-administrative-services/index.cfm

The per credit rate for the summer session and winter session course(s) are listed at https://www1.wne.edu/cost-and-aid/undergraduate/cost.cfm.

Special Academic Opportunities

Undergraduate Research

Undergraduate Research

A limited number of qualified undergraduate students may undertake supervised research if they show both interest in and aptitude for independent and creative work. Applications may be made for research in any of the disciplines in which faculty are willing to involve students. When such research is conducted, students must submit written reports for approval by the faculty of the department in which the work was conducted. The supervising faculty member and the department chair must approve grades for such work.

In order to enroll for undergraduate research, the student must make arrangements in writing prior to registration. Applications are available from the Deans of the Colleges of Arts and Sciences, Business, and Engineering. Applications must have the signatures of the student, the faculty supervisor, and the department chair. If the Dean of the College approves the application, the student will be given a form authorizing registration for the work.

Special Academic Opportunities

Washington Semester

Washington Semester

Western New England University participates in the Washington Semester Program offered by American University in Washington, DC. This program, which is open to juniors and seniors, provides an opportunity to study and intern in Washington, DC. Programs are offered in American Politics, Journalism, Justice, Foreign Policy, International Business and Trade, Transforming Communities, Public Law, Economic Policy, Contemporary Islam, International Environment and Development, Israel Studies, International Law and Organization, and Peace and Conflict Resolution. Students may intern with government agencies, members of Congress, the courts, private businesses, public interest groups, professional organizations, newspapers, television studios, theaters, or museums. Interested students should contact Dr. Donald Williams.

General University Requirements

All students must have a minimum of 40 credit hours of General University Requirements, which shall be filled by courses in the Foundations and Perspectives of Understanding as outlined below.

Foundations

Fundamental to every student's success in college and beyond is competency in six areas that provide the foundation for lifelong learning and for personal and professional effectiveness. These areas are computer competence, critical thinking, information literacy, mathematical analysis, oral communication, and written communication. The University recognizes the importance of continuing development in these areas in the context of the student's major. The target level of competency in these areas will be determined and assessed by the major in which the student is enrolled. Following is a brief explanation of the importance of each foundation area.

Computer Competence

Understanding how to use computer technology is necessary in virtually all professional and personal aspects of life. While computer usage is a ubiquitous requirement in university courses—for word processing, research, communication, and much more—it is critical for students to have the ability to use tools appropriate to their primary discipline for the purposes of computation, data collection, and/or data analysis.

Critical Thinking

The ability to reason logically and to evaluate and analyze arguments or problems is important in reaching sound decisions. The educated person should be able to solve problems, reach conclusions based on a thorough analysis of the evidence, and defend such conclusions in a clear and convincing manner.

While critical thinking is an element in virtually every course, each student must take one course in which critical thinking is a major focus.

Information Literacy

The ability to access and evaluate information on the internet, in existing databases, in the press, and in academic journals and books is an essential tool in today's world. Students should have the ability to identify, access, evaluate, and ethically and legally use relevant resources for their research. To develop skills in information literacy, instruction will be provided as part of each student's first year curriculum and standard coursework.

Mathematical Analysis

Daily life, many professional and intellectual pursuits, and success in college require an understanding and appreciation of mathematical reasoning and problem solving. The ability to establish connections between real world phenomena and mathematical ideas, to employ logical mathematical reasoning, to properly use mathematical equations, and to analyze quantitative data allows us to grasp complex issues, solve problems, and better meet the needs of our technological society.

Each student must take two foundational mathematics courses. A minimum grade of C- is required in at least one of these mathematics courses for graduation.

See College of Engineering for a discipline-specific Mathematical Analysis requirement.

Oral Communication

Being able to communicate well verbally is also essential for success in the modern world. The ability to deliver effective oral presentations includes a logical organizational structure as well as sufficient factual support for one's key points. Additionally, having a clear and engaging presentation style helps with effective public speaking.

To develop skills in oral communication, instruction will be provided as part of each student's first-year curriculum or standard coursework.

Written Communication

Effective writing is important in virtually all human activities, from informal exchanges with friends and family to more formal intellectual pursuits and the professional responsibilities of the workplace. The ability to express ideas in writing, using appropriate sentence structure, grammar, and mechanics, as well as a detectable thesis and logical support for the thesis, allows us to communicate effectively with others.

To develop skills in written communication, each student must take two foundational English composition courses. Because writing and reading are closely related and because all students should have some college experience of literature, these courses also feature the analytic reading of literary texts in a cultural context. Each student must complete both of these writing courses with grades of C- or better.

Perspectives of Understanding

Western New England University is committed to developing in its students an appreciation of multiple perspectives of understanding. Perspectives are the systematic ways various academic disciplines view and interpret the world around us. Each perspective enhances the students' understanding of the complexity of the environment in which we live and of the richness of human experience. Ultimately, these perspectives have the potential to expose us to a breadth of disciplines, deepen our judgments, and inform our responses to the opportunities and challenges of life and work in the 21st century. They can help us to lead more responsible and fulfilling lives as individuals, family members, and citizens of democracy.

Perspectives courses generally emphasize three components: first is the factual foundation of the discipline, second is the approach or method of analysis in the discipline, and third is the contribution of the discipline to a greater knowledge of contemporary issues. Perspectives of Understanding included in the General University Requirements are Aesthetics, Ethics, Global Cultures, History, Natural Science, and Social/Behavioral Science.

Students must complete a minimum of six perspectives courses that collectively achieve the following requirements:

- All perspectives are covered
- Two natural science courses, each with laboratories, or
- Two sequential courses in natural science, the first of which must have a laboratory.

Note: Comparative courses that combine two perspectives, such as Global Cultures and Aesthetics, will satisfy the requirement in both areas. However, students must still take a minimum of four perspectives courses in addition to the two natural science courses.

Aesthetic Perspective (ART,FILM,MUS and THTR)

The aesthetic perspective regards objects in terms of the qualities that make them attractive in and of themselves. Whatever the objects, they are valued not for any utilitarian purpose, but for their inherent richness, their sensual and emotive effect, their form, line, color, sound, texture, feeling, and meaning. Through this perspective, students learn to articulate the economic, political, cultural, historical, professional, scientific, and/or social context for an art form, artwork, or performance.

Courses that satisfy this perspective may be a performance or studio art class or they may be a history or appreciation course.

Ethical Perspective (Any PH excluding PH 110 or PH 204)

The goal of the ethical perspective is to help students form rationally-defensible ethical views to guide their behavior in all aspects of their lives. This requires heightening their sensitivity to ethical issues and providing them with a variety of tools for ethical problem-solving. It involves giving students experience in critical analysis of real-life ethical issues, coupled with a critical examination of the most influential techniques of moral decision-making and moral argument.

Global Cultures Perspective (CUL)

The global cultures perspective gives students an awareness of the multicultural nature of contemporary society, as it is constituted by individuals from different backgrounds, cultures, and/or nations. Students learn about the significance of essential terminology, concepts, events, and/or people important to another culture. This perspective increases students' understanding of the values, attitudes, and beliefs of a distinct culture, as well as the conflicts, differences, and/or changes that have occurred within that culture.

Historical Perspective (HIST)

Through historical inquiry, this perspective enriches insight into the political, social, economic, and cultural forces that have shaped the modern world, providing the context for future events. Students learn to identify and analyze key historical terms, people, places, events, ideas, and concepts. They also learn to analyze primary and secondary sources and historical patterns or changes. This perspective helps students use evidence to assess a historical argument or a historical relationship to a contemporary or universal issue.

Natural Science Perspective (NSP)

The science perspective cultivates familiarity with the vast realm of accumulated knowledge about the structure and functioning of the physical and biological world. Students should learn part of the factual foundation, including vocabulary, of at least one major area of science and should observe and practice the disciplined logic that scientists employ to discover and evaluate new knowledge.

Social/Behavioral Science Perspective (SBP)

The behavioral science perspective uses scientific methods to study the forces and processes that influence the behavior of individuals, groups, governments, and economies.

First Year Seminar

First year seminars orient students to the scholarly community and assist them in their transition to the academic demands of college. Each College will develop courses to meet the needs of its students.

Exemptions to this requirement may be based on the following circumstances:

- Transfer credit of 27 or more semester hours from a two- or four-year college derived from a full-time course of study. Exemption may be further considered on an individual case basis, provided that a minimum of 21 credit hours are transferred through full-time study.
- Transfer credits cannot be from CLEP, AP, IB, or high school to college sources.
- Non-traditional adult learners are exempt from the requirement and the equivalent credit.

In all cases of exemption, substitute credit must be applied, i.e., credits toward the degree are not exempt, simply the course.

Undergraduate Certificate Programs

Western New England University makes several Certificate Programs available to those who do not want a degree, but who want specialized training that goes beyond a few courses in a subject.

There are undergraduate certificate programs in business, chemistry and communication.
Undergraduate certificates are not available to non-degree-seeking students.

A listing of Undergraduate Certificates is below:

- Certificate in Chemistry
- Certificate in Communication
- Certificate in Diversity Management
- Certificate in Human Resource Management Fundamentals
- Certificate in Innovation & Entrepreneurship
- Certificate in Leadership
- Certificate in Project Management
- Certificate in Remote Work Skills
- Certificate in SAS
- Certificate in Socially-Conscious Management
- Certificate in Spanish
- Certificate of SAP Student Recognition Award

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

WNE offers many opportunities for students to save time and money by pursuing undergraduate and advanced degrees in WNE accelerated and Dual Degree programs.

3+1 BS in Biology or Health Sciences/MS in Pharmacogenomics

3+1 BS in Biology or Health Sciences/MS in Pharmacogenomics

The College of Arts and Sciences and the College of Pharmacy and Health Sciences at Western New England University have collaborated to offer a program for students interested in attaining a BS in Biology or Health Sciences, and furthering their career with an MS degree in the Pharmacogenomics program (MSPGx).

Students can earn both the BS and MS degrees in just over four years (i.e., four years and one additional summer semester) from entry as an undergraduate. Students admitted by WNE Admissions as undergraduates are only admitted into the BS degree portion of the program. Transition into the MSPGx program is not automatic, nor is acceptance into the MSPGx program guaranteed, but requires application and acceptance into the MSPGx program. The MSPGx program admission requirements can be found in the MS in Pharmacogenomics program description in this catalog.

Students in good standing in the Biology or Health Sciences majors who are on track to complete the bulk of the required (not elective) courses of their major within three

years (including General University and college requirements) are eligible to apply for admission to the MSPGx degree program during their junior year after December 1. Candidates must successfully submit their application materials for admission consideration to the MSPGx program.

After successfully completing the first year (Fall and Spring) of the MSPGx program, students will be awarded a BS degree in Biology or Health Sciences, assuming all degree requirements have been met (including the 30 hours of 300-level or above credit requirement and the 120 minimum credit rule). After completing the summer semester of the MSPGx program, assuming all of the degree requirements have been met (41 credits), students will be awarded the MS in Pharmacogenomics.

Depending on the specific BS program (refer to the Biology or Health Sciences program descriptions in this catalog for the curricula of each program), there will be cross-credits between the two programs, i.e., courses for which credit will apply to the completion of both degrees. Up to 29 credits of first-year (Fall and Spring) MSPGx program courses (with some exceptions) will be accepted into the respective BS program as follows:

- For the BS in Biology or Health Sciences, PHAR 516 (Pharmacy Ethics), PHAR 526 (Pharmacy Outcomes), PHRSC 510 (Seminar & Journal Club 1), PHRSC 520 (Seminar & Journal Club 2), PHRSC 526 (Analytical Techniques), PHRSC 527 (Data Analysis and Biostatistics), and PHRSC 551 (Introduction to Genetics and Genetic Counseling) can fulfill GEN XXX (General Elective) requirements.
- For the BS in Biology, the courses PHAR 513 (Biochemistry), PHAR 523 (Basic Principles of Genetics & Genomics), PHAR 522 (Pathophysiology), PHAR 611 (Principles of Pharmacology) , PHRSC 552 (Advanced Genetics and Genomics), and PHRSC 553 (Genetics Data Analysis—Bioinformatics) can fulfill BIO or GEN elective requirements, but only if the student did not already take a similarly-titled course as part of their undergraduate degree program. If the student already took such a course, the graduate course credits cannot count towards the undergraduate degree.

- For the BS in Health Sciences, the courses PHAR 522 (Pathophysiology), PHAR 523 (Basic Principles of Genetics & Genomics), PHAR 611 (Principles of Pharmacology), PHRSC 552 (Advanced Genetics and Genomics), and PHRSC 553 (Genetics Data Analysis—Bioinformatics) can fulfill HS or GEN elective requirements, but only if the student did not already take a similarly-titled course as part of their undergraduate degree program. If the student already took such a course, the graduate course credits cannot count towards the undergraduate degree. The course PHAR 513 (Biochemistry) cannot count towards the BS in Health Sciences degree.

Students in the Biology or Health Sciences programs that either (a) do not meet the MSPGx program admission requirements during their junior year, or (b) elect not to apply for admission to the MSPGx program at that time, remain eligible to apply for admission as part of the general applicant pool following four years of University study and completion of a bachelor's degree.

Degree Requirements

BS in Biology or Health Sciences Curriculum Years – 120 Total Credit hours over the First Four Years

- Students meet with their faculty advisor to select the proper order and courses to take in the first three years to incorporate MSPGx courses in the fourth year.

MSPGx Curriculum Years - 41 Total Credit Hours over the Last Year and One Additional Summer

Senior Year BS / First Year MSPGx - Fall Semester

PHAR 513	Biochemistry	3 cr.
PHAR 516	Pharmacy Ethics	3 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHRSC 551	Introduction to Genetics and Genetic Counseling	3 cr.

Subtotal: 16

Senior Year BS / First Year MSPGx - Spring Semester

PHAR 522	Pathophysiology	3 cr.
PHAR 523 PHAR 526	Basic Prin. Genetics & Genomics Pharmacy Outcomes	2 cr. 2 cr.
PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 552	Advanced Genetics and Genomics	1 cr.
PHRSC 553	Genetic Data Analysis - Bioinformatics	3 cr.

Subtotal: 13

First Year MSPGx - Summer Semester

PHRSC 554	Applied Pharmacogenomics Experience	6 cr.
PHRSC 555	Clinical Pharmacogenomics Experience	6 cr.

Subtotal: 12

MSPGx program MS degree completion requirements:

1) All courses passed ("C" or better), with no more than two courses with a grade of "C" or "C+"
2) Attain an overall grade point average of 3.000 or higher

Total Credit Hours: 41

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+1 BS in Neuroscience/MS in Pharmacogenomics

3+1 BS in Neuroscience/MS in Pharmacogenomics

This program is designed for students interested in attaining a BS in Neuroscience and furthering their career with an experiential-based MS in Pharmacogenomics. Both programs provide an excellent background in neuroscience and pharmacogenomics, a combination which provides students with the knowledge and experience needed for gainful employment in the clinical research and/or the clinical implementation of pharmacogenomics in industry and practice.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+2 BS in Biology, Chemistry or Health Sciences/MS in Pharmaceutical Sciences

3+2 BS in Biology, Chemistry or Health Sciences/MS in Pharmaceutical Sciences

The College of Arts and Sciences and the College of Pharmacy and Health Sciences at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in attaining a BS in Biology, Chemistry or Health Sciences and furthering their career with a thesis-based MS in Pharmaceutical Sciences program (MSPS). This dual degree program allows students to complete the requirements for each program and receive two separate degrees with just one additional year of study beyond the normal four-year Bachelors program.

Students admitted by WNE Admissions as undergraduates are only admitted into the BS degree portion of the program. Transition into the MSPS program is not automatic, nor is acceptance into the MSPS program guaranteed, but requires application and acceptance into the MSPS program. The MSPS program admission requirements can be found in the MS in Pharmaceutical Sciences program description in this catalog.

Students in good standing in the Biology, Chemistry or Health Sciences programs who are on track to complete the required courses of their major within three years (including General University and college requirements) are eligible to apply for admission to the MSPS program during their junior year after December 1. Candidates must successfully submit their application materials, as well as complete an admissions interview, if requested of them.

Depending on the specific BS program, there are credits shared between the two programs, i.e., courses for which credit will apply to the completion of both degrees. Up to 28 credits of first-year MSPS program courses will fulfill course requirements in the BS degrees (with some exceptions depending on the undergraduate degree being pursued). All students choosing this unique curricular path must consult closely with their faculty advisor to ensure all course requirements of their BS program are completed before their fourth year (Chemistry majors will need to complete BIO 107/BIO 117, General Biology I). In addition, the MSPS program offers six different areas in which a student can focus their program and research: Pharmacology or Neuropharmacology, Medicinal Chemistry and Drug Development, Pharmaceutics and Drug Delivery, Pharmacogenomics, Biomedical Sciences, and Pharmacoeconomics and Healthcare Data Analytics. These focus areas are accomplished through different sequence elective courses, the details of which can be found in the MS in Pharmaceutical Sciences program description in this catalog. All students in the dual degree program must consult with both their BS and MSPS faculty advisors to select the correct MSPS elective sequences in the proper order.

Students in the Biology, Chemistry or Health Sciences major that either (a) do not meet the MSPS program admission requirements during their junior year, or (b) elect not to apply for admission to the MSPS program at that time, remain eligible to apply for admission as part of the general applicant pool following four years of University study and completion of a bachelor's degree.

Degree Requirements

BS in Biology, Chemistry or Health Sciences Curriculum Years – 120 Total Credit hours over the First Four Years

MSPS Program Curriculum Years - 38 Total Credit hours over the Last Two Years

Senior Year (First Year MSPS) - Fall Semester

GEN xxx	General Electives	3 cr.
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 515	Principles of Pharmacology	3 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHRSC 529	Responsible Conduct of Research	3 cr.
PHAR-PHRSC xxx	MSPS Sequence Elective(s)	2-4 cr.

MSPS Subtotal: 12-14

Subtotal: 15-17

Senior Year (First Year MSPS) - Spring Semester

PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 532	Advanced Pharmacology & Drug Action	3 cr.
PHAR-PHRSC xxx	MSPS Sequence Elective(s)	5-6 cr.
GEN xxx	General Elective	3 cr.

MSPS Subtotal: 10-11

Subtotal: 13-14

First Year MSPS - Summer

PHRSC 528	Thesis Research 1	2 cr.

MSPS Subtotal: 2

Second Year MSPS - Fall Semester

PHRSC 618	Thesis Research 2	3 cr.
PHRSC 630	Scientific Communication	3 cr.
PHRSC-PHAR xxx	MSPS Sequence Elective(s)	3-4 cr.

MSPS Subtotal: 9-10

Second Year MSPS - Spring Semester

PHRSC 628	Thesis Research 3	3 cr.

MSPS Subtotal: 3

MSPS Subtotal: 38

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+2 BS in Neuroscience/MS in Pharmaceutical Sciences

3+2 BS in Neuroscience/MS in Pharmaceutical Sciences

The 3+2 BS in Neuroscience/MS in Pharmaceutical Sciences is a program unique to western Massachusetts for those students interested in attaining a BS in Neuroscience and furthering their career with a thesis-based MS in Pharmaceutical Sciences. Both programs provide excellent experience in designing and performing research. The combination of the research-intensive BS with the thesis-based MS provides students with two excellent programs geared toward employment in the pharmaceutical industry and/or pharmaceutical research.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+3 BA in Psychology/OTD

3+3 BA in Psychology/OTD

The 3+3 BA in Psychology/OTD program is a collaborative effort between the Department of Psychology in the College of Arts and Sciences and the Doctor of Occupational Therapy program in the College of Pharmacy and Health Sciences. It provides an accelerated pathway to the WNE Doctor of Occupational Therapy (OTD) degree with guaranteed OTD admission for qualified students who remain in "good standing" following three years of undergraduate study. Students who successfully complete their first year in the WNE OTD program will receive a BA in Psychology.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+3 Bachelor/JD

3+3 Bachelor/JD

Qualified Western New England University students who want to attend Western New England University School of Law can earn their bachelor's and Juris Doctor (JD) degrees in just six years instead of seven in the 3+3 Law program. To qualify, students must have a minimum undergraduate grade point average of 3.300 and score above the median LSAT for the previous year's School of Law matriculants. Students who qualify can enter the School of Law in the fall of their fourth full-time undergraduate year and receive their bachelor's degrees at its end. They are eligible to obtain their Juris Doctor degrees after two more years of study.

It is not possible, however, for all majors to qualify for the 3+3 Law program. Programs such as Chemistry, Computer Science, Forensic Biology, Forensic Chemistry, Health Sciences, Mathematics, and most engineering programs require too much sequential work in those disciplines to allow completion in three years. Biology majors would require some summer course work in order to complete this program.

In order to apply for this program, transfer students must successfully complete at least 45 credit hours of undergraduate studies at Western New England University. Students considering a career in law are eligible for membership in the Pre-Law Society, which provides cocurricular activities for pre-law students. Among the society's activities are workshops on selecting and applying to law schools; field trips to observe law classes; mock trials; and films, lectures, and discussions designed to clarify the responsibilities and privileges of the profession of law.

The office of the pre-law advisor maintains files of reference materials on law schools, the Law School Admissions Test, and other subjects of interest to pre-law students. Regardless of major, students thinking about attending law school should consult with the pre-law advisor, Associate Professor Peter Fairman, Department of History and Political Science, at the earliest opportunity.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+3 BS in Health Studies/OTD

3+3 BS in Health Studies/OTD

The 3+3 BS in Health Studies/OTD program is an accelerated track of the Health Studies major that provides a pathway for qualified students to be admitted to the WNE Doctor of Occupational Therapy (OTD) program. The program guarantees OTD admission for qualified students who remain in "good standing" following three years of undergraduate study. Students who successfully complete their first year in the WNE OTD program will receive a BS in Health Studies.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

3+3 BS in Neuroscience/OTD

3+3 BS in Neuroscience/OTD

The College of Pharmacy & Health Sciences offers a program unique to western Massachusetts for those students interested in attaining a Bachelor of Science in Neuroscience and furthering their career aspirations with a Doctorate in Occupational Therapy. This dual degree program allows students to complete the requirements for each program and receive two separate degrees with just one additional year of study beyond the normal four-year Bachelors program. The fourth year of the BS in Neuroscience serves as the first year of the doctorate program in occupational therapy.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Four-Year Accelerated BSBA/MS in Accounting

Four-Year Accelerated BSBA/MS in Accounting

This program allows full-time undergraduate Accounting majors to accelerate the completion of both the bachelor's and master's degrees in Accounting. Students accepted into this program can earn the MS in Accounting degree in as few as four years.

This dual-degree program is a combination of the undergraduate Accounting major and the MS in Accounting. With permission of the department chair, students are able to take any graduate course once they have completed the undergraduate prerequisite with a "B" or better grade. Students taking the CPA exam must check the requirements of the respective jurisdiction.

This program requires up to 18 credit hours a semester, summer study, and some graduate study prior to an undergraduate degree. Some instruction takes place online. Students seeking admission to the program at the time of admission to the University must take either the SAT or the ACT entrance exam and complete the Accelerated Accounting Program application. Students seeking admission to the program at a later time must have earned a "B+" average or better in AC 101/HONB 201, AC 202, and AC 305, as well as a minimum 3.000 cumulative BSBA GPA. Students who wish to have a less-intensive undergraduate experience can move to the Five-Year program. To complete the accelerated program students must earn an average GPA of 3.000 or higher in AC 610, AC 621, AC 640, AC 646, AC 660, FIN 612, FIN 630, and three electives.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year Bachelor/MBA

Five-Year Bachelor/MBA Program

This program allows undergraduate students in the Colleges of Arts and Sciences, Business, or Engineering to accelerate the completion of both the bachelor's and master's degrees in business. Students can earn the popular and valuable Master of Business Administration degree with just one additional year of study. This program is available to students of all majors except for Education.

Students will earn both BSBA and MBA degrees within five years of entry as an undergraduate. Undergraduate study in business will satisfy all prerequisite coursework requirements for the MBA program.

Program Prerequisites:

Satisfied after completing the undergraduate business core (BIS 220/BIS 221, AC 101/HONB 203,and FIN 214) courses with a "B" average or better and no grade below a "C".

Program Application and Admission Requirements:

This program seeks students who have excelled in their undergraduate studies. Applicants must:

1. Earn an overall GPA of 3.000
2. Complete the College of Business Graduate Studies application and essays for the MBA program. All application materials should be submitted to the Admissions Office
3. Forward scores for the Graduate Management Admission Test (GMAT) to the Admissions Office. Students should seek to score 500 or higher on the GMAT. Students may also apply for a GMAT waiver based on a cumulative GPA of 3.300 or higher at the time of graduation

Applicants may take up to two graduate courses in the fall term of their senior year. A third graduate course may be taken during the senior year after a student has been admitted.

Senior Year - Undergraduate program

Fall Semester

- Up to 12 credits of undergraduate coursework*
- Three-six credits of graduate coursework

Spring Semester

- Up to 12 credits of undergraduate coursework*
- Three-six credits (not to exceed nine credits total in senior year) of graduate coursework

Degree Requirements

See MBA Program structure (Note: Some MBA courses may have undergraduate prerequisites).

*Business students must complete all requirements for the BSBA degree independent of the graduate coursework completed during their senior year. This may require students to take courses during summer or winter sessions to accelerate undergraduate studies.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year Bachelor/MS in Accounting

Five-year Bachelor/MS in Accounting

This program allows undergraduate full-time accounting majors in the College of Business to accelerate the completion of both the bachelor's and master's degrees in Accounting. Students can earn the Master of Science in Accounting degree within five years of entry as an undergraduate. A detailed program of study for the MS in Accounting can be found here.

Program Prerequisites:

Students must have completed undergraduate prerequisites for AC6XX or FIN6XX when taking these courses as an undergraduate. A typical student will have an average GPA of 3.000 (B) in their accounting and finance prerequisites with no grade lower than "C."

1. Earn an overall GPA of 3.000
2. Complete the College of Business Graduate Studies application and essays for the MS in Accounting program. All application materials should be submitted to the Admissions Office

3. Forward scores for the Graduate Management Admission Test (GMAT) to the Admissions Office. Students should seek to score 500 or higher on the GMAT. Students may also apply for a GMAT waiver based on a cumulative GPA of 3.300 or higher at the time of graduation

Applicants may take up to two graduate courses for which they have met the prerequisites and a third graduate course after they have been admitted to the program.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year Bachelor/MS in Organizational Leadership

Five-year Bachelor/MS in Organizational Leadership

This program allows undergraduate majors in the College of Business to accelerate the completion of both their bachelor's degree and MS in Organizational Leadership. Students will earn both the BSBA and MS degrees within five years of entry as an undergraduate. With this option, students can complete the MS in Organizational Leadership with just seven months of additional study.

Program Prerequisites:

No specific course prerequisites.

Program Application and Admission Requirements:

1. This program seeks students who have excelled in their undergraduate studies. Applicants must:

   1. Earn an overall GPA of 3.000.
   2. Complete the College of Business Graduate Studies application and essays for the MS in Organizational Leadership program. All application materials should be submitted to the Admissions Office.
   3. Forward scores for the Graduate Management Admission Test (GMAT) to the Admissions Office. Students may also apply for a GMAT waiver based on a cumulative GPA of 3.300 or higher at the time of graduation.

   Applicants may take up to two graduate courses in their senior year. A third graduate course may be taken during the senior year after a student has been admitted.

Degree Requirements

See the MS in Organizational Leadership program here.

Senior Year - Undergraduate program

Fall Semester

- Up to 12 credits of undergraduate coursework*
- 3-6 credits of graduate coursework

Spring Semester

- Up to 12 credits of undergraduate coursework*
- 3-6 (not to exceed 9 total in senior year) credits of graduate coursework

*Students must complete all requirements for the BSBA degree independent of the graduate coursework completed during their senior year.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year BSE/MSE in Civil Engineering Program

Five-Year BSE/MSE in Civil Engineering Program

This program allows undergraduate civil engineering majors in the College of Engineering to accelerate the completion of the Bachelor of Science in Engineering (BSE) degree in Civil Engineering and to earn the Master of Science in Engineering (MSE) degree in Civil Engineering with just one additional year of study.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year BSE/MSE in Electrical Engineering

Five-Year BSE/MSE in Electrical Engineering Program

This program allows undergraduate Electrical Engineering majors in the College of Engineering to accelerate the completion of the Bachelor of Science in Engineering (BSE) with a major in Electrical Engineering and to earn the Master of Science in Engineering (MSE) in Electrical Engineering with just one additional year of study.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year BSE/MS in Engineering Management

Five-Year BSE/MS in Engineering Management Program

This program allows undergraduate Engineering majors in the College of Engineering to accelerate the completion of the Bachelor of Science in Engineering (BSE) degree and to earn the Master of Science (MS) degree in Engineering Management with just one additional year of study.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year BSE/MSE in Mechanical Engineering Program

Five-Year BSE/MSE in Mechanical Engineering Program

This program allows undergraduate Mechanical Engineering majors in the College of Engineering to accelerate the completion of the Bachelor of Science in Engineering (BSE) with a major in Mechanical Engineering and to earn a Master of Science in Engineering (MSE) degree in Mechanical Engineering with just one additional year of study.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Five-Year BSE in Biomedical Engineering /MS in Pharmaceutical Sciences

Five-Year BSE in Biomedical Engineering /MS in Pharmaceutical Sciences

The College of Engineering and the College of Pharmacy & Health Sciences at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in attaining a Bachelor's of Science in Engineering (BSE) in Biomedical Engineering and furthering their career aspirations with a thesis-based Masters of Science (MS) in Pharmaceutical Sciences. This dual degree program allows students to complete the requirements for each program and receive two separate degrees with just one additional year of study beyond the normal four-year Bachelors program.

Accordingly, students can earn both the BSE and MS degrees within five years of entry as an undergraduate. Students admitted by WNE Admissions as undergraduates are only admitted into the BSEdegree portion of the program. Transition into the MS program is not automatic, nor is acceptance into the MS program guaranteed, but requires application and acceptance into the MS program. The MS program admission requirements can be found in the MS in Pharmaceutical Sciences program information in this catalog.

Students in good standing in the BSE program are eligible to apply for admission to the MS degree program during their sophomore year after December 1. Candidates must successfully submit their application materials, as well as complete an admissions interview, if requested of them.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses, probably geared towards focusing on the pharmaceutics and drug delivery elective sequence (as shown below), and should consult closely with their BSE and MS advisors. If the BSE student is considering a different focus area in their MS program, they should consult the descriptions of the other five focus areas found in the MS in Pharmaceutical Sciences program description in this catalog. In addition, the student will have to consult with both their BSE and MS faculty advisors to plan their sequence elective courses appropriately. The first two years of study will remain the same as the BSE curriculum. Beginning in the third year, the student will take courses in both the Colleges of Engineering and Pharmacy & Health Sciences. At the end of the fourth year, the student will graduate with the BSE degree and will exclusively take MS courses starting that summer.

Students in the BSE major that either (a) do not meet the MS program admission requirements during their sophomore year, or (b) elect not to apply for admission to the MS program at that time, remain eligible to apply for admission as part of the general applicant pool following four years of University study and completion of a bachelor's degree.

Degree Requirements

83 TOTAL CREDIT HOURS OVER THE THREE DUAL-DEGREE YEARS

3rd Year - Fall Semester

BME 301	Engineering Physiology I	3 cr.
BME 305	Biomedical Engineering Laboratory I	1 cr.
BME 331	Bioinstrumentation	3 cr.
MATH 350	Engineering Analysis I	3 cr.
PHAR 514 (or PHAR-PHRSC xxx)	Pharmaceutics I (or MSPS Sequence Elective(s))	2(3) cr.
PHRSC 529	Responsible Conduct of Research	3 cr.
BME 342	Drug Delivery	3 cr.

Subtotal: 18

* Note: BME 342 Drug Delivery is offered in the fall semester of odd years. Students entering the 3rd year of study on an even year should take PHRSC 527 Data Analysis & Biostatistics in its place and take BME 342 in the fall of the 4th year.

3rd Year - Spring Semester

BME 302	Engineering Physiology II	3 cr.
BME 306	Biomedical Engineering Laboratory II	1 cr.
BME 351	Biomechanics I	3 cr.
HIST XXX	Historical Perspective	3 cr.
CUL XXX	Cultural/Aesthetic Perspective	3 cr.
PHAR 524 (or PHAR-PHRSC xxx)	Pharmaceutics II (or MSPS Sequence Elective(s))	2 cr
PHAR 525 (or PHAR-PHRSC xxx)	Pharmaceutics II Lab (or MSPS Sequence Elective(s))	1 cr.
SBP XXX	Social/Behavioral Science Requirement	3 cr.

Subtotal: 19

4th Year - Fall Semester

BME 405	Biomedical Engineering Senior Laboratory	1 cr.
BME 437	Senior Design Projects I	3 cr.
BME 451	Biomechanics II	3 cr.
PHAR 610 (or PHAR-PHRSC xxx)	Principles of Pharmacokinetics (or MSPS Sequence Elective(s))	4 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.

Subtotal: 18

4th Year - Spring Semester

BME 440	Senior Design Projects II	3 cr.
BME 450	Biotransport Processes	3 cr.
PHAR 656 (or PHAR-PHRSC xxx)	Drug Discovery & Development (or MSPS Sequence Elective(s))	3 cr.
PH XXX	Ethical Perspective	3 cr.
PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 532	Advanced Pharmacology & Drug Action	3 cr.

Subtotal: 17

4th Year - Summer

PHRSC 528	Thesis Research 1	2 cr.

Subtotal: 2

5th Year - Fall Semester

PHRSC 618	Thesis Research 2	3 cr.
PHRSC 630	Scientific Communication	3 cr.

Subtotal: 6

5th Year - Spring Semester

PHRSC 628	Thesis Research 3	3 cr.

Subtotal: 3

Subtotal: 83

Total Credit Hours: 83

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year BSE/JD

Six-Year BSE/JD

The College of Engineering's accelerated six-year BSE/JD program offers qualified engineering students the opportunity to complete both their Bachelor of Science in Engineering (BSE) in their major area of study and their JD degree at the University in six years instead of seven. To be tentatively accepted into this unique program as a first-year student, individuals need a minimum SAT Math score of 650 and a minimum Critical Reading SAT score of 650; or ACT equivalent scores of 29 in English, Math, and Composite; and a high school GPA of 3.500 or higher. Students not meeting these precollege requirements, but who have demonstrated superior performance in their studies at the University, may petition to be considered for the accelerated degree sequence at the end of their sophomore year.

Students need to maintain a 3.300 undergraduate GPA in order to maintain their tentative acceptance to the School of Law. Following the sophomore year, students take the LSAT and need to score above the 50th percentile of the previous year's matriculating Law School class. During the fourth year, students will be completing their BSE degree and begin taking classes at the School of Law. These law classes are offered in the evening; there is no conflict with engineering courses. The summer following senior year is spent completing the requirements of the first year of law school and puts the student on track to complete the law degree in just two additional years. These final two years of the program follow the standard School of Law timetable.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year Biomedical Engineering BSE/JD

Six-Year Biomedical Engineering BSE/JD

Qualified Biomedical Engineering students have the opportunity to accelerate their attainment of a Bachelor of Science in Engineering (BSE) in Biomedical Engineering and a Law Juris Doctor (JD) degree. Entrance requirements and standards necessary to maintain a tentative acceptance to the School of Law can be found in the Accelerated Six-Year BSE/JD section of this catalog.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses and should consult closely with their advisor. The first two years of study will remain the same as the BSE curriculum. The third year will change slightly to accommodate the senior year when the student will take both Engineering and School of Law courses. Some summer School of Law courses will be necessary after the fourth year.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year Civil Engineering BSE/JD

Six-Year Civil Engineering BSE/JD

Qualified Civil Engineering students have the opportunity to accelerate their attainment of a BSE in Civil Engineering and a Law degree. Entrance requirements and standards necessary to maintain a tentative acceptance to the School of Law can be found in the Accelerated Six-Year BSE/JD section of this catalog.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses and should consult closely with their advisor. The first two years of study will remain the same as the BSE curriculum. The third year will change slightly to accommodate the senior year when the student will take both Engineering and School of Law courses. Some summer School of Law courses will be necessary after the fourth year.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year Computer Engineering BSE/JD

Six-Year Computer Engineering BSE/JD

Qualified Computer Engineering students have the opportunity to accelerate their attainment of a BSE in Computer Engineering and a Law degree. Entrance requirements and standards necessary to maintain a tentative acceptance to the School of Law can be found in the Accelerated Six-Year BSE/JD section of this catalog.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses and should consult closely with their advisor. The first two years of study will remain the same as the BSE curriculum. The third year will change slightly to accommodate the senior year when the student will take both Engineering and School of Law courses. Some summer School of Law courses will be necessary after the fourth year.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year Electrical Engineering BSE/JD

Six-Year Electrical Engineering BSE/JD

Qualified Electrical Engineering students have the opportunity to accelerate their attainment of a BSE in Electrical Engineering and a Law degree. Entrance requirements and standards necessary to maintain a tentative acceptance to the School of Law can be found in the Accelerated Six-Year BSE/JD section of this catalog.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses and should consult closely with their advisor. The first two years of study will remain the same as the BSE curriculum. The third year will change slightly to accommodate the senior year when the student will take both Engineering and School of Law courses. Some summer School of Law courses will be necessary after the fourth year.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year Industrial Engineering BSE/JD

Six-Year Industrial Engineering BSE/JD

Qualified Industrial Engineering students have the opportunity to accelerate their attainment of a BSE in Industrial Engineering and a Law degree. Entrance requirements and standards necessary to maintain a tentative acceptance to the School of Law can be found in the Accelerated Six-Year BSE/JD section of this catalog.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses and should consult closely with their advisor. The first two years of study will remain the same as the BSE curriculum. The third year will change slightly to accommodate the senior year when the student will take both Engineering and School of Law courses. Some summer School of Law courses will be necessary after the fourth year.

Undergraduate/Graduate or Doctoral Professional Practice Degree Programs

Six-Year Mechanical Engineering BSE/JD

Six-Year Mechanical Engineering BSE/JD

Qualified Mechanical Engineering students have the opportunity to accelerate their attainment of a BSE in Mechanical Engineering and a Law degree. Entrance requirements and standards necessary to maintain a tentative acceptance to the School of Law can be found in the Accelerated Six-Year BSE/JD section of this catalog.

Students choosing this unique curricular path will need to closely follow a prescribed sequence of courses and should consult closely with their advisor. The first two years of study will remain the same as the BSE curriculum. The third year will change slightly to accommodate the senior year when the student will take both Engineering and School of Law courses. Some summer School of Law courses will be necessary after the fourth year.

Early Acceptance Dual Degree Programs

Students who have achieved a high level of success in their high school academic performance may apply for conditional early acceptance into certain programs as first-year students. To qualify for this opportunity, typically applicants have earned a high school GPA of 3.500 or higher, and a combined verbal and quantitative sections score of 1200 or higher on the SAT.

Early Acceptance Dual Degree Programs

Five-Year Bachelor/MBA

Five-Year Bachelor/MBA Program - Early Acceptance

Students who have achieved a high level of success in their high school academic performance may apply for conditional early acceptance into either program as freshmen. To qualify for this opportunity, applicants typically have earned a high school GPA of 3.500 or higher, and a combined verbal and quantitative sections score of 1200 or higher on the SAT.

Once admitted, students must

1. Maintain an overall GPA of 3.300 or higher, after freshman year.
2. Successfully complete an undergraduate degree
3. Earn a “B” average or better with no grade below a “C” in the prerequisite courses.

A detailed program of study can be found in the MBA Program structure.

Senior Year - Undergraduate Program

Fall Semester

Up to 12 credits of undergraduate coursework*
3-6 credits of graduate coursework

Spring Semester

Up to 12 credits of undergraduate coursework*
3-6 (not to exceed 9 credits total in senior year) credits of graduate coursework

Degree Requirements

See MBA Program structure (Note: Some MBA courses may have undergraduate prerequisites).

*Business students must complete all requirements for the BSBA degree independent of the graduate coursework completed during their senior year. This may require students to take courses during summer or winter sessions to accelerate undergraduate studies.

Early Acceptance Dual Degree Programs

Five-Year BSBA/MS In Sport Leadership and Coaching

Five-Year BSBA/MS In Sport Leadership and Coaching Program - Early Acceptance

This program allows undergraduate majors in the College of Business to accelerate the completion of both their bachelor's degree and Master of Science in Sport Leadership and Coaching. Students will earn both their BSBA and MS in Sport Leadership and Coaching degrees within five years of entry as an undergraduate. With this option, students can complete the MS in Sport Leadership and Coaching with just twelve months of additional study.

Students who have achieved a high level of success in their high school academic performance may apply for conditional early acceptance into either program as freshmen. To qualify for this opportunity, applicants typically have earned a high school GPA of 3.500 or higher, and a combined verbal and quantitative sections score of 1200 or higher on the SAT.

Once admitted, students must
1. Maintain an overall GPA of 3.300 or higher, after freshman year.
2. Successfully complete an undergraduate degree.
3. Earn a "B" average or better with no grade below a "C" in the prerequisite courses.

A detailed program of study can be found in the MS in Sport Leadership and Coaching program structure.

Senior Year - Undergraduate Program

Fall Semester

Up to 12 credits of undergraduate coursework*
Three-six credits of graduate coursework

Spring Semester

Up to 12 credits of undergraduate coursework*
Three-six (not to exceed 9 credits total in senior year) credits of graduate coursework

*Business students must complete all requirements for the BSBA degree independent of the graduate coursework completed during their senior year. This may require students to take courses during summer or winter sessions to accelerate undergraduate studies. Students may be enrolled in a maximum of 18 credits at any point in time

Early Acceptance Dual Degree Programs

Five-Year Bachelor/MS in Accounting

Five-Year Bachelor/MS in Accounting – Early Acceptance

Students who have achieved a high level of success in their high school academic performance may apply for conditional early acceptance into either program as freshmen. To qualify for this opportunity, applicants typically have earned a high school GPA of 3.5 or higher, or a combined verbal and quantitative sections score of 1200 or higher on the SAT. Juniors with a GPA of 3.300 may apply.

Once admitted, students must

1. Maintain an overall GPA of 3.300 or higher, after freshman year.
2. Successfully complete an undergraduate degree
3. Earn a "B" average or better with no grade below a "C" in the prerequisite courses.

This program allows undergraduate full-time accounting majors in the College of Business to accelerate the completion of both the bachelor's and master's degrees in accounting. Students can earn the Master of Science in Accounting degree within five years of entry as an undergraduate. A detailed program of study for the MS in Accounting can be found here.

Minors

In addition to the academic major which all students must take, students have the option of electing one or more minors. To elect a minor or to obtain further information, students should consult their academic Dean's Office. Click on the links to the left to explore WNE minors.

Requirements

A student must successfully complete all courses specified for the minor with a minimum cumulative GPA of 2.000 in the minor. Additionally, a minimum of two courses, with a minimum of six credits, of each minor must be completed at WNE.

Minors

Accounting Minor

Accounting Minor

With an increase in international trade and the rapid pace of commercial transactions, the need for business professionals familiar with accounting is growing and the role they play in the business world is expanding in exciting ways. In the accounting minor, students study such topics as auditing and assurance services, financial reporting, fundamentals of individual tax, managerial accounting, cost accounting, and investments.

Degree Requirements

The Accounting Minor Requirement is 18 credit hours as follows:

AC 101/HONB 203	Financial Reporting I	3 cr.
AC 202	Managerial Accounting	3 cr.
AC 2XX-4XX	Elective	3 cr.
AC 3XX-4XX	Elective	3 cr.
Total Credit Hours:		**12**

Plus Two of the Following Electives:

AC 3XX-4XX	Elective	3 cr.
AC 3XX-4XX	Elective	3 cr.
FIN 3XX-4XX	Elective	3 cr.
BL 640	Business Law	3 cr.
Total Credit Hours:		**6**

The accounting minor is not available to accounting majors.

Students may take a limited number of graduate courses toward the undergraduate minor, in accordance with current policy.

Minors

African American Studies Minor

African American Studies Minor

Students of all majors will benefit from gaining insights into the African American experience in this interdisciplinary minor that explores topics ranging from media, race, and gender to African American history. Courses include study in African American Literature; Civil War and Reconstruction; Comparative Race Relations; and Race, Gender, and Ethnicity in the Media.

Degree Requirements

The African American Studies Minor Requirement is 18 credit hours as follows:

ENGL 223	African American Literature I	3 cr.
ENGL 224	African American Literature II	3 cr.
CUL 255	African American and Caribbean Cultures	3 cr.
Total Credit Hours:		**9**

(Other electives at the discretion of the director)

Plus Three of the Following Electives:

ENGL 336	Ethnic American Literature	3 cr.
ENGL 341	Caribbean Writers	3 cr.
ENGL 343	Literature of Africa and the African Diaspora	3 cr.
ENGL 345	Major African American Writers	3 cr.
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.
SO 211	Race and Ethnicity	3 cr.
Total Credit Hours:		**9**

Minors

Art Minor

Art Minor

Students seeking to express their creativity and gain technical proficiency may choose to minor in art. The art minor requirement is 18 credit hours in art, with at least nine credit hours in studio art and six credit hours in art history/appreciation. This minor requires at least nine credit hours in studio art and nine credit hours in Art History/Appreciation.

Minors

Athletic Coaching Minor

Athletic Coaching Minor

The Athletic Coaching Minor is offered through the College of Arts and Sciences. The minor is interdisciplinary in nature and draws from courses in physical education, psychology, and sport management. The minor provides a cohesive and meaningful academic program for students wishing to pursue the formal study of athletic coaching.

Degree Requirements

The Athletic Coaching Minor Requirement is 18 credit hours as follows:

PEHR 201	Principles and Practices of Successful Coaching	3 cr.
PEHR 202	Care and Prevention of Athletic Injury/Sport First Aid	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 321	Sports Psychology	3 cr.
PSY 313	Learning	3 cr.
	or	
SPMN 450	Managing Collegiate/Scholastic Athletic Programs	3 cr.
PEHR 480	Internship in Athletic Coaching	3 cr.
	or	
PEHR 481	Internship in Athletic Coaching	3 cr.

Minors

Biology Minor

Biology Minor

Students majoring in psychology, chemistry, or criminal justice can enhance their studies with the addition of a biology minor. Students study plants and animals, and their interactions through both lectures and lab work.

Degree Requirements

The Biology Minor Requirement is 18 credit hours as follows:

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 201	Plant Biology	4 cr.
BIO 213	Ecology	3 cr.
BIO 15X	Natural Science Perspective in Biology	3 crs.
Total Credit Hours:		**18**

Note: the BIO 15X requirement can be fulfilled with any BIO 15X or higher level BIO course.

BIO 213 has CHEM 105 as a pre-/co-requisite.

Minors

Biomedical Physics Minor

Biomedical Physics Minor

A minor in biomedical physics will allow students who are interested in how physics applies to biomedicine to explore the subject from a deeper and more medical viewpoint. Through various lab activities and lectures, students will build a foundation for careers in biology, medicine, biophysics, and other related fields. Study includes coursework in physics of the life sciences, electricity and magnetism, optics, and mechanics.

Degree Requirements

The Biomedical Physics Minor Requirement is 20 credit hours as follows:

Required PHYS courses: 11 Credits

PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.
	or	
PHYS 133	Mechanics	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.
	And	
PHYS 320	Modern Physics	3cr.
Total Credit Hours:		**11**

Plus nine credit hours from the following:

PHYS 301	Optics	3cr.
PHYS 3XX	PHYS 3xx Elective	3 cr.
PHYS 3XX	PHYS 3xx Elective	3 cr.
	or	
PHYS 390	Special Topics	1-3 cr.
Total Credit Hours:		**9**

Six credit hours of the nine credit hours about can be substituted from the following:

BME 332	Biomedical Imaging	3 cr.
	or	
BME 450	Biotransport Processes	3 cr.
	or	
BME 451	Biomechanics II	3 cr.

Minors

Business Minor

Business Minor

Students in the College of Arts and Sciences and the College of Engineering who want to prepare for future careers in business can take a minor in business that will supply basic knowledge about accounting, finance, management, and marketing.

Degree Requirements

The Business Minor Requirement is 18 credit hours as follows:

AC 101/HONB 203	Financial Reporting I	3 cr.
AC 202	Managerial Accounting	3 cr.
BIS 202	Introduction to Business Information Systems	3 cr.
FIN 214	Introduction to Finance	3 cr.
MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
Total Credit Hours:		**18**

The business minor is not available to students whose major is within the College of Business.

Minors

Chemistry Minor

Chemistry Minor

Chemistry impacts many professions. A minor in chemistry provides an opportunity for students to investigate more fully the relationships between chemistry and disciplines such as biology, criminal justice, environmental science, and psychology. Courses include general and analytical chemistry, as well as biochemistry and organic chemistry.

Degree Requirements

The Chemistry Minor Requirement is 20 credit hours as follows:

CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
Total Credit Hours:		**8**

Plus any one of the following lecture and lab combinations:

CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
	or	
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
Total Credit Hours:		**4**

Plus either set of the two-lecture/two-laboratory course sequences listed below:

CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
	or	
CHEM 317	Physical Chemistry I	3 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.
CHEM 318	Physical Chemistry II	3 cr.
CHEM 328	Physical Chemistry Laboratory II	1 cr.
Total Credit Hours:		**8**

This minor is not open to forensic chemistry majors.

The chemistry minor is open only to students who have completed one semester of college-level physics (PHYS 101, PHYS 103, PHYS 123, PHYS 132, or PHYS 133) and one of the following mathematics courses: MATH 109, MATH 123, MATH 127 or MATH 133.

Note: CHEM 314/CHEM 324 requires the organic chemistry sequence as prerequisites. The physical chemistry two-lecture/two- laboratory course sequence requires CHEM 211/CHEM 221 as a prerequisite.

Note: The number of available seats in upper-level chemistry courses is very limited, and we recommend advanced planning and advising.

Minors

Communication Minor

Communication Minor

Students in every major will find the communication minor beneficial in learning how to write clearly, speak well, handle electronic media, and make professional presentations. Topics of study include public speaking, small and large group communication, journalism, and broadcasting.

Degree Requirements

The Communication Minor Requirement is 18 credit hours as follows:

COMM 100	Principles of Communication	3 cr.
	or	
COMM 233	Business Writing and Communication	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 340	Business Communication	3 cr.
Total Credit Hours:		**12**

Plus Two of the Following Electives:

JRNL 100	Journalism: Practices and Principles	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 283	Health Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 315	Rhetoric of Social Justice Movements	3 cr.
COMM 321	Interpersonal Communication	3 cr.
COMM 324	Media Industries, Government, and Society	3 cr.
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.
COMM 348	Intercultural Communication	3 cr.
COMM 356	Global Communication	3 cr.
Total Credit Hours:		**6**

Minors

Computer Forensics Minor

Computer Forensics Minor

The rate of computer crime is increasing at a phenomenal rate and is receiving heightened attention by businesses and the media. There is a corresponding need for computing professionals who are also trained in the field of criminal justice.

This minor provides students with a combination of criminal justice and computing skills to enable them to investigate computer crimes.

Degree Requirements

The Computer Forensics Minor Requirement is 18 credit hours as follows:

Required CS/IT Courses (9-10 credit hours)

CS 101/IT 101	Introduction to Computing	4 cr.
	or	
CS 132	Principles of Computing	3 cr.
	and	
CS 300	Digital Forensics I	3 cr.
CS 310	Digital Forensics II	3 cr.
Total Credit Hours:		**9-10**

Required CJ Courses (9 credit hours)

CJ 101	Introduction to Criminal Justice	3 cr.
CJ 311	Criminal Investigation	3 cr.
CJ 348	Introduction to Cyber Crimes	3 cr.
Total Credit Hours:		**9**

Minors

Computer Science Minor

Computer Science Minor

From medicine to education, virtually every profession requires computer competency. Students make themselves an asset to future employers with a deeper understanding of the technology behind your desktop computer. Students learn about topics including computing, programming, data structures, software development, and advanced discrete mathematics.

Degree Requirements

The Computer Science Minor Requirement is a minimum of 19 credit hours as follows:

CS 101/IT 101	Introduction to Computing	4 cr.
CS 102/IT 102	Introduction to Programming	4 cr.
	or	
CS 171	Programming for Mathematics	4 cr.
	or	
CS/IT 111	Accelerated Python	1 cr.
CS 200/IT 200	Data Structures	4 cr.
CS 210	Software Design	4 cr.
MATH 251	Advanced Discrete Mathematics	3 cr.
	or	
MATH 281	Foundations of Mathematics I	3 cr.
CS 32x-4xx	Computer Science Elective	3 cr.
	or	
MATH 363	Theory of Computation	3 cr.

CS/IT 111 has an additional prerequisite of ENGR 105 or instructor permission.

Minors

Creative Writing Minor

Creative Writing Minor

Creative writing is an age-old tradition for self-expression and social commentary. By learning the difference between imitation and innovation by studying the works of great writers and literary techniques, students increase their imaginative capacity and have the ability to tell stories that endure.

As a creative writing minor, students learn the craft of writing in various genres through workshops in creative writing, poetry, fiction, and non-fiction. As students explore different styles and expand their writing skills they generate a writing portfolio that highlights their work.

Degree Requirements

The Creative Writing Minor Requirement is 18 credit hours as follows:

ENGL 237	Creative Writing	3 cr.
ENGL 351	Fiction Workshop	3 cr.
ENGL 352	Poetry Workshop	3 cr.
ENGL 354	Creative Nonfiction Workshop	3 cr.
ENGL 3xx	Creative Writing Electives (Variable-Topics)	3 cr.
ENGL 3XX/4XX	Creative Writing/English Elective	3 cr.
Total Credit Hours:		**18**

Please note:

With the exception of ENGL 237, the creative writing workshops may be taken more than once for credit toward the minor.

Creative writing electives : ENGL 270, ENGL 290-ENGL 299, ENGL 351, ENGL 352, ENGL 354, ENGL 370 and ENGL 390- ENGL 399.

Minors

Criminal Justice Minor

Criminal Justice Minor

Crime affects business, the environment, our families, and personal lives. Why not gain a better understanding of the criminal justice system through courses such as Criminology and Criminal Procedure? Even if students do not plan to work in the criminal justice system, there are many opportunities to apply these studies in business, security, or social services. Students study criminology, corrections, police and society, and criminal law and procedure.

Degree Requirements

The Criminal Justice Minor Requirement is 18 credit hours as follows:

A student must take CJ 101 prior to taking the remaining courses:

CJ 101	Introduction to Criminal Justice	3 cr.
CJ 211	Corrections	3 cr.
	or	
CJ 218	Police and Society	3 cr.
	or	
CJ 234	The Judicial Process	3 cr.
CJ XXX	Criminal Justice Elective	3 cr.
CJ XXX	Criminal Justice Elective	3 cr.
CJ XXX	Criminal Justice Elective	3 cr.
CJ XXX	Criminal Justice Elective	3 cr.
Total Credit Hours:		**18**

Minors

Cybersecurity Minor

Cybersecurity Minor

The Cybersecurity Minor Requirement is a minimum of 20 credit hours as follows:

IT 101/CS 101	Introduction to Computing	4 cr.
IT 102/CS 102	Introduction to Programming	4 cr.
	or	
CS 171	Programming for Mathematics	4 cr.
	or	
CS/IT 111	Accelerated Python	1 cr.
IT 230	Introduction to Operating Systems and Script Development	3 cr.
IT 250/BAIM 413	Data Communications and Networks	3 cr.
IT 330	Fundamentals of Cybersecurity	3 cr.
IT 430	Ethical Hacking	3 cr.
IT 435	Cybersecurity Operations	3 cr.
Total Credit Hours:		**20-23**

CS/IT 111 has an additional prerequisite of ENGR 105 or instructor permission.

Minors

Digital Publishing Minor

Digital Publishing Minor

The Digital Publishing minor is intended to provide students with an interdisciplinary understanding of contemporary practices of publishing in an online world. The minor is designed so that students have a foundation in aesthetics of layout and design, writing, and programming, and understand the changing dynamics of the digital publishing industry. In the course of their studies, students will build a portfolio of professional work, learn about online publishing platforms that can spotlight their talents, and work toward creating an online student-run publishing hub.

Degree Requirements

The Digital Publishing Minor Requirement is 18 credit hours as follows:

ENGL 270	Writing for the Web	3 cr.
IT 240	Foundations of Web Systems	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
Total Credit Hours:		**9**

Plus Two of the Following Electives:

COMM 324	Media Industries, Government, and Society	3 cr.
COMM 352	Multimedia Communication	3 cr.
COMM 360/JRNL 360	Sportswriting	3 cr.
COMM 371/JRNL 370	Advanced Radio Reporting	3 cr.
ENGL 370	Writing about TV and Film	3 cr.
ENGL 371	Narrative and Digital Media	3 cr.
IT 350	Web Systems Development	3 cr.
IT 450	Advanced Topics in Web Design and Development	3 cr.
JRNL 303	Contemporary Journalism	3 cr.
Total Credit Hours:		**6**

Plus One of the Following:

ART 130	Color in Art & Design	3 cr.
COMM 260	Communication Web Design	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
ENGL 240	Editing	3 cr.
Total Credit Hours:		**3**

Minors

Economics Minor

Economics Minor

Economics is the study of the production and distribution of wealth—something that affects every facet of our society. Coursework includes microeconomics, macroeconomics, money and banking, and management issues for professionals. Regardless of a student's major or career plans, knowledge of how the American and world economies work will be valuable and useful. Economics is one of the most popular minors at the University.

Degree Requirements

The Economics Minor Requirement is 18 credit hours as follows:

EC 111	Principles of Microeconomics	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
EC 215 or EC 311	Intermediate Macroeconomics or Money and Banking	3 cr.
EC 216 or EC 317	Intermediate Microeconomics or Management Issues for Professionals	3 cr.
Total Credit Hours:		**12**

Plus six additional credits at the 200-level or higher

	Total Credit Hours:	**6**

Minors

Education Minor

Education Minor

Many professionals spend their early careers in business and later share what they know as teachers. For students who think they would one day want to enter this rewarding field, an education minor is an excellent addition to the résumé. Students study developmental and educational psychology, curriculum and methods, teaching reading, and principles and problems of education.

Degree Requirements

The Education Minor Requirement is 18 credit hours as follows:

PSY 101	Introduction to Psychology	3 cr.
ED 201	Principles and Problems of Education	3 cr.
ED 365	Special Education: Principles & Practices	3 cr.
Total Credit Hours:		**9**

Take nine credits from the following Education or Psychology courses:

ED 333	Independent Study in Education	1-3 cr.
ED 350	Reading and Language Arts: Theory and Methods	3 cr.
ED 275	Teaching English Language Learners	3 cr.
ED 375	Humanities, Science and Mathematics Methods	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 304	Educational Psychology	3 cr.
PSY 307	Psychological Assessment	3 cr.
PSY 313	Learning	3 cr.
PSY 317	Psychology of the Exceptional Person	3 cr.
PSY 322	School Psychology	3 cr.
ED 120 Intro to Education in addition to one of the following 1-credit courses:		2 cr.

ED 202 Secondary Pre-practicum I	1 cr.
ED 252 Survey of Geography	1 cr.
ED 361 Methods for Humanities 5-12	1 cr.
ED 362 Methods for Mathematics 5-12	1 cr.
ED 363 Methods for Sciences 5-12	1 cr.
Total Credit Hours:	**9**

Minors

English Minor

English Minor

The study of literature can help students develop their ability to think critically and express your ideas as well as provide the stimulation and enjoyment of reading many wonderful works. This minor is an ideal complement to majors ranging from marketing communication/advertising to history and government. Students read and study both British and American literature, as well as Shakespeare's tragedies and comedies.

Degree Requirements

The English Minor Requirement is 18 credit hours as follows:

ENGL 231	British Literature I	3 cr.
	or	
ENGL 232	British Literature II	3 cr.
ENGL 251	American Literature I	3 cr.
ENGL 314	Shakespeare: Plays and Poems	3 cr.
	or	
ENGL 315	Shakespeare: The Tragedies	3 cr.
	or	
ENGL 316	Shakespeare: The Comedies and Histories	3 cr.
	or	
ENGL 338/411	Major Authors	3 cr.
	or	
ENGL 345	Major African American Writers	3 cr.
ENGL 3XX/4XX	English Elective	3 cr.
ENGL 3XX/4XX	English Elective	3 cr.
ENGL 3XX/4XX	English Elective	3 cr.
Total Credit Hours:		**18**

Minors

Enterprise Resource Planning with SAP Minor

Enterprise Resource Planning with SAP Minor

SAP is the all-encompassing computer software used by major corporations worldwide. Enterprise Resource Planning with SAP minor is offered as an advanced version of the SAP Certification program offered by the College of Business, where students take more courses enriched with hands-on SAP training.

Degree Requirements

The Enterprise Resource Planning with SAP Minor Requirement is 21 credit hours as follows:

BIS 202	Introduction to Business Information Systems	3 cr.
BIS 221	Statistics for Business Analytics	3 cr.
BIS 312	Quality and Operations Management with SAP	3 cr.
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
BIS 412	Business Analytics with SAP	3 cr.
MAN 370	Project Management	3 cr.
BIS 340	Enterprise Resource Planning Systems	3 cr.
Total Credit Hours:		**21**

Minors

Entertainment Management Minor

Entertainment Management Minor

For students who want to be involved in the world's best venues for sport, music, and entertainment, the entertainment management minor offers a peek behind the curtain at the business side of entertainment while also helping students understand the operations and planning that goes into each exciting event. Students take courses in Event Planning, Labor Management Relations, Event Planning, Economics of Art and Entertainment, and more to prepare for management of the events, shows, and games that generate both revenue and audiences.

Degree Requirements

The Entertainment Management Minor Requirement is 18 credit hours as follows:

AEM 250	Introduction to Arts & Entertainment Organizations	3 cr.
BL 308	Labor Management Relations	3 cr.
	or	
BL 388	Labor Management Relations in Sport	3 cr.
AEM 355	Arts and Entertainment Venue Operations	3 cr.
	or	
SPMN 355	Sport Facility Planning and Management	3 cr.
EC 350	Economics of Arts and Entertainment	3 cr.
	or	
BL 403	Business Law for Entrepreneurs	3 cr.
COMM 344	Event Planning	3 cr.
MK 372	Digital Media Marketing Strategies	3 cr.
Total Credit Hours:		**18**

Minors

Entrepreneurship Minor

Entrepreneurship Minor

Students pursuing the entrepreneurship minor will complement their major area of study with an understanding of what is involved in developing new ventures and in managing small and medium-sized firms. The interdisciplinary nature of the program will give students a broad perspective of the business enterprise. Students will study financial reporting, marketing, entrepreneurship and innovation, and global entrepreneurship.

Degree Requirements

The Entrepreneurship Minor Requirement is 15 credit hours as follows:

Required Courses (9 credits):

ENTR 251	Entrepreneurship and Innovation	3 cr.
BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
ENTR 480	Internship in Entrepreneurship	3 cr.
Total Credit Hours:		**9**

Plus Two of the Following Electives:

FIN 330	Financing Entrepreneurial Ventures	3 cr.
MK 302	Market Analysis	3 cr.
MK 372	Digital Media Marketing Strategies	3 cr.
Total Credit Hours:		**6**

Not available to students majoring in Entrepreneurship.

Minors

Film Studies Minor

Film Studies Minor

In this fascinating minor, students explore the history of cinema, the art behind this powerful international medium, the process of screenwriting, the power of the director signature, and the various genres of film. Topics of study not only cover the history and art of film, but also horror, mass media, women in film; and international cinema.

Degree Requirements

The Film Studies Minor Requirement is 18 credit hours as follows:

The following two courses are required:

FILM 102	The History of Film	3 cr.
FILM 103	The Art of Film	3 cr.
Total Credit Hours:		**6**

Plus 12 Credits from the Following Electives:

FILM 201	Studies in Mainstream Film Genres	3 cr.
FILM 202	The Haunted Screen	3 cr.
FILM 210	Mass Media in Film	3 cr.
FILM 290	Special Topics in Film	1-3 cr.
FILM 304	Science Fiction Film	3 cr.
FILM 312	International Cinema	3 cr.
FILM 320	Introduction to Cinema Production	3 cr.
FILM 340	Director's Signature	3 cr.
FILM 370	Women and Film	3 cr.
FILM 390 - 393	Special Topics in Film	1-3 cr.
Total Credit Hours:		**12**

Minors

Finance Minor

Finance Minor

The study of finance is the art and science of wealth management. Almost every firm, government agency, and corporation has financial managers who prepare financial reports, direct investment activities, and implement cash management strategies.

In the finance minor, students take courses in Introduction to Finance, Investments, Intermediate Corporate Finance, and other electives in Finance. Students will gain the foundation to understand and interpret cash flow and return on investment, which, combined with the major degree program, will significantly increase students' value to future employers.

Degree Requirements

The Finance Minor Requirement is 18 credit hours as follows:

FIN 214	Introduction to Finance	3 cr.
FIN 317	Investments	3 cr.
FIN 320	Intermediate Corporate Finance	3 cr.
Total Credit Hours:		**9**

Plus 9 credits of FIN Electives:

FIN 3XX-4XX	FIN Electives	9 cr.
Total Credit Hours:		**9**

The finance minor is not available to finance majors.

Minors

Forensic Science Minor

Forensic Science Minor

This minor requires a solid foundation in general biology, general chemistry, and organic chemistry along with investigation-based courses such as Introduction to Criminal Justice and Scientific Evidence used by law enforcement agencies to solve crimes through forensic evidence.

Degree Requirements

The Forensic Science Minor Requirement is 30 credit hours as follows:

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CJ 101	Introduction to Criminal Justice	3 cr.
FS 240	Scientific Evidence	3 cr.
FS 201	Introduction to Forensics	4 cr.
Total Credit Hours:		**30**

Note: This minor is not open to Forensic Chemistry or Forensic Biology majors.

Minors

Health Science Minor

Health Science Minor

The Health Sciences curriculum prepares students for health-related careers by enabling them to acquire a strong foundation in both biology and chemistry that is required by many health-related professional paths including medicine, physician assistant, optometry, dentistry, and veterinary medicine, as well as graduate programs in biomedical sciences.

Degree Requirements

The Health Science Minor Requirement is 22 credit hours as follows:

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 215	Anatomy and Physiology I	4 cr.
BIO 216	Anatomy and Physiology II	4 cr.
HS 2XX	HS Elective	3 cr.
HS 2XX	HS Elective	3 cr.
Total Credit Hours:		**22**

Additional courses that fulfill the HS elective requirements: BIO 203, BIO 310, BIO 312, BIO 401, BME 425, CHEM 402, NSCI 248, NSCI 348

Note: This minor is not open to health sciences and health studies majors.

BIO 215 has CHEM 106 as a prerequisite.

Minors

History Minor

History Minor

Study the forces that have shaped U.S. and world societies and put the present into perspective. Choose from courses in African, Asian, European, Latin American, and U.S. history. History develops research, analytical, and communication skills that complement many majors in the humanities, social sciences, and business.

Degree Requirements

The History Minor Requirement is 18 credit hours as follows:

- Six HIST courses (18 credits)
- No more than six HIST credits at the 100-level
- At least six credits at the 300-level or above

Minors

Human Resource Management Minor

Human Resource Management Minor

Students interested in understanding the employment relationship and pursuing careers in human resources will benefit from the human resource management minor. Courses will focus on benefits, compensation, and employment law among other topics.

Degree Requirements

The Human Resource Management Minor Requirement is 18 credit hours as follows:

HRM 323	Human Resource Management	3 cr.
BL 308	Labor Management Relations	3 cr.
	or	
BL 388	Labor Management Relations in Sport	3 cr.
BL 424	Business Law for Human Resource Management	3 cr.
Total Credit Hours:		**9**

Plus Nine Credits of HRM 3XX/4XX Courses

HRM 3XX/4XX	Human Resource Management Elective	3 cr.
HRM 3XX/4XX	Human Resource Management Elective	3 cr.
HRM 3XX/4XX	Human Resource Management Elective	3 cr.
Total Credit Hours:		**9**

The human resource management minor is not available to management & leadership majors, sport management majors, or human resource majors.

Minors

Integrated Marketing Communication Minor

Integrated Marketing Communication Minor

In the integrated marketing communication minor students will strengthen your marketing abilities by studying the foundational principles of marketing, buyer behaviors, promotional strategy, campaign planning, public relations and other topics. This minor will make students valuable to any business or industry .

Degree Requirements

The Integrated Marketing Communication Minor Requirement is 16 credit hours as follows:

COMM 245	Video Editing and Production	4 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
MK 302	Market Analysis	3 cr.
MK 303	Customer Solutions	3 cr.
MK 372	Digital Media Marketing Strategies	3 cr.
Total Credit Hours:		**16**

The integrated marketing communication minor is not available to students majoring in marketing or marketing communication/advertising.

Minors

International Business Minor

International Business Minor

From courses in international finance to multinational marketing, the international business minor offers an interdisciplinary program designed to help students develop the appropriate skills and knowledge required to enter careers in international business. Topics of study include management, intercultural communication, international monetary economy, and international law.

Degree Requirements

The International Business Minor Requirement is 18 credit hours as follows:

INTB 251	Introduction to International Business	3 cr.
Total Credit Hours:		**3**

Plus Two of the Following:

FIN 322	International Finance	3 cr.
MAN 311	International Management	3 cr.
MK 311	Multinational Marketing	3 cr.
Total Credit Hours:		**6**

Plus nine credits focused on Culture, Communication, Economics, Foreign Language, International Studies, Political Science, or other.

Past examples include:

CUL 315/BUS 315	International Practicum	3 cr.
COMM 348	Intercultural Communication	3 cr.
EC 371	International Monetary Economics	3 cr.
EC 372	International Trade	3 cr.
POSC 203	International Relations	3 cr.
POSC 340/LSOC 340	International Governance and Law	3 cr.
Total Credit Hours:		**9**

Minors

International Studies Minor

International Studies Minor

The United States and U.S. companies are affected in so many ways by events beyond our borders, even events in the farthest places. Students study world regional geography, world history, contemporary global issues, and international relations. This minor will help students better understand what some people call the "global village" and our place in it.

Degree Requirements

The International Studies Minor Requirement is 21 credit hours as follows:

GEOG 102	World Regional Geography I: Highly Developed Countries	3 cr.
	or	
GEOG 103	World Regional Geography II: Less Developed Countries	3 cr.
	and	
HIST 106	World History, 1500 CE-Present	3 cr.
	or	
INST 101/POSC 101	Introduction to Contemporary Global Issues	3 cr.
	and	
POSC 203	International Relations	3 cr.
Total Credit Hours:		**9**

Plus any one course from the International Studies Curriculum List Group B or Foreign Language

	Total Credit Hours:	**3**

Plus any three courses from the International Studies Curriculum List Group C or Foreign Language

	Total Credit Hours:	**9**

Minors

Journalism Minor

Journalism Minor

Clearly explaining significant and potentially complicated ideas and developments to a general audience is a complex task with enormous social implications. Learning to write well and to grasp the enormous ethical responsibility of journalists and journalism in a rapidly changing media environment is essential for understanding how ideas are framed, circulated, and received in society. This minor will help students develop skills in writing, editing, and synthesizing information for audiences of print, digital, audio, and audio/visual media platforms; learn conventional journalistic practices and standards in a variety of media, aiding in both the production and consumption of news; and explore the shifting dynamics of the journalism field in the contemporary United States.

Degree Requirements

The Journalism Minor Requirement is 19 credit hours as follows:

JRNL 100	Journalism: Practices and Principles	3 cr.
JRNL 303	Contemporary Journalism	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 245	Video Editing and Production	4 cr.
Total Credit Hours:		**13**

Plus Any Two 3XX/4XX JRNL Courses

JRNL 360/COMM 360	Sportswriting	3 cr.
JRNL 362	Entertainment Journalism	3 cr.
JRNL 370/COMM 371	Advanced Radio Reporting	3 cr.
Total Credit Hours:		**6**

Minors

Latin American Studies Minor

Latin American Studies Minor

From literature to history, the Latin American studies minor will take students into the rich cultural tapestry of Latin America. Coursework includes Spanish language, Latin American civilization, colonial Latin American History, and race and ethnicity. Upon the approval of the dean, certain language requirements may be waived for students with a demonstrated proficiency in Spanish or Portuguese.

Degree Requirements

The Latin American Studies Minor Requirement is 18 credit hours as follows:

SPAN 101	Elementary Spanish I	3 cr.
	and	
SPAN 102	Elementary Spanish II	3 cr.
	or	
SPAN 203	Intermediate Spanish I	3 cr.
	and	
SPAN 204	Intermediate Spanish II	3 cr.
CUL 250	Latin American Civilization	3 cr.
HIST 170	Colonial Latin American History	3 cr.
	or	
HIST 171	Modern Latin American History	3 cr.
Total Credit Hours:		**18**

A demonstrated proficiency in Spanish or Portuguese may allow one to waive certain language requirements and to add courses in Latin American government or history. These would require the approval of the dean of the College of Arts and Sciences.

Minors

Management Minor

Management Minor

Students who want to learn the latest management styles and techniques and how to handle the challenges of working in organizations can minor in management studies. Topics of study include interpersonal skills, organization, human resource management, project management, and conflict resolution.

Degree Requirements

The Management Minor Requirement is 18 credit hours as follows:

Required courses (nine credit hours):

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
MAN 303	Interpersonal Skills for Leading	3 cr.
HRM 323	Human Resource Management	3 cr.
Total Credit Hours:		**9**

Plus Nine Credit Hours of MAN 3XX/4XX Courses

MAN 3XX/4XX	Management Courses	9 cr.
Total Credit Hours:		**9**

The management minor is not available to students who are majoring in management and leadership, sport management, or human resource management.

Minors

Marketing Minor

Marketing Minor

The marketing minor will give students an introduction to the principles of marketing, buyer behavior, marketing research, marketing management, and experience creating and marketing an original product. This minor helps students create value for future employers through knowledge of marketing.

Degree Requirements

The Marketing Minor Requirement is 18 credit hours as follows:

MK 200/HONB 200	Principles of Marketing	3 cr.
MK 302	Market Analysis	3 cr.
MK 303	Customer Solutions	3 cr.
MK 3XX/4XX	Marketing Elective	3 cr.
MK 3XX/4XX	Marketing Elective	3 cr.
	and	
BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
	or	
MK 3XX/4XX	Marketing Elective	3 cr.
Total Credit Hours:		**18**

The minor is not available to students majoring in marketing or marketing communication/advertising.

Minors

Mathematical Science Minor

Mathematical Science Minor

An ideal complement to a major in computer science, economics, or any field in the College of Business, this minor gives students a solid mathematical foundation for jobs that use mathematical tools. Students study calculus, discrete mathematics, modern algebra, real analysis, and topology.

Degree Requirements

The Mathematical Science Minor Requirement is a minimum of 18 credit hours as follows:

MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
	or	
MATH 127	Calculus I with Precalculus Review	5 cr.
	or	
MATH 133	Calculus I	4 cr.
MATH 124	Calculus II for Management, Life, and Social Sciences	3 cr.
	or	
MATH 134	Calculus II	4 cr.
MATH 251	Advanced Discrete Mathematics	3 cr.
	or	
MATH 281	Foundations of Mathematics I	3 cr.
Total Credit Hours:		**9-11**

Three Additional MATH Courses Numbered 290 or Above

(excluding MATH 302, MATH 331, MATH 380, MATH 384, and MATH 441), and at least 3 credits of which must be:

MATH 418	Introduction to Modern Algebra	3 cr.
	or	
MATH 421	Real Analysis	3 cr.
Total Credit Hours:		**9**

Minors

Media Minor

Media Minor

The minor in media prepares students for working with radio, television, production companies, and other electronic media. Students learn to develop news stories from start to finish through hands-on training in fact gathering, interviewing, writing, editing, filming, and on-air speaking.

Degree Requirements

The Media Minor Requirement is 19 credit hours as follows:

COMM 100	Principles of Communication	3 cr.
	or	
COMM 233	Business Writing and Communication	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 251	Video Communication	3 cr.
Total Credit Hours:		**13**

Plus Two of the Following Electives:

JRNL 100	Journalism: Practices and Principles	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 324	Media Industries, Government, and Society	3 cr.
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.
COMM 352	Multimedia Communication	3 cr.
COMM 356	Global Communication	3 cr.
Total Credit Hours:		**6**

Minors

Music Minor

Music Minor

Building on courses that focus on music appreciation and music theory and composition, the music minor includes six semester hours in musical performance ranging from the Campus Chorus to the Pep Band to guitar instruction, plus nine semester hours of MUS courses at the 200- or 300-level.

Degree Requirements

The Music Minor Requirement is 18 credit hours as follows:

Two Required MUS Courses:

MUS 101	Introduction to Music	3 cr.
MUS 201	Basic Music Theory and Composition	3 cr.
Total Credit Hours:		**6**

Four Credits in MUS Performance from:

MUS 141-148	University Singers	1 cr.
MUS 151-158	Campus Chorus	1 cr.
MUS 161-168	Pep Band	1 cr.
MUS 181-188	Concert Band	1 cr.
Total Credit Hours:		**4**

Eight Additional Credits in MUS Performance from:

MUS 110	Beginning Guitar	3 cr.
MUS 141-148	University Singers	1 cr.
MUS 151-158	Campus Chorus	1 cr.
MUS 161-168	Pep Band	1 cr.
MUS 181-188	Concert Band	1 cr.
MUS 210	Intermediate Guitar	3 cr.
MUS 290	Special Topics in Music	1-3 cr.
Total Credit Hours:		**8**

Minors

Neuroscience Minor

Neuroscience Minor

Neuroscience is a field of study that integrates psychology, biology, physics, and chemistry for the common goal of understanding the structure, development, and function of the brain and nervous system. Neuroscientists work toward a common goal: to understand the structure, development, and function of the nervous system.

In the Neuroscience minor, students are immersed in a research-rich environment that supports a curriculum steeped in scientific investigation. After taking the Introduction to Behavioral Neuroscience course, students are able to explore electives such as Cognitive Neuroscience, Neurodevelopment, and Research Methods in Neuroscience.

This minor's requirement is NSCI 212 plus 15 additional credit hours in neuroscience.

Degree Requirements

The Neuroscience Minor Requirement is 18 credit hours as follows:

NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
Total Credit Hours:		**3**

Plus 15 Additional Credit Hours in Neuroscience (NSCI)

	Total Credit Hours:	**15**

Minors

Philosophy Minor

Philosophy Minor

Students with a minor in philosophy might study such topics as how we distinguish between reasonable and unreasonable beliefs, moral right and wrong, and justice and injustice, as well as explore Eastern and Western religions. A philosophy minor also sharpens reasoning, reading, and writing skills.

Degree Requirements

The Philosophy Minor Requirement is 18 credit hours as follows:

Any Two Courses from the Following in Metaphysics and Epistemology

PH 103	Introduction to Philosophy	3 cr.
PH 316	Philosophy and Climate Change	3 cr.
PH 341	Modern and Contemporary Philosophy	3 cr.
Total Credit Hours:		**6**

Any Two Courses from the Following in Value Theory and Ethics

PH 208	Ethics	3 cr.
PH 210	Ethics for Social Workers	3 cr.
PH 211	Business Ethics	3 cr.
PH 225	Ethics of Digital Technologies	3 cr.
PH 231	Biomedical Ethics	3 cr.
PH 241	Environmental Ethics	3 cr.
PH 245	War, Terrorism and Torture	3 cr.
POSC 207/LSOC 207/PH 207	Introduction to Political Theory	3 cr.
LSOC 330	Contemporary Political Theory	3 cr.
Total Credit Hours:		**6**

Any Two Courses from the Following in Non-Western Philosophy

PH 204	Symbolic Logic	3 cr.
PH 214	World Ethics	3 cr.
PH 304/REL 304	Philosophy of Religion and Spirituality	3 cr.
Total Credit Hours:		**6**

Minors

Political Science Minor

Political Science Minor

Globalization makes it increasingly difficult to separate business, education, and social issues from the influences of national and international governments. This minor is ideal for students majoring in business, history, economics, or communication. Topics of study feature American politics, international relations, comparative government, and political thought.

Degree Requirements

The Political Science Minor Requirement is 18 credit hours as follows:

POSC 102	American National Government	3 cr.
Total Credit Hours:		**3**

Plus 15 Credit Hours of 200, 300, or 400 level Political Science Courses (POSC)

	Total Credit Hours:	**15**

Within these course requirements, a student must take at least three credit hours in American politics, international relations, comparative government, and political thought.

Minors

Psychology Minor

Psychology Minor

Why do people do what they do? Studying psychology can help us understand other people and even ourselves. In addition to helping students understand themselves and others, the research findings of psychology have wide application to many professional fields, from human services to medical, industrial, and educational settings. Within the minor there is flexibility to select courses that meet individual career objectives, including Sports Psychology, School Psychology, Forensic Psychology, Organizational Psychology, Clinical Psychology, Child Psychology, Neuropsychology, Applied Behavior Analysis, and Special Education, among many others.

The minor requirement is PSY 101 plus 15 additional credit hours in psychology.

Note: internships, independent study, and undergraduate research may not be used to fulfill these requirements.

Minors

Public Administration Minor

Public Administration Minor

For students considering a career working for a non-profit organization or the government, the public administration minor is an ideal choice. Coursework ranges from constitutional law to urban economics and public policy to public administration.

Degree Requirements

The Public Administration Minor Requirement is 18 credit hours as follows:

Required courses (six credit hours):

POSC 102	American National Government	3 cr.
POSC 205	Public Administration	3 cr.
Total Credit Hours:		**6**

Plus Four of the Following Elective Courses:

POSC 210	State and Local Politics	3 cr.
POSC 212	Political Analysis	3 cr.
POSC 218	Public Policy in America	3 cr.
POSC 322	The U.S. Presidency	3 cr.
POSC 325/LSOC 325	Constitutional Law	3 cr.
POSC 340/LSOC 340	International Governance and Law	3 cr.
POSC 342	Environmental Politics	3 cr.
EC 351	Economics and Government	3 cr.
EC 355	Public Finance	3 cr.
Total Credit Hours:		**12**

Minors

Public Relations Minor

Public Relations Minor

The public relations minor emphasizes the construction of messages for public consumption across media and the development of skills to enhance the efficacy of conveying a message clearly and accurately via mass media institutions. The curriculum includes introduction to public relations, business communication, event planning, journalism practices and principles, and organizational communication.

Degree Requirements

The Public Relations Minor Requirement is 18 credit hours as follows:

COMM 100	Principles of Communication	3 cr.
	or	
COMM 233	Business Writing and Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
Total Credit Hours:		**12**

Plus Two of the Following Electives:

COMM 245	Video Editing and Production	4 cr.
COMM 280	Organizational Communication	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 340	Business Communication	3 cr.
COMM 344	Event Planning	3 cr.
COMM 348	Intercultural Communication	3 cr.
COMM 356	Global Communication	3 cr.
Total Credit Hours:		**6**

Minors

Quantitative Economics Minor

Quantitative Economics Minor

Quantitative economics is an ideal complement for a math, computer science, or engineering major as well as for any business student who has calculus. Mathematical and statistical skills are at a premium in the worlds of business, government or the non-profit sector and the Economics substance of this minor will focus on issues that affect all of our lives. Students learn calculus, quantitative economics, issues in contemporary economics, and macroeconomics and microeconomics.

Degree Requirements

The Quantitative Economics Minor Requirement is a minimum of 18 credit hours as follows:

MATH 133	Calculus I	4 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
EC 117	Principles of Quantitative Economics	3 cr.
EC 215	Intermediate Macroeconomics	3 cr.
EC 216	Intermediate Microeconomics	3 cr.
EC 490	Seminar: Issues in Contemporary Economics	3 cr.
EC 2XX/3XX	Economics Elective	3 cr.
Total Credit Hours:		**18-19**

Minors

Spanish Minor

Spanish Minor

The ability to converse in Spanish will benefit students entering business, education, or social services. The Spanish minor also offers courses specifically for criminal justice.

Degree Requirements

The Spanish Minor Requirement is 18 credit hours as follows:

Required five courses (15 hours):

SPAN 203	Intermediate Spanish I	3 cr.
SPAN 204	Intermediate Spanish II	3 cr.
SPAN 305	Advanced Conversational Spanish I	3 cr.
SPAN 306	Advanced Conversational Spanish II	3 cr.
SPAN 325	Goya to Almodovar: Hispanic Culture	3 cr.
Total Credit Hours:		**15**

Choose Any One of the Following Courses:

SPAN 290	Special Topics in Spanish	1-3 cr.
SPAN 140	Spanish for Social Services	3 cr.
SPAN 130	Spanish for Criminal Justice	3 cr.
SPAN 102	Elementary Spanish II	3 cr.
CUL 240	Latin American Youth in Revolt: Young People and Counterculture in Latin American Cinema	3 cr.
CUL 253	Cuban Cultures	3 cr.
CUL 276	Spain: Nation and Culture	3 cr.
HIST 276	Spain: Nation and Culture	3 cr.
HIST 277	Columbia: Nation and Culture	3 cr.
HIST 372	Latin American Revolutions	3 cr.
HIST 373	Women in Latin America	3 cr.
HIST 170	Colonial Latin American History	3 cr.
HIST 171	Modern Latin American History	3 cr.
Total Credit Hours:		**3**

Minors

Statistics Minor

Statistics Minor

An understanding of statistics is increasingly important in all industries as data can be mined for trends, predictive analysis, and needs of consumers. This minor not only offers the mathematical background needed, but also computer programming courses that will teach students to use industry software to manipulate and interpret big data. Coursework includes Probability and Statistics, Data Visualization and Data Techniques, Multivariate and Big Data Analysis, and Data Science with Python.

Degree Requirements

The Statistics Minor Requirement is a minimum of 20 credit hours as follows:

One of the following introductory statistics courses, with MATH 121 recommended.

BIS 221	Statistics for Business Analytics	3 cr.
IE 212	Probability and Statistics	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
Total Credit Hours:		**3**

The Following Four Courses:

MATH 221	Introductory Probability & Statistics II	3 cr.
MATH 306	Linear Algebra	3 cr.
MATH 331	Computation in Statistics	3 cr.
MATH 441	Data Visualization & Data Techniques	3 cr.
Total Credit Hours:		**12**

MATH 306 has a prerequisite of either MATH 124 or MATH 134 or MATH 251.

One of the Following Courses:

BIS 450	Multivariate & Big Data Analysis	3 cr.
EC 386	Econometrics	3 cr.
IE 429	Design and Analysis of Experiments	3 cr.
MATH 372	Probability	3 cr.
MATH 384	Applied Regression & Time Series	3 cr.
Total Credit Hours:		**3**

One of the Following Computer Programming Courses:

CS 102/IT 102	Introduction to Programming	4 cr.
CS 171	Programming for Mathematics	4 cr.
BIS 315	Data Science with Python	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
Total Credit Hours:		**2-4**

Minors

Theater Minor

Theater Minor

The theatre minor is perfect for the student who loved theater in high school as an actor, designer, or techie and may want to pursue these passions either professionally or recreationally. Students study acting, improvisational comedy, directing, and theater appreciation. Participating in the drama club or Improv on the Rocks troupe can count for credit. There are also independent studies available for those students who want to pursue more specialized disciplines.

Degree Requirements

The Theater Minor Requirement is 18 credit hours as follows:

The minor requirement is 18 credit hours in THTR, with no more than 6 credits in THTR 151 - THTR 159 and THTR 160 - THTR 169.

One from ENGL 310, ENGL 314, ENGL 315, ENGL 316 may be substituted for a 3 credit THTR course.

	Total Credit Hours:	**18**

Minors

Women's & Gender Studies Minor

Women's & Gender Studies Minor

The women's and gender studies (WGST) minor equips students with the practical and conceptual tools necessary for understanding the many ways in which gender affects our everyday lives. WGST is an interdisciplinary field that bridges the humanities, social sciences, and natural sciences to produce a rich and empathetic worldview that allows us to recognize and challenge gender inequality in our interactions, institutions (like work and family), and social world. Topics of study include women in literature, film, and the media; psychology of women, and the dynamics of oppression and empowerment.

The women's & gender studies minor involves 18 credit hours of coursework. Each student must take courses from a minimum of three different disciplines (sociology and at least two others).

Degree Requirements

The Women's and Gender Studies Minor Requirement is 18 credit hours as follows:

The Following Two Courses:

SO 101	Introduction to Sociology	3 cr.
SO 208	Gender	3 cr.
Total Credit Hours:		**6**

Plus Any Four Additional Courses from the Following List:

CJ 302	Women and the Criminal Justice System	3 cr.
CJ 353	Violence Against Women	3 cr.
CJ 365	LGBTQ+ Issues in Criminal Justice	3 cr.
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.
ENGL 358	Women in Literature	3 cr.
FILM 370	Women and Film	3 cr.
HIST 251	Early American Women's History to 1865	3 cr.
HIST 373	Women In Latin America	3 cr.
PSY 305	Psychology of Women	3 cr.
Total Credit Hours:		**12**

Or any other course with a primary focus on women or gender, dependent upon the approval of the director of the Women & Gender Studies minor program.

Policies & Procedures

This section contains important information that all students should be aware of.

Policies & Procedures

English & Mathematics Assessments

English and Mathematics Assessments

To encourage student success, assessment in both English and mathematics is required for all first-year and transfer students prior to completion of course registration. Appropriate directives are then provided for course selection and registration, awarding of transfer credit and/or additional support services. Students not eligible for direct entry into courses required for some degree programs may have to take additional credits to fulfill graduation requirements.

Policies & Procedures

Course Offerings

Course Offerings

Western New England University attempts to offer the widest possible selection of courses each year, and the University reserves the right to withdraw, modify, or add to the courses offered, or to change the order of courses in curricula as circumstances warrant.

The University further reserves the right to cancel under-enrolled courses. Students affected by such cancellations will be permitted to choose another course. In cases where other courses cannot be substituted, students may be permitted to waive requirements or receive full or partial refunds of tuition and other fees. The University also reserves the right to change the requirements for graduation, the tuition, and the fees charged as circumstances dictate and needs arise.

Policies & Procedures

Student Contact Information

Student Contact Information

Students must provide and maintain basic contact data such as permanent and local address, local telephone or cell phone, and an active email account if the account is other than the email provided by the University. This information shall be updated as necessary and must be provided prior to course registration each semester.

Policies & Procedures

Registration, Add/Drop, & Course Withdrawal

Registration, Add/Drop, and Course Withdrawal

In order to register for classes, the student typically meets with a faculty advisor to discuss the student's selection of courses. Consultation with a faculty advisor is required to initiate the course registration process. If the advisor is not available, students may seek consultation with their academic dean's office.

Once registration has been completed, students are expected to consult with the advisor (or academic dean's office if advisor is not available) before any additions, deletions, or changes can be made in the student's schedule. All changes must be reviewed by the advisor or dean. Changes also need to comply with established deadlines to add, drop or withdraw from a course. Instructor approval must also be obtained to add a class after it has met for the equivalent of one week. See the Academic Calendar for specific dates each semester.

Students drop classes themselves in Self-Service during the add/drop period. After add/drop, students must submit a Course Drop/Withdrawal Request Form to their academic dean's office by the withdrawal deadline. Absence from class or notifying the instructor without completing the withdrawal form does not constitute withdrawal from a course.

Policies & Procedures

Auditing a Class

Auditing a Class

Subject to space limitations, a student may audit a course if granted approval by the instructor in which the course is offered. Auditing serves to enable a student to study the subject matter of a course when a grade is neither required nor desired. An audit carries no credit, has no grade point equivalent, and is recorded simply as "Audit." A student intending to audit a course should consult Enrollment Services for the proper procedure (see the Costs & Aid section of this catalog). Refer to the Academic Calendar for the deadline to change from "audit to credit" status or "credit to audit" status.

Graduate courses in the Colleges of Arts and Sciences, Business, and Engineering may be audited on a space-available basis by alumni who have completed bachelor's or master's degrees at Western New England University and who also have the listed prerequisites for the course selected. Courses in the School of Law are only available for audit by their alumni.

Policies & Procedures

Repeating a Course

Repeating a Course

Any course in which a grade of "C-" or lower was earned may be repeated a maximum two times for a total of three attempts at any time during the student's enrollment at Western New England University. Grades of F and W count as attempts. The official transcript shows the complete record, but the grade point average is computed on the basis of the highest earned grade in each course (W is not an earned grade; for information on credits and grades earned at institutions other than WNE, consult the policy for Transfer Credit Evaluation).

Credit for the course is awarded only once. In cases where a course grade of "F" has been assigned as a penalty for gross academic misconduct, a student may not replace that grade in the cumulative GPA. The student may retake the course, but the resulting grade is counted as a separate course.

Policies & Procedures

Undergraduates Taking Graduate Courses

Undergraduates Taking Graduate Courses

Full-time seniors who have a 3.000 or higher cumulative GPA may apply through their academic dean's office to enroll in graduate 500/600-level courses. Juniors who meet the same GPA criteria may also be considered on a case-by-case basis. The student may enroll in a course provided:

- there is space available in the course
- the academic deans of the student's college and the college offering the course approve the registration
- the student has met the prerequisites of the course
- the course is being applied to the student's undergraduate program as an elective or as a substitute for a course with comparable content

Students may only take graduate courses that will apply to their undergraduate program. Approval is limited to a maximum of six graduate credits per term (or billing cycle) and 12 graduate credits overall. Students may not enroll in courses that end after their expected undergraduate commencement date.

Students who meet the above criteria take the graduate credits as part of their full-time undergraduate tuition rate. As such, students must be enrolled for a minimum of 12 credits in the student's term structure. Winter courses count toward spring for purposes of billing and financial aid. Credit will be applied to a graduate program at Western New England University if the student matriculates within six months of completing undergraduate degree requirements for grades of "B" or better. Upon acceptance into the graduate program, the student may request transfer of these graduate courses. Grades will not count again at the graduate level. Students officially accepted into a graduate program will be considered a matriculated graduate student after receiving their undergraduate degree and subsequently enrolling in graduate courses.

This guidance does not apply to students simultaneously enrolled in undergraduate and graduate programs such as the 3+3 Law or the Four-year Accelerated BSBA/MS in Accounting programs.

Policies & Procedures

Change of Major

Change of Major

Changing a student's major/degree program within the same college, or changing a student's major/degree to a different college, requires the completion of a "Request for Change of Academic Program."

Selection of a new, or additional major (2nd major) and/or a minor or certificate, may change projected graduation date. Although the academic advisor should be consulted on matters of curriculum, the ultimate responsibility for decisions on the student's program of study remains with the student. Furthermore, each student holds the ultimate responsibility to understand degree requirements and to plan for orderly fulfillment.

Changing a degree program may result in assignment to the catalog requirements in effect at the time of the change.

Policies & Procedures

Modifying a Student's Major Degree Program

Modifying a Student's Major Degree Program

Any modification or change to a student's major degree program requires the written permission of the student's academic dean. The waiver/substitution form may be obtained in the student's academic dean's office.

Concurrent registration in more than one academic program leading to separate degrees is not allowed without the written permission of the appropriate academic dean. Permissions forms may be obtained in the student's academic dean's office.

Policies & Procedures

Taking Coursework at Another College

Taking Coursework at Another College

Coursework towards a student's degree program may be pursued elsewhere only with the prior written permission of the student's academic dean. Permission forms are available in the student's academic dean's office. An official copy of the transcript needs to be sent to Enrollment Services upon completion of the prior approved coursework.

Students can also cross-register for courses through Acadeum and CCGS cross-registration agreements. Further information about those programs is in the Special Academic Opportunities section of this catalog.

Policies & Procedures

Attendance

Attendance

Students are expected to attend all class sessions for courses in which they are enrolled. However, it is the responsibility of the individual instructor to evaluate the importance of attendance in determination of course grades.

Accordingly, at the beginning of each semester, each instructor prepares a written statement setting forth the policy for consideration of absences, makeup examinations, and related matters that will be in effect for that entire semester. The statement of policy on attendance, appropriate to each class, is made available at the first class meeting.

It is especially important for first-year students to establish the discipline of attending all classes and laboratories and to be properly prepared by having done all assigned reading and homework. It can be easily demonstrated that students who fail to attend class do not succeed in college.

Student Absence Due to Religious Beliefs

The General Laws of Massachusetts, Chapter 151C, Section 213 states the following: "Any student in an educational or vocational training institution, other than a religious or denominational educational or vocational training institution, who is unable, because of his religious beliefs, to attend classes or to participate in any examination, study, or work requirement on a particular day shall be excused from any such examination or study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which he may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school. No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any students who avail themselves of the provisions of the section."

Policies & Procedures

Undergraduate Grading System

Undergraduate Grading System

The work of each undergraduate student is graded according to the following scale. Figures indicate undergraduate grade point equivalents:

Superior	A (4.000)	A- (3.700)	
Above Average	B+ (3.300)	B (3.000)	B- (2.700)
Average	C+ (2.300)	C (2.000)	C- (1.700)
Passing	D+ (1.300)	D (1.000)	P (0)
Failure	F (0)		

In certain undergraduate courses a grade of "P" (Pass) is assigned if the course is satisfactorily completed. "P" has no grade point equivalent.

Policies & Procedures

Academic Integrity

Academic Integrity

Definition

WNE expects all students to exercise academic integrity and practice ethical behavior in all learning environments and scenarios, including classrooms and laboratories, internships and practica, study groups and academic teams. Academic misconduct includes but is not limited to cheating, plagiarism, unauthorized collaboration, use of unauthorized electronic devices, self-plagiarism, and fabrication or falsification of data. Examples of academic misconduct can be found on the Academic Affairs Policy webpage.

These and other types of academic misconduct are serious offenses that initiate a formal process of inquiry, one that may lead to disciplinary sanctions. Some cases of academic misconduct may be reviewed and resolved at the college level; repeat offenses necessitate a full review by the Academic Standards Committee of the Faculty Senate.

This policy applies to all undergraduate and graduate students taking courses in the College of Arts and Sciences, the College of Business and the College of Engineering; and to undergraduate students in the College of Pharmacy and Health Sciences when taking courses at the 100 through 400 levels. Other students, including those in the School of Law and in the College of Pharmacy and Health Sciences (OTD, PharmD, Masters), should consult the student handbooks for their programs. In addition to this policy, students are subject to the student code of conduct as described in the *WNE Student Handbook*. Students may also be subject to codes of conduct as determined by their college or academic program.

This Academic Integrity Policy, including its adjudication procedures and sanctions, is distinct from the Academic Standing policies for undergraduate and graduate students. These policies are followed when sanctions for academic misconduct have an impact on a student's GPA.

Resolving Incidents of Academic Misconduct

Process

If academic misconduct is suspected by a university community member, they will notify the chair of the department offering the course, who will facilitate the process. If the chair has a conflict of interest, the dean of the college will appoint another chair to facilitate. If the misconduct occurs outside the context of a course in which the student is enrolled, the dean of the college in which the student is enrolled will designate a chair to investigate. At any point the case may be referred to the Academic Standards Committee if it warrants sanctions beyond the purview of the chair. A case may also be referred to the Academic Standards Committee if a student withdraws from a course in which misconduct has been alleged.

The chair (or chair's designee) will investigate the incident. The chair's designee may be the faculty member who suspects misconduct if deemed appropriate by the chair and faculty member. As soon as possible, the chair (or chair's designee) will initiate the investigation by notifying the student. The investigation must include an opportunity for the student to respond to the allegation, and for the faculty member or community member who suspects the misconduct to have an opportunity to respond. At the end of the investigation, a determination is made of whether an act of academic misconduct has occurred. If misconduct is determined to have occurred, a sanction is set by the chair. At the end of the investigation, the chair notifies the student of the determination and of their right of appeal.

Sanctions for an Individual Incident of Academic Misconduct

If the chair (or chair's designee) reaches the conclusion that academic misconduct has occurred, sanctions may be imposed based on the severity of the misconduct. These sanctions may include one or more of the following but are not limited to:

- Remediation to address skill development
- A grade reduction on an individual assessment of student work
- A failing grade on an assignment
- A grade of F in a course. In this case the University Registrar's Office will be notified in accordance with the policy for repeating a course.

The misconduct will be referred to the Academic Standards Committee if it is unusually severe and warrants possible suspension or dismissal as outlined below.

Appeal Process

For incidents not referred to the Academic Standards Committee, a student may appeal in writing (including email) to the academic dean's office of the college offering the course in which the sanction was issued or to the dean of the college in which the student is enrolled (for cases not associated with a course). The student's appeal must be made within ten business days after formal communication of the sanction. The dean (or dean's designee) investigates the appeal and determines if the previous finding(s) and sanction are appropriate. The dean's designee cannot have been involved in the previous investigation and determination of misconduct. The dean will send written notice of the decision on the appeal to the student. The decision of the dean is final.

In cases that are referred to the Academic Standards Committee for suspension or dismissal, the appeal will be referred to the Office of the Provost as described below.

Archival

If an initial determination of academic misconduct is made and a sanction is imposed, the chair must archive documentation of the incident in the WNE internal record. If the appeal process occurs, the academic dean's office must archive the results in the WNE internal record.

Grading Students under Review for Academic Misconduct

Faculty, department chairs, program directors, and deans will work diligently to ensure timely review and closure of cases of academic misconduct. In some cases, however, it may not be possible to reach a determination or impose a sanction prior to the deadline for submitting course grades. In this case, the instructor of record will inform the University Registrar's Office that the final grade is delayed pending resolution of the case. Once a determination has been made, the instructor of record will complete a change of grade form, with an explanation of the grade change that includes a statement of how the sanction impacted the final course grade.

Academic Standards Committee Misconduct Reviews

Process

When a case has been referred to the Academic Standards Committee or when a student has received two or more sanctions for academic misconduct, the Academic Standards Committee of the Faculty Senate will review the student's internal record to determine if sanctions or additional sanctions are warranted. At any point, the Academic Standards Committee may choose to undertake additional investigation if warranted and may appoint designees to conduct any or all parts of an investigation.

Upon notification of alleged academic misconduct, the Academic Standards Committee will schedule a hearing and may invite relevant University community members to the hearing. The Academic Standards Committee will notify the student in writing of the opportunity to appear for a hearing. The hearing will proceed regardless of whether the student is in attendance.

The student may seek assistance from an advisor of the student's choice who may attend the hearing. The advisor must be a member of the University community (current student, faculty member, or staff member) and may not be or act as legal counsel.

Academic Standards Committee hearings are not open to the public. Therefore, members of the WNE community who are not directly involved in the allegation and friends, parents, partners, siblings, legal counsel, and others are not permitted in the room where the Academic Standards Committee hearing takes place but may wait nearby for support purposes. Formal rules of process, procedure, or evidence such as those applied in civil or criminal courts are not used in the Academic Standards Committee. Members of the Academic Standards Committee will recuse themselves from a case if there is a conflict of interest and will be replaced by the Faculty Senate.

After the hearing, the Academic Standards committee meets to make a determination. At the determination meeting representatives from the Dean of Students' Office and the University Registrar's Office will be present in a non-voting *ex officio* capacity.

After the Academic Standards Committee makes a determination, notice of that determination is sent to the student by the dean of the college in which the student is completing a degree.

Sanctions

Sanctions may include but are not limited to:

- Educational sanctions
- Warning

- Censure
- Probation
- Suspension
- Dismissal from the University

Student conduct that results in sanctions may result in forfeiture of all WNE scholarships, financial aid, or monies paid.

Appeal

A student found responsible for academic misconduct and sanctioned by the Academic Standards Committee may file one appeal by sending a written letter of appeal to the provost within ten business days. A graduating student must initiate the appeal process no later than three days prior to commencement. Appeals are considered only if the sanction is egregious, or if there is additional information not available at the time of the hearing, or if there was a procedural error that calls into question the determination of the Academic Standards Committee. The student's letter of appeal must identify the procedural error or include a statement of why the sanction is egregious or of why the additional information should be considered and why it was not presented at the time of the original hearing. The Office of the Provost will notify the student of the result of the appeal. The decision of the provost (or provost's designee) is final.

Archival

The chair of the Academic Standards Committee must archive documentation of any investigation, the hearing, and any imposed sanctions in the WNE internal record. The academic dean's office of the college in which the student is completing a degree must archive notification to the student of the determination of the Academic Standards Committee in the WNE internal record. The Office of the Provost must archive any documentation relating to an appeal and its outcome in the WNE internal record.

Policies & Procedures

Academic Concerns & Grievances of Final Course Grades

Academic Concerns and Grievances of Final Course Grades

This policy applies to all undergraduate and graduate students in the College of Arts and Sciences, the College of Business, and the College of Engineering; and to undergraduate students in the College of Pharmacy and Health Sciences when taking courses at the 100- through 400-levels. Other students, including those in the School of Law and in the College of Pharmacy and Health Sciences (OTD and PharmD), should consult the student handbooks for their programs.

Registering a Concern about an Instructor

A student who has a concern regarding a faculty member teaching a course should first speak with and email the faculty member(s). If the concern is not resolved, then the student should bring the matter to the attention of the department chair or program director. If the concern remains unresolved, then the matter should be brought to the attention of the dean's office of the college in which the course is offered. If the chair of the department or program director is the faculty member teaching the course and the matter is not resolved, the matter should be brought to the dean's office.

Registering a Concern about a Grade on a Course Assessment

A student who has a concern about a grade on a single assessment (such as an assignment or exam) should first speak with and email the faculty member(s) within ten (10) calendar days of receiving the grade or prior to the posting of the final course grade, whichever comes earlier. If the concern is not resolved, then the student should bring the matter in writing (including email) to the attention of the department chair or program director within three weeks of receiving the grade. The decision of the chair or program director is final. If the chair of the department or program director is the faculty member teaching the course and the matter is not resolved, the matter should be brought to the attention of the dean's office of the college in which the course is offered; the decision of the dean's office is final.

Grieving a Final Grade in a Course

There is a formal process for grieving a final grade within 30 calendar days of the posting of the final grade in Self-Service. Students should keep copies of all correspondence for their own records. To avoid obstructions to progression through the academic program, a student seeking to grieve a final grade should follow steps outlined below in a timely manner.

1. Within 10 calendar days of the grade being posted in Self-Service, the student should speak with and email the faculty member.
2. Within 20 calendar days of the grade being posted in Self-Service, the student should petition the department chair or program director in writing (including by email) if the issue remains unresolved, and if the student believes that the grade had no basis in fact or was arbitrary. The student should expect the department chair or program director to arrange to discuss the matter with the student; this meeting ideally should take place within seven calendar days of the chair or program director receiving the petition. If the department chair or program director is the faculty member teaching the course and the matter has not been resolved, the matter should be brought to the attention of the dean's office of the college in which the course is offered within this 20-day period.
3. Within 30 calendar days of the grade being posted in Self-Service, and if resolution of the grievance has not been reached or if the student wishes to appeal the decision of the chair or program director, the student should file a formal grievance in writing (including by email) with the dean (or dean's designee) of the college in which the course is offered.

It is the responsibility of the dean or dean's designee to inform the student of a decision within 10 business days of receiving the formal grievance. The decision of the dean (or dean's designee) shall be final.

Graduating Students

A graduating student must initiate the grade grievance process no later than three days prior to date of degree conferral by emailing the faculty member and copying the department chair or program director. The email should indicate that the student is scheduled to graduate.

Graduating students should be mindful that the grade grievance process may impact the awarding of Latin honors and may delay the date of degree conferral

Policies & Procedures

Midterm (In-progress) & Final Examinations

Midterm (In-progress) and Final Examinations

Mid-term (In-progress) examinations are given at the discretion of the faculty member teaching the course. The normal pattern is that final examinations are given in all courses in accordance with a schedule published by the registrar's office. In case an instructor decides not to give a final examination, the instructor must inform the college's dean.

Final examinations must be given on the date and at the time scheduled by the Registrar's Office unless other arrangements have been approved by the college's dean and forwarded to the registrar's office. Under no circumstances are final examinations to be administered during the final week of classes. Further, during the last week of classes, hour examinations are permitted only in those courses where there is a final examination, semester paper, or semester project requirement due the week of final examinations. The chair of each department is responsible for the adherence of the latter policy by all members of the department. In addition, no examinations or quizzes shall be administered the last day of classes (if it falls on Monday) or on the last two scheduled days of classes (if the last day of classes falls on Tuesday or thereafter). This policy does not in any way relieve the student of responsibility for material covered in the last days of classes.

The faculty member in each course in which students are enrolled determines the value and weight of a final examination. All final examinations are given at the end of the semester according to a predetermined schedule. The anticipated final exam schedule is normally published at the beginning of each semester. Students should note the exam schedule when arranging travel plans for departure at the end of the semester.

When preparing the final exam schedule, every attempt is made to avoid scheduling more than two exams for each student on any given day. Should this situation occur, however, the Faculty Senate has adopted a policy to assist students in managing the conflict. In the case of a student who is scheduled for three final examinations on one day, the examination in the middle time is expected to be rescheduled at the convenience of both the student and the faculty member. The student must give notice to the faculty member of the middle exam no later than 10 days prior to the start of the examination period for that semester.

There are two exceptions, however, to the middle exam solution. The first is that if the student can move any of the three examinations to the examination for another section of the same course taught by the same instructor, he or she must make that request of the faculty member if the move does not cause another conflict. The second exception is that if the middle examination is a common examination (multiple sections of the course all taking the same exam), one of the other two remaining exams will be rescheduled by joint agreement between the two faculty members. The student should make the conflict known to both faculty involved. If an agreement cannot be reached, a decision will be jointly made by the deans of the colleges in which these two courses are housed.

The final exam schedule is posted at https://www1.wne.edu/academic-affairs/academic-scheduling.cfm.

Policies & Procedures

Withdrawal from a Course

Withdrawal from a Course

To withdraw from a course, the student must obtain their advisor's or academic Dean's signature on the course withdrawal form available from Enrollment Services. Absence from class without completing the form does not constitute withdrawal and may result in a failing grade. (See the section on the Withdrawal and Refund policy in this catalog regarding payments.)

If the student drops a course within the first two weeks before the drop deadline, no grade is assigned. If a student withdraws after the second week of classes, but prior to the last withdrawal date published in the final schedule for that semester, a withdrawal mark of "W" is assigned. A student may not receive a grade of "W" to avoid the consequences of a breach of academic integrity. A grade of "W" carries no academic penalty or prejudice.

Policies & Procedures

Medical Leave

Medical Leave

A matriculated undergraduate who needs to discontinue studies during the course of a semester for medical reasons (physical and/or mental health) can request a mid-semester medical leave.

Students who are having medical difficulty are encouraged to contact the Dean of Students office to discuss the details of the medical leave request and to explore options to support the student's long-term success. The Dean of Students office will confer with the Academic Success Center and other University offices as needed on issues affecting the student and their studies.

A mid-semester medical leave does not negate the student's financial responsibility to the University. Tuition, fees, room and board charges, and financial aid will all be treated normally through the WNE Withdrawal and Refund Policy, related refund schedules, and federal Return of Title IV Funds guidelines. Financial aid recipients should contact Enrollment Services as soon as possible to explore all implications of taking a medical leave related to their student account and financial aid. Students are also encouraged to look into possible implications for their health insurance coverage.

Mid-semester medical leaves are formally initiated by the student submitting a Medical Leave Request Form and supporting documentation from a health care provider to the Dean of Students office. The Dean of Students office will consult with University Health and Counseling Services as appropriate. The Dean will submit approved Medical Leave Request forms to Enrollment Services.

To be eligible for a mid-semester medical leave, the student must have demonstrated academic engagement up to the point that extenuating circumstances affected the student's performance. The date the student submits the mid-semester medical leave form and supporting documentation, or otherwise notifies the University in writing of the need for a mid-semester medical leave, is the effective date of the leave. No academic work or participation may happen after this date; doing so moves the effective date of the medical leave to the date of the last academically-related activity except as noted below. Medical leaves with effective dates after the course drop deadline will result in marks of W (withdrawn) for all registered course work. Requests must be submitted by December 1 for the fall semester, May 1 for the spring semester or July 1 for 8-week or 12-week summer semesters, except that medical leaves cannot be approved if a student has taken a final exam or submitted final coursework for any classes for the semester. Medical leaves are not available for winter or 6-week summer semesters.

The Dean of Students Office, in consultation with University Health and Counseling Services staff, may include treatment expectations upon their request to return for students granted a medical leave. Students receiving a mid-semester medical leave typically must be away from the University for the semester the leave takes effect and one additional full 15-week semester. Exceptions regarding the additional full semester off will only be considered on appeal in cases where the student provides sufficient documentation attesting to the student's readiness to resume academic work.

Students must request to return from medical leave to the Dean of Students, and the request must include supporting documentation from a licensed health care provider who is not related to the student and who is responsible for treatment that supports the student's request for—and reinstatement from—the leave.

Students on medical leave are considered to be current Western New England University students, but may not be enrolled in classes during their time away. The Western New England University email address will remain active and will be the primary means of contact by the University.

Policies & Procedures

Withdrawal from the University

Withdrawal from the University

If it becomes necessary for undergraduate degree students to withdraw or request a leave of absence from the University, an Application for Withdrawal or Absence from Campus form must be completed and filed with the Academic Success Center. (Please note that mid-semester medical leave requests will be submitted to the Dean of Students office using the Medical Leave Request form. See the section on Medical Leave in this catalog). Prior to completing the Application for Withdrawal or Absence from Campus form, students are expected to consult with the Dean of Students in order to complete an exit interview. Withdrawal and leave requests will be made part of the student's permanent record maintained in Enrollment Services.

When extenuating circumstances prevent a student from filing the form in person, an application for withdrawal by email is acceptable. The email should state the reasons necessitating the withdrawal and should be directed to the Dean of Students. In the case of graduate and professional students, withdrawal forms are filed with the Law School Registrar or the academic dean's office of the college in which the student's major is administered.

The effective date of an official withdrawal is the date the student submits written notification of the intent to withdraw to the University's designated offices as described in this policy. If a student leaves the University without providing official notification, the withdrawal date is the midpoint of the payment period or period of enrollment, as applicable, or the date of an academically-related activity in which the student participated. Academically-related activities include physically attending a class where there is an opportunity for direct interaction between the instructor and students; submitting an academic assignment; taking an exam, an interactive tutorial, or computer-assisted instruction; attending a study group that is assigned by the University; participating in an online discussion about academic matters; and initiating contact with a faculty member to ask a question about the academic subject studied in the course.

Any approved refunds will be computed on the basis of the effective date described above. Absence from class without completing a withdrawal form does not constitute withdrawal, and submission of course drop forms may not substitute for a withdrawal. Refunds are made in accordance with the Tuition Refund Schedule and the Room and Board Refund Schedule. Students who withdraw with an unpaid balance will be financially liable for any amount remaining unpaid after a refund credit, if any, has been applied to the balance. Students who withdraw from the University will have transcripts withheld until all financial obligations have been met.

Any refund resulting from a reduction in the number of hours registered will be made on the basis of the above schedule. Students taking between 12 and 18 hours per term will not have any adjustment in tuition if, after the course reduction, they are still enrolled in 12 to 18 credit hours. The Higher Education Amendments of 1998 require students receiving Federal Title IV financial assistance who withdraw or otherwise cease attendance on or before 60 percent of the way through the semester to have their assistance reduced based on calendar days enrolled versus the length of the semester. Programs affected are Pell Grants, Supplemental Education Opportunity Grants, Federal Direct Ford Subsidized Loans, Federal Direct Ford Unsubsidized Loans, and Federal Direct Ford Plus Loans, but not Federal Work-Study. The calculation of the amount to be returned to these funds may result in the student owing a balance to the University and/or the Federal Government. Institutional scholarships and grants will be adjusted according to the same percentage as tuition charges. State Aid will be adjusted according to the same percentage as the federal aid.

Policies & Procedures

Incomplete Work

Incomplete Work

Faculty have discretion to grant a temporary course mark of Incomplete ("I") in response to a student's request. Marks of Incomplete ("I") should be assigned during the normal final grading period of the semester.

Faculty may set the threshold for issuing a mark of "I" at their discretion. At a minimum, the following conditions must be met:

- The student has previously completed a majority of the course requirements at a level that merits a passing grade.
- The "I" mark is justified by verifiable extenuating circumstances such as a serious illness or family emergency (incompletes may not be granted based solely on a request for more time or to submit additional/revised work to earn a higher grade).

When a mark of "I" has been temporarily assigned, the instructor of record must submit an Undergraduate Incomplete Mark form to the University Registrar's Office when final grades are due. Faculty needing an extension to file the form should contact the registrar. The Incomplete Mark form must 1) confirm that the student has completed a majority of the course requirements with a passing grade, 2) specify what the student's earned grade in the course would be if no additional work was submitted by the student, and 3) list outstanding assignments/assessments and their relative weights in the course grading scale.

A student who has been issued a mark of "I" has six weeks from the last day of final examinations to submit further work for consideration for a final evaluation, whether or not they are still enrolled at Western New England University. Faculty have until noon the following Monday to submit a final course grade by completing a Change of Grade form.

If the course instructor does not submit a Change of Grade form and does not request an extension of time for the student to complete outstanding work, the student's earned grade in the course as recorded on the Incomplete Mark form becomes the final grade in the course.

If the course instructor determines that time beyond the original deadline should be provided for submission of final work, the instructor must submit a request [through an updated Undergraduate Incomplete Mark form] to the University Registrar. The registrar will consult with the dean of the college offering the course and will inform the course instructor and student of the decision. No extension is permitted beyond the last day of exams of the following fall or spring semester.

If the original instructor is no longer available to evaluate completed work at the time of submission, the chair of the department offering the course will evaluate the work or will find an appropriate substitute evaluator for the work.

A mark of Incomplete ("I") may have an impact on Satisfactory Academic Progress for financial aid, future registration, or date of graduation. The mark “I” carries a grade point equivalent of 0.000 for purposes of determining academic standing and Satisfactory Academic Progress. In addition, an incomplete course may be a prerequisite to courses needed in the following semester, and students will be administratively withdrawn from registered courses in the upcoming semester if they have four or more Incompletes on their record. Finally, a degree will not be awarded to a student with one or more "I" marks remaining on their record.

Policies & Procedures

Academic Standing

Undergraduate Academic Standing

Students' academic standing is determined by their cumulative grade point averages (GPA). Academic Standing is normally calculated for fall and spring semesters. Academic Suspension, Academic Dismissal, and Immediate Reinstatement will be permanently recorded on students' official transcripts. An Academic Warning will not appear on the official transcript. However, all Academic Warnings, Academic Probations, as well as all Academic Suspensions, Academic Dismissals, and Immediate Reinstatements will be permanently recorded on internal academic records.

Good Standing

Students are in good academic standing when their cumulative GPA is 2.000 or above. This requirement applies to full-time and part-time students and to those who were admitted as first-year, transfer, or non-matriculated students. The average number of credits earned per semester is not used in the determination of academic standing. However, the registrar's office will issue a credit alert to all students who have earned less than an average of 12 graduation credits per semester.

Academic Warning

Academic Warning is an indicator to students that they are in academic difficulty. Students whose cumulative GPA is 2.000 or above, but whose semester GPA falls below 2.000, will be sent a warning indicating that they must meet with the Academic Success Center prior to the end of the first week of classes of the next fall or spring semester to enter into a written agreement defining an academic improvement plan. Seniors whose cumulative GPA is 2.000 or above, but whose major GPA is less than 2.000, will also be placed on Academic Warning as they will need to earn a Major GPA of 2.000 to graduate. This status does not appear on the transcript and is not subject to appeal.

Academic Probation

Academic Probation is a formal standing that shows the student is in academic distress. Students whose cumulative GPA falls below 2.000 will be placed on Academic Probation. Once placed on probation, a student must meet with the Academic Success Center prior to the end of the first week of classes of the next fall or spring semester to enter into a written agreement defining an academic improvement plan. This standing appears on the transcript and is not subject to appeal.

Academic Suspension

Academic Suspension is a separation from the University of a full semester (fall or spring). Students who have been on Academic Probation and who fail to achieve or maintain Good Standing in any subsequent semester will be placed on Academic Suspension. This standing appears on the transcript and is eligible for appeal.

Suspended students may not enroll in the succeeding fall or spring semester unless an appeal is granted (see section on Appeals Process below). However, suspended students will be able to register during Priority Registration during the semester they are away for the subsequent fall or spring semester when they are eligible to return. Students should work with their advisors to plan their courses and to receive clearance to register.

Students who are placed on Academic Suspension may be granted an Immediate Reinstatement through the appeal process (see Appeals Process below). Immediate Reinstatement status allows the student to return on Academic Probation and grants the student an additional semester to achieve Good Standing. Students on Immediate Reinstatement status who fail to achieve Good Standing will be dismissed.

Academic Dismissal

Students who were previously placed on Academic Suspension (including those granted an appeal and Immediate Reinstatement) and who are readmitted and fail to achieve or maintain Good Standing in any subsequent semester will be placed on Academic Dismissal unless an appeal is granted (see Appeals Process below). This standing appears on the transcript and is eligible for appeal.

Summer and Winter Course Enrollments for Suspended and Dismissed Students

Although academic standing is determined on the basis of prior coursework, due to the timing of registration and academic discipline matters students placed on Academic Suspension or Academic Dismissal may complete a course for which they registered before suspension or dismissal occurred if it is offered during the immediately subsequent Winter or Summer Session (Summer I, Summer III, or Summer IV only).

Appeals Process

Students have the right to appeal Academic Suspension or Academic Dismissal. Authority for determining students' academic status resides with the Academic Standards Committee.

1. Students must consult with their Dean’s office about petitions and appeals procedures. Students may also consult with the Academic Success Center. All appeals must be submitted in writing on the Academic Appeal Form to the University Registrar by the deadline stated in the notice of Academic Suspension or Academic Dismissal.

2. Appeals of Academic Suspension or Academic Dismissal may be made on the following grounds: substantial academic progress, course work completed after the initial decision, financial difficulties, health problems, extenuating personal circumstances, or other academic reasons.

Appeals of the Academic Standards Committee ordinarily are final. A student may appeal the decision of the Academic Standards Committee by submitting a written appeal to the Provost within five (5) business days of receipt of the Academic Standards Committee's official decision on the following grounds: incorrect calculation of grade point average; lack of fair consideration provided to the student, i.e., there is evidence that some aspect of the appeal consideration was prejudicial, arbitrary, or capricious, or new and significant information not reasonably available at the time of the initial appeal has become available.

Academic Status and Grade Changes

The academic status earned by a student shall remain in effect if they receive a retroactive grade change that affects Academic Standing, unless the original grade is corrected by the professor, or an Incomplete is converted to a grade, within 6 weeks.

Reinstatement Process

A student who has been academically dismissed and had an appeal denied, or chose not to appeal, may apply for readmission to Western New England University, provided they demonstrate that they are prepared to constructively resume their studies and regain academic good standing by fulfilling the following conditions:

1. The student may apply for readmission no sooner than one full academic year after academic dismissal.

2. The student must file an application for reinstatement to the Office of the Registrar, with a written statement requesting reinstatement [create one and link here].

3. The student must demonstrate that time away was spent constructively through, for example, taking coursework at another institution, completing community service, maintaining gainful employment, or through some combination of these activities. The student must also demonstrate that the issues leading to their academic dismissal are resolved.

4. The student may seek to improve their cumulative GPA by taking WNE courses as a non-matriculated student. This may help regain eligibility for financial aid. Academically dismissed students taking courses as non-matriculants must maintain minimum semester GPAs of 2.000 to continue taking coursework; failure to do so will result in permanent dismissal.

5. The student shall apply for readmission to the University Registrar, who will determine whether to grant a readmission interview.
6. The University Registrar shall review the applicant's record and associated information and shall present the case to the student's academic dean's office. The academic dean's office shall determine whether to grant the applicant readmission as a matriculated student.

7. If readmitted, the student must meet promptly with an academic advisor to create a degree completion plan.

8. The reinstated student is placed on probation, and the student's term GPA of each of the two subsequent semesters following readmittance must be 2.000 or higher. During the probationary period, the student is exempt from academic standing requirements concerning their cumulative GPA (as described above). If the student does not earn a term GPA of 2.000 or higher in the two terms following reinstatement, the student will be permanently dismissed.

9. A student may be readmitted and may re-enroll at the university only one time. A student who receives a second dismissal from the University may not appeal. A second dismissal is final.

Policies & Procedures

President's & Dean's Lists

President's and Dean's Lists

To be placed on the President's List, a full-time student must be enrolled in courses carrying a minimum of 12 credit hours and achieve a semester grade point average of 3.800 or above. A part-time student may qualify for the President's List by carrying 6-11 credit hours and achieving a grade point average of 3.800 or above.

To be placed on the Dean's List, a full-time student must be enrolled in courses carrying a minimum of 12 credit hours and achieve a semester grade point average of 3.300 or above. A part-time student may qualify for the Dean's List by carrying 6-11 credit hours and achieving a grade point average of 3.300 or above.

Policies & Procedures

Honors at Graduation

Honors at Graduation

Honors are awarded at graduation for superior scholastic attainment. Students are recommended for honors if, in addition to satisfying all other requirements for the degree, they have completed a minimum of 60 credit hours at the University and have earned the required grade point average:

Cum Laude requires a grade point average of at least 3.300

Magna Cum Laude requires a grade point average of at least 3.600

Summa Cum Laude requires a grade point average of at least 3.800

Students who graduate with between 45 and 59 credit hours completed at the University and who have a grade point average in those courses of 3.500 or higher graduate "With Honors".

Policies & Procedures

Reactivation Procedure

Reactivation Procedure

Students who wish to return to Western New England University after an absence of one or more full semesters (fall or spring), may do so by submitting a Request for Reactivation Form to their dean's office. Students who wish to return to the University but change their major should also submit a Request for Change of Academic Program Form, along with the Request for Reactivation form, to the dean's office of the program in which they wish to enroll.

Students must also submit official transcripts to Enrollment Services (for work completed) and unofficial transcripts (for work in progress) from all school(s) attended since leaving WNE. Reactivation may be contingent upon successful completion of coursework taken while away from the University.

Students are academically eligible to return if they left WNE in Good Standing, on Academic Warning, Academic Probation, or if they completed any mandated Academic

Suspension. Students who were academically dismissed who wish to return to WNE must follow the Reinstatement Process in the Academic Standing policy in this catalog.

Students readmitted to the University after an absence of at least one year will follow the degree requirements outlined by the catalog in effect at the time of re-enrollment.

In order to be eligible for priority registration, students are encouraged to submit all required paperwork by February 1 for Summer or Fall term reentry, or by September 15 for Winter or Spring term reentry.

Student Services

WNE has many services for its students.

Student Services

Athletics & Recreation

Athletics and Recreation

Athletics

Western New England University offers comprehensive and competitive NCAA Division III varsity athletic programs in twenty-one different sports (10 men's/11 women's sports). As a full member of the Commonwealth Coast Conference, the department provides an educationally purposeful approach to providing a leading-edge student-athlete experience. Athletics promotes, develops, and supports student-athlete excellence in three key areas: on the field of competition, in the classroom, and in servant leadership.

Recreation

Western New England University is also focused on promoting a lifelong commitment to healthy habits and holistic wellness through comprehensive recreation offerings that serve the entire student population. WNE Recreation reinforces the University cocurricular approach by advancing the development of its program participants as well as its student employees. Recreation programming includes intramurals, club sports, group fitness classes, and open fitness/recreation opportunities.

Facilities

The Anthony S. Caprio Alumni Healthful Living Center (CAHLC) plays host to all indoor Athletics/Recreation offerings. Golden Bear Stadium is a state of the art FieldTurf playing surface that is home to football, field hockey, and lacrosse. Additionally, there are dedicated playing surfaces for tennis, soccer, baseball, and softball. Finally, the Southwood fields provide additional space for practice and recreational opportunities

Student Services

Career Services

Career Services

The Delbridge Career Center, located on the second floor of the St. Germain Campus Center, offers a variety of career-related programs, workshops, seminars and classroom presentations to educate students on career development, readiness, and strategy. Specialized career professionals for the Colleges of Arts and Sciences, Business, and Engineering implement the University's strong commitment to the development of students' career decision-making by providing individual and group career coaching; assistance in major and occupational exploration; and internship, job and graduate school search strategies. Students who have not officially declared majors are encouraged to utilize the services of the career coaches who, through assessment inventories and exploration tools, will assist students in declaring a major.

A four-year career plan, with the emphasis shifting from academic to professional, is offered by the Delbridge Career Center to direct students at each level of their University education, . Career education and exploration begins in the students' first year where students begin to discover and understand their skills and strengths, and participate in University experiential activities. In the students' sophomore year, they begin to direct their interests through a variety of courses, further develop leadership skills, and participate in career-focused programs such as Sophomore Career Connections. The University's internship program adds value to students' education by bringing the theories and concepts learned in the classroom to life and providing opportunities to apply that knowledge in local businesses and organizations. Through the combination of academics and experiential learning, students develop the career readiness skills and experiences employers and graduate schools require of their candidates.

The Delbridge Career Center collaborates with other departments on campus, including University Advising, Residential Life, Athletics, Alumni Relations, Student Involvement and Leadership and Connections, and academic departments to facilitate workshops and activities. Topics include interviewing, résumé and cover letter building, options for exploring internships and study abroad, and networking to educate and empower students. The campus recruiting program connects students to employers through information sessions, interview days, and virtual and on-campus career fairs. Central to these programs and to student success is networking. As such, the career professionals work in partnership with students to identify, strategize, and expand their own network of career resources.

All students have access to Handshake, the Delbridge Career Center's robust, interactive career management system. In Handshake, students create their profile; research and apply for jobs and internships; connect with employers; participate in career fairs, events, and workshops; make appointments to meet with their Career Advisor; and store career documents (résumés, cover letters, etc.) and other career resources. Access to Handshake continues after graduation as alumni of the University.

Resources including web-based career guidance programs such as TYPEFOCUS, Candid Career, O*NET and other internet sites provide students with the knowledge to make informed career decisions. The University's network of alumni is a valuable resource to connect students with alumni actively employed in their fields and eager to share their occupational information.

The Delbridge Career Center's effective combination of education, career programs, and job search coaching is a valuable complement to every student's academic experience.

Student Services

Counseling Services

Counseling Services

The Center for Health and Wellness offers free, professional and confidential Counseling Services to enrolled students who live on and off campus. Our team consists of caring and skilled licensed clinicians and graduate associates that provide a variety of services including individual and couples counseling, same-day and quick access appointments, and crisis support as well as outreach and educational programming.

Common issues students face include adjustment to college, anxiety, depression, relationship challenges, sexual identity, eating disorders, substance abuse, sexual/physical abuse and students dealing with low self-esteem or self-confidence.

Students are able to schedule same-day and quick access appointments on line as well as request counseling services.

WNE Counseling Services is dedicated to offering a judgment-free, safe space for students to overcome mental health challenges, develop strong coping skills and foster a life-long commitment to wellness. We take a strength-based, client centered approach with respect to each individual's culture, beliefs, and uniqueness.

Disclaimer: Although Counseling Services' professional staff can address many mental health concerns, there are some disorders that are beyond our scope of practice. Examples include, but are not limited to, psychosis, severe addictions, and severe eating disorders. In these instances, students will be provided with appropriate off-campus referrals.

Additionally, given the number of students that seek counseling, most appointments will be made on an every-other-week basis. During times of high demand students may be placed on a waiting list with no guarantee they will be able to be seen before the end of the semester. Students who are experiencing a mental health **crisis** will be seen that day.

Student Services

Cultural Education & Inclusion, & International Programs & Education

Cultural Education and Inclusion and International Programs & Education

Cultural Education and Inclusion

Supporting the educational value gained through the array of cultures represented on our campus, WNE acknowledges, recognizes, and strives to undergird the particular concerns of under-represented, marginalized, and international students. Western New England values and supports diversity, equity, and inclusion in its many forms as we recognize that students work, play, and live in a pluralistic society. Through programming, the Office of Cultural Education and Inclusion offers students additional exposure to an increasingly complex and interconnected world, in ways that encourage respect for other cultures and people groups. Examples of current or past programs include celebrations of Black History, Latino History, International Cultures, and Women's History. Programming also includes exposure to visiting artists and lecturers of rich and culturally diverse heritages. The organization and execution of these programs are administered through the Office of Cultural Education and Inclusion solely or in collaboration with the multicultural club on campus called United & Mutually Equal (U&ME), and other clubs and offices who support the mission of diversity, equity, and inclusion.

International Programs and Education

The Office of International Programs and Education supports international students, scholars, and their dependents from throughout the world on matters relating to immigration as well as academic, social, financial, and personal concerns relevant to daily life in the United States. The Office also provides programs specifically to serve the needs of international students and scholars from immigration advising to cultural adjustment programs. including programs include the International Welcome Reception, Diwali, International Week, the Kite Festival, and many more.

Additionally, The Office of International Programs and Education collaborates with other campus offices and students' organizations to develop and implement educational and co-curricular programs designed to heighten cultural awareness, appreciation of cultural diversity, and intercultural understanding for all students and scholars.

Student Services

First Year Transition

First Year Transition

Students at Western New England University have a web of support. In their first-year and beyond students have many options to identify a personal resource and mentor. A critical piece to solving the adjustment puzzle is to identify at least one person in an advising capacity who is accessible and interested in student success. In the First Year program, such identification is made easier by searching among a carefully constructed support network. While the second year requires more overt and intentional outreach, mentoring is no less important.

Faculty Advisor

Each student is assigned to a member of the faculty or professional staff to assist in the development of educational and career plans. Normally, the first year advisor is linked to the first year seminar instructor. Sophomores are typically linked to advisors based on academic discipline. Academic advisors are the principal resource regarding information on academic requirements and should be consulted prior to completion of course registration and to review in-progress grades.

University Advisor

Each first year student is assigned to a professional staff member in the Vanech Family University Advising Center who provides students specific and holistic support through to graduation. This assignment doesn't change, so the advisor remains a constant person of support as students work towards degree completion. The advisors assist with clarifying academic, life, and career goals that open conversation to determine major options that align with those goals. University Advisors are also a connection to appropriate campus resources while they help navigate the physical campus and technology/educational tools utilized on campus.

Peer Advisor

Each first-year student is assigned to an upper-class student who is trained to serve as a source of information, point of first contact, and conduit to program and services. Most notably, peer advisors coach each student in the formation of the personal success plan and act as an advocate for student success. Peer advisors are also assigned to each section of the First Year Seminar to work with seminar instructors and mentor students in the development of academic skills and attitudes. For transfers, peer advisors are trained to provide transfer students specific transitional support to match the unique experience of being a first year student at a new institution while having already navigated the high school-to-college transition.

Faculty

Among the notable changes students encounter in college is the shift to assuming personal responsibility for learning. Faculty teaching in the first year and beyond are committed to student success and particularly respond to students who demonstrate a desire to learn. Students are encouraged to take advantage of faculty interest. Faculty further demonstrate their commitment to the quality of instruction in the first year through the existence of a faculty committee dedicated to the first year academic program and promotion of structured learning environments with high feedback.

Resident Advisor

Students of sophomore, junior, or senior standing are employed by the Residence Life Office to assist in the day-to-day management of the residence areas, and the development of group living-learning environments conducive to academic achievement and personal growth.

Supplemental Instruction Leader

Within the context of academic programs, there are historically high-risk courses. In a number of such courses, upper class students serve to model and foster effective strategies for becoming a student of the discipline.

For further information about the first-year program, visit http://www1.wne.edu/first-year/index.cfm/, or to solicit advice and counsel regarding educational or personal goals, students and parents are encouraged to contact the Dean of Students.

Student Services

Health Services

Health Services

Health Services is available 24/7, with office hours Monday through Friday from 8:30 a.m. to 4:30 p.m. Visits are by appointment, or urgent walk-in. Appointments can be made in person or by calling the office at 413-782-1211. For after hour medical concerns, an on-call provider is available at 413-519-4055. **For life threatening emergencies contact Campus Police at 413-782-1411 or dial 911.*

Prior to the start of classes, all full-time students must submit an admission health form. This form is located on the Health Services website. A completed health form requires a medical history, physical examination within one year of the first day of classes, and documentation of all required immunizations. NCAA athletes have additional requirements including a physical exam within six months of the start of classes, sickle cell testing and athletic pre-participation clearance.

All enrolled students may utilize health services.

Health Services does not bill insurance for healthcare. With notification prior to service, some medical services may require an additional fee. Insurance cards will be needed for all outside services such as laboratory testing, radiology, prescriptions, specialty referral, out of department health care.

The Commonwealth of Massachusetts requires that students carrying a three-quarter load (undergraduates or graduate/professional students in the School of Law or the College of Pharmacy and Health Sciences taking nine or more credits or graduate students in arts and sciences, business or engineering taking five or more credits)to either purchase insurance through the University or to receive a waiver by completing a waiver approval process by submitting a form online with pertinent information about their private insurer. This approval process must be completed every year of enrollment.

For additional information, please visit our Health Services website and/or contact our office.

Student Services

Honor Societies

Honor Societies

Alpha Kappa Delta

Alpha Kappa Delta is the national honor society in sociology and a member of the Association of College Honor Societies. The Theta Chapter of Massachusetts was chartered at Western New England University in 1975. Students are nominated for membership through their faculty advisor on the basis of academic excellence and serious commitment to, and interest in, the study of society for the purpose of service to mankind. To be nominated, a student must have a 2.700 cumulative average and a 3.000 average in at least 12 credit hours of sociology and social science courses.

Alpha Lambda Delta

Alpha Lambda Delta is a national honor society that recognizes academic excellence during a student's first year in college. The purpose of this honor society is to encourage superior academic achievement among freshmen and to promote leadership early in the students' collegiate experience. Membership is open to all freshmen who earn a cumulative average of at least 3.500 either in their first semester of enrollment or in their first year of enrollment prior to initiation. No incompletes or failures can be on the record. To be eligible, students must be enrolled full time in a degree program.

Alpha Mu Alpha

Alpha Mu Alpha is the national marketing honorary society for qualified undergraduate, graduate, and doctoral marketing students, and marketing faculty. Under the auspices of the AMA, a selected advisory committee of marketing educators designed the recognition program to acknowledge outstanding scholastic achievement on a highly competitive basis. Honor recipients must be senior undergraduate students with a minimum overall GPA of 3.250, members of the Western New England University Marketing Association, and members of our Collegiate Chapter of the American Marketing Association.

Alpha Phi Sigma

Alpha Phi Sigma is the only criminal justice honor society for criminal justice majors. Alpha Phi Sigma recognizes academic excellence, and students must maintain a minimum of 3.200 overall GPA and 3.200 GPA in criminal justice courses. The student must also rank in the top 35% of their classes and have completed a minimum of four courses within the criminal justice curriculum. The honor society is open to those with a declared criminal justice major or minor.

Beta Alpha Psi

Beta Alpha Psi is an honorary organization for financial information students and professionals. The primary objective of Beta Alpha Psi is to encourage and give recognition to scholastic and professional excellence in the business information field. This includes promoting the study and practice of accounting, finance, and information systems; providing opportunities for self-development, service, and association among members and practicing professionals; and encouraging a sense of ethical, social, and public responsibility. Our Mu Epsilon Chapter of Beta Alpha Psi was installed in January 2009.

Beta Gamma Sigma

Beta Gamma Sigma is a national honor society for business majors at schools accredited by AACSB International, the Association to Advance Collegiate Schools of Business. Students are selected from the top 7% of juniors, top 10% of seniors, and top 20% of graduate students. Candidates must have completed at least one half of the work required for their degree, and have completed two terms' work at Western New England University.

Delta Delta Epsilon

Delta Delta Epsilon (DDE) is an international forensic science honor society that is dedicated to stimulating academic achievement, promoting community understanding, and advancing the fields of forensic science. Membership is limited to students within the disciplines of forensic science which meet high academic criteria and have displayed excellence during their collegiate career. Students must have completed a majority of the requirements towards their forensic science degree, have a minimum overall GPA of 3.300, and rank in the top 35% of their class.

Lambda Pi Eta

Lambda Pi Eta is the official communication studies honor society of the National Communication Association (NCA). As an accredited member of the Association of College Honor Societies (ACHS), Lambda Pi Eta has nearly 400 active chapters at colleges and universities worldwide. The goals of Lambda Pi Eta are to recognize, foster, and reward outstanding scholastic achievement; stimulate interest in the field of communication; promote and encourage professional development among communication majors; provide an opportunity to discuss and exchange ideas about the field; establish and maintain close relationships and understanding between faculty and students; and explore options for further graduate studies.

Mortar Board

The Mortar Board is the senior honor society at Western New England University. The society is open to those students who have demonstrated both academic excellence and leadership both on campus and in the community. Students in the top 35% of the Junior Class will be considered eligible for the Society with the membership being selected by the existing members of the previous year. The Mortar Board Society hopes to recognize student achievement, while also serving as a focal point of planning and collaboration for senior leaders.

Omicron Delta Kappa

Omicron Delta Kappa (ODK), the National Leadership Honor Society, was founded in 1914 at Washington & Lee University in Lexington, VA. The founders formulated the idea that leadership of exceptional quality and versatility in college should be recognized; that representatives in all phases of college life should cooperate in worthwhile endeavors; and that outstanding students, faculty, and administrators should meet on a basis of mutual interest, understanding, and helpfulness. ODK was the first college honor society of a national scope to extend recognition beyond the formal classroom, give recognition and honor for meritorious leadership and service in extracurricular activities, and to encourage development of general campus citizenship. Chapters, which are called Circles, are located on over 300 campuses throughout the nation. The Circle of ODK at Western New England University recognizes achievement in the following five areas:

- Scholarship
- Athletics
- Campus/Community Service, Social/ Religious Activities, and Campus Government
- Journalism, Speech, and the Mass Media
- Creative and Performing Arts

Nominations are taken each fall and spring from all segments of the campus community.

Phi Alpha Theta

Phi Alpha Theta is the national honor society in history. Its mission is to promote the study of history through the exchange of ideas and the encouragement of research, teaching, and publication. To be considered for membership, a student must have completed at least 12 hours in history (four courses), have a GPA of at least 3.100 in history, have a GPA of at least 3.000 overall, and be in the top 35% of the class. Membership is not limited to history majors.

Pi Sigma Alpha

Pi Sigma Alpha is the national political science honor society. Students majoring in political science, public administration, and international relations who attain high standards of scholarship and academic distinction in political science and in their overall academic programs are invited to membership. Membership is conferred on the basis of academic merit alone.

Psi Chi

Psi Chi is the national honor society in psychology, an affiliate of the American Psychological Association, and a member of the Association of College Honor Societies. Organized in five regional divisions with more than 300 active chapters, Psi Chi recognizes the academic achievement of students who meet or exceed exacting eligibility standards. The purpose of Psi Chi is to advance the science of psychology, and to encourage, stimulate, and maintain scholarship. To be nominated a student must be a declared major or be enrolled in the minor program in psychology, have completed three semesters of college study, and maintained a 3.000 cumulative grade point average and a 3.000 grade point average in at least nine credit hours of psychology courses.

Sigma Nu Tau

Sigma Nu Tau is a collegiate honor society recognizing students, faculty members, and entrepreneurs who have either excelled in the study of entrepreneurship or who are exemplary models of principled entrepreneurship. Requirements for membership include at least a 3.200 GPA for undergraduates who have at least 15 credits in entrepreneurial studies.

Sigma Tau Delta

Sigma Tau Delta's central purpose is to confer distinction upon students of the English language and literature in undergraduate, graduate, and professional studies. Sigma Tau Delta strives to confer distinction for high achievement in English language and literature in undergraduate, graduate, and professional studies; provide, through its local chapters, cultural stimulation on college campuses and promote interest in literature and the English language in surrounding communities; foster all aspects of the discipline of English, including literature, language, and writing; promote exemplary character and good fellowship among its members; exhibit high standards of academic excellence; and serve society by fostering literacy.

Tau Beta Pi

Tau Beta Pi is the national honor society for engineering. Outstanding juniors and seniors inducted into Tau Beta Pi receive national recognition for their academic and professional achievements. Student members of Tau Beta Pi are also invited to join the local engineering honorary, Sigma Beta Tau, which has an active alumni group.

Student Services

Professional Societies

Professional Societies

American Marketing Association (AMA)

Western New England University is home to one of the 400 collegiate chapters of the American Marketing Association. The mission of the Collegiate Chapters Division of the AMA is to be the world's leading professional student organization by furthering the professional development of students through leadership, training, and involvement in the field of marketing.

American Society of Mechanical Engineers (ASME)

The Western New England University student section of The American Society of Mechanical Engineers was established for the purpose of advancement and dissemination of knowledge of the theory and practice of mechanical engineering, the presentation of a proper perspective of engineering work, and the opportunity to become acquainted with the personnel and activities of the Society, as well as the promotion of professional awareness and fellowship.

Association for Computing Machinery (ACM)

Organized as a student chapter, the Association for Computing Machinery seeks to promote a working knowledge of computer science. Design, construction, and language of modern computing machinery are within the interests of the club. Additional goals of the chapter are to promote professionalism and ethical use of computing and information resources. Affiliate membership is offered to any student and full membership is likewise available, provided the student is also a member of the national organization.

Biomedical Engineering Society (BMES)

The Biomedical Engineering Society is a national organization of biomedical engineers. The mission of the student branch of the BMES at Western New England University is to provide students the opportunity to learn about the field of biomedical engineering. Through participation in the chapter, students are exposed to the many diverse aspects of the field as well as opportunities for education and employment after graduation. The chapter accomplishes this mission through invited guest speakers, plant and clinic tours, a trip to the Annual Meeting of the BMES, and a trip to the Annual Northeast Bioengineering Conference. Additionally, students are encouraged to submit papers into regional and national competitions sponsored by the BMES. Beyond these experiences, the chapter offers students opportunities for community involvement and social activity.

Institute of Electrical and Electronic Engineers (IEEE)

The Institute of Electrical and Electronic Engineers is the world's largest professional engineering society. The Western New England University student branch provides the electrical engineering student with a means of establishing a sense of professional awareness and identity. It has proven itself to be valuable in helping students make important career decisions. It also provides students with a medium for entering student paper competitions at local, regional, and national levels. A strong tie exists between the local professional chapter and the student branch at the University.

Institute of Industrial Engineers (IIE)

The objective of the Western New England University student chapter of the Institute of Industrial Engineers is to promote the profession of industrial engineering through affiliation with the national organization. Activities include discussion of professional opportunities, field trips to employment sites, research, and becoming acquainted with the ideals, purposes, and lifestyle typical of those in the profession. The student chapter brings the classroom experience to life.

Society of Women Engineers (SWE)

The student chapter of the Society of Women Engineers was established to serve as a support group and provide career guidance to women engineering students. The student chapter of SWE sponsors panel discussions and lectures given by women engineers focusing on the special needs and problems of women engineers in industry. The students also attend seminars, mini-conferences, and meetings of the National Society of Women Engineers Hartford Section and Boston Section. The SWE chapter has also established a mentorship program with women engineers in local industry.

Student Chapter of the Northeastern Section of the Mathematical Association of America

The student chapter of the Northeastern Section of the Mathematical Association of America provides a forum for students to discuss and plan careers in mathematics and the mathematical sciences; to present student papers at the local, regional, and national levels; and to participate in a national problem-solving contest. Moreover, students are encouraged to attend mathematics conferences, subscribe to journals through the MAA, and to participate in many of the activities during Math Awareness Week each year. The chapter is established to expose students to many areas in mathematics and to all the career options open to mathematicians. Membership is available to any student who is a member of the national organization.

Student Services

Student Accessibility Services

Student Accessibility Services

Western New England University and the office of Student Accessibility Services (SAS) is committed to providing services that will support students with diagnosed disabilities. Both Section 504 of the Rehabilitation Act and the Americans with Disabilities Act Amendments Act (ADAAA) guide the student accommodation process at WNE. In collaboration with students, families, faculty, and staff, SAS approves accommodations for students with documented disabilities. Some examples of common accommodations that may be provided to students include, but are not limited to, extended time on exams, distraction-reduced testing environments, use of assistive technology, and accessible housing accommodations. University students seeking SAS services will need to self-identify and register with SAS by completing the SAS Intake form, provide supporting documentation, and participate in a Welcome Meeting or an Accommodation Review.

Documentation demonstrating that the student's disability substantially limits one or more major life activities in accordance with ADAAA is required from all students who request accommodations. For specific documentation criteria and to access the online registration process, please visit: https://www1.wne.edu/student-accessibility-services/students/register-with-sds.cfm.

Accommodations are individually determined based on the functional limitation(s) that are identified by the supporting documentation and through an interactive process. Once registered with SAS, it is the responsibility of the student to request accommodations on a semester-to-semester basis or as the need arises. Students are strongly encouraged to notify SAS of their accommodation needs with as much advance notice as possible to ensure timely implementation. Accommodations are not set up automatically or applied retroactively. Student information is kept confidential and shared only on an as-needed basis.

For more information visit https://www1.wne.edu/student-accessibility-services/index.cfm.

Student Services

Residence & Campus Life

Residence and Campus Life

Living Facilities

Students may live in a variety of accommodations, ranging from traditional residence halls to room suites with semiprivate baths, and apartments or townhouse units with full kitchens and baths. Residence facilities serve as an integral part of the educational program. Students proceed through various types of residential facilities as they progress through their undergraduate programs. First-year students are normally assigned to traditional residence halls, while sophomores, juniors, and seniors become eligible to reside in suite-style living units, apartments, or townhouse units, as space permits.

All residence facilities are furnished with bunk or loft style beds, storage space (such as closets, free standing wardrobe units, or bureaus), desks, and chairs. Apartment and townhouse units are also furnished with kitchen appliances, a dining table, and living area furnishings. Laundry on campus is included with your housing charge and does not require any additional payment. Assignment is determined by the student's housing preferences, class level, and number of credits. Requests for University housing are honored depending on availability of facilities, fulfillment of application, payment, and assignment deadlines. Each residency area is staffed with an area director and several resident advisors. The area director is a full-time professional, live-in staff member who oversees components of University housing throughout the campus. Resident advisors are full-time undergraduate and graduate students working directly with a specific living group.

Dining Services

Food services are provided in the University Commons. A full-service board plan offers students a variety of dining options. All first year resident students participate in the University's 7 Day All Access meal plan. Students have unlimited access to the dining hall every day while it is open. Upperclass resident students residing in Commonwealth Hall, LaRiviere, and Windham Hall may elect to participate in the 7 Day All Access Plan or the Weekly 12 Meal Plan. Students living in Gateway Village, Evergreen Village, and Southwood Hall, as well as commuter students, have the option of adding a dining plan. In addition to the standard dining plans, students may also purchase "Bear Bucks," which function like a debit card and may be used at any dining location on campus, as well as at Domino's Pizza. Food service is available seven days a week while classes are in session.

Food Service professionals are available to assist with dietary concerns such as food allergies. Detailed documentation from a physician outlining specific food restrictions and/or needs should be provided to the Office of Student Accessibility Services for consideration of an accommodation or exemption status.

Student Services

Student Employment

Student Employment

Western New England University's Student Employment program can help students meet their educational and personal expenses. Every year, hundreds of our undergraduates work on-campus in a variety of positions. Through student employment, students have the opportunity to contribute to the Western New England community while learning and practicing skills for future positions and internships.

Getting a Job

Open positions are posted in Handshake (https:/wne.joinhandshake.com) after August 15. Students are encouraged to apply to several positions and actively follow up about the status of their application with hiring supervisors.

The Delbridge Career Center in the St. Germain Campus Center, administers the On-Campus Student Employment program and is available to assist students in their job search should students need their expertise.

Student Employee Job Fair

The Student Employment Job Fair is held annually and is scheduled within the first two weeks of the fall semester. Representatives from a variety of University offices and departments attend to recruit student employees. Students will have an opportunity to speak with potential supervisors about specific job responsibilities.

Student Employment - Federal Work Study

The Federal Work Study Program provides funds for jobs for undergraduate students with financial need. The program encourages community service work and work related to the student's course of study. The Federal Work Study Program is need-based and requires a completed financial aid application on file with the University. Most Federal Work Study positions are on campus however, there are some off campus opportunities with America Reads.

Student Employment - Institutional Work Study

For students not receiving a Federal Work Study award, some University offices have institutionally-funded positions available. These positions are not tied to financial aid awards and are on-campus positions only.

Note: On-campus private vendors such as ARAMARK and Follett hire independently and not through this program.

Student Services

Student Involvement & Connections

Student Involvement and Connections

The mission of the Office of Student Involvement and Connections works with students as they explore new ideas and interests, their identity, the arts, cultures, and opportunities at Western New England. The Office fosters ways for them to connect to the community, their peers, networks of support, clubs and organizations, and their goals. The Office encourages engagement in learning outside of the classroom, leadership development, program planning, community service, and social action, with the goal that our students will lead through involvement in clubs and organizations, employment, activism, peer engagement, and in their communities.

Student Involvement and Connections provides all students with opportunities to explore from the moment they step foot on campus, and is committed to ensuring that students take advantage of pathways, or create their own path, to become engaged members of the community and leaders in their cocurricular involvement.

Clubs and Organizations

Clubs and organizations represent a wide range of programs and reflect the current interests of our students. Involvement in clubs fosters personal growth and the development of many transferable skills for future career paths. Club activities include social programs, career exposure, and community service projects. All students are encouraged to actively participate in at least one organization and to regularly attend the many activities offered on- and off-campus.

With dozens of clubs and organizations to choose from, the challenge is not "will I get involved?" but rather "how do I narrow down the choices?" Involvement opportunities range from off-campus trips sponsored by the Outing Club, to the exciting array of video game tournaments sponsored by the gaming club (WARP). Most of the academic departments have a partnership with a student organization and provide collaborative opportunities between academic and cocurricular life. The class councils sponsor campus-wide entertainment that ignites class pride.

The Student Senate is the official voice of full-time undergraduate students and comprises representatives from each class; representatives from each of the Colleges of Arts and Sciences, Business, and Engineering; and commuter and resident representatives. Elections for most offices are held in the fall and spring of each year. The Student Senate serves as a liaison between students, faculty, and the administration of the University. In addition, the Senate appoints representatives to sit on joint committees of the University Senate in order to encourage cooperation and to foster joint decision making. The Senate has as one of its major responsibilities the budgeting and administering of student activity fees in ways that will most benefit the University community, mostly through funding the 70+ clubs and organizations, class councils and major events such as Spring Event.

Clubs and organizations broken down into the following interest areas:

- Special Interest
- Class Councils
- Diversity, Equity, and Inclusion
- Professional and Departmental
- Bold Media
- The Arts

A full list of clubs and organizations can be found here.

Leadership

Leadership at Western New England University happens through experiences. The Division of Student Affairs Shared Student Leadership competencies, listed below, are integrated into development series, one day workshops and shorter interactive sessions. Students are also encouraged to take hold of opportunities to lead their peers in clubs and organizations, student leader positions, and by chairing large scale campus programs.

Through professional and student led programming, the Office of Student Involvement and Leadership focuses on engaging students through entertainment; community building; civic engagement opportunities; programming that provokes thought, trips and travel, exposure to the arts; and fun events throughout the year. The *WOW: What's on Wednesday's* program series happens on a bi-weekly basis during the day. We provide programming on campus weekly through our *Golden Hours* programming every Friday and Saturday night from 8:00-10:00 p.m. on campus. Clubs and organizations offer programs for their members, as well as the campus community, throughout the year.

The Campus Activities Board is a standing committee of the Student Senate responsible for comedy programs, films, concerts, performing arts, recreation, and special traditional events. It is through this student organization that the majority of student programming originates. Particular emphasis is given to providing a full spectrum of programs encompassing both weekday and weekend schedules. Membership is open to any full-time student.

Campus Center

The Campus Center is the center of activity for students, faculty, staff, and guests of Western New England University. Centrally located on our beautiful campus, the Campus Center is easily accessible from any point on campus. It is the home of the University Bookstore, a Game Room with two billiards tables, ping pong and air hockey tables and arcade games, meeting rooms of various sizes, programming spaces, the Golden Bear Clubs and Organizations Resource Center, and most offices within the Division of Student Affairs.

Student Services

Student Programs & Services

Student Programs and Services

Programs are always changing to remain current with student needs. One of the most important variables in success is a student's willingness to take advantage of the support system. Without participation, program or advisor interaction is of little value. The following programs are designed to promote a successful adjustment to college life:

Summer Orientation and Registration (SOAR)

Students and parents take part in a one-day program on selected dates through the summer months. The SOAR program is guided by principles of academic anticipation. During SOAR, separate but complementary programs are held for students and parents. Student and parent needs are addressed through the first class meeting of First Year Seminar, academic information sessions, adjustment workshops, conversations with faculty, completion of course registration for the fall semester, initiation of a preliminary educational plan, completion of residency assignment information, and introduction to college life.

First Year Seminar

All first-semester first-year students and transfer students with 29 or less completed college credits (AP or high school to college credit is not counted in the credit limits) are required to successfully complete a graded, credit bearing course focusing on critical thinking, discovery and confirmation of academic interests, oral presentation strategies, promotion of educational values, information literacy, and personal development. Many sections of the seminar also feature content relevant to a particular academic discipline. The seminar is taught by regular teaching faculty who also serve as students' academic advisors for the first two years of enrollment or until such time as a major is confirmed. Students may opt to request reassignment of the faculty advisor should the need arise. First Year Seminar is uniquely structured by each designated College. Credit values vary. Upper-class student assistance further distinguishes the course in the context of modeling and fostering academic integration.

Freshman Focus

The Freshman Focus Program serves as an umbrella under which students can access particular opportunities for personal growth. Programs include the Student Activities Expo designed to acquaint students with clubs and organizations, thereby seeking to connect students to the life of the campus. The Freshman Focus Program also includes workshops geared to students who aspire to leadership as "emerging leaders." Students may also elect to take part in Freshman Council, an assembly of freshman students committed to building cohesiveness and respect for every first year student. Yet another dimension of the Freshman Focus Program includes the development of student-centered community expectations, a set of guiding principles governing student living and interaction. Finally, the Freshman Focus Program provides the structure for formation of a personal development lecture series revolving around themes of life management and social consciousness.

Sophomore Career Connections Program

The Delbridge Career Center, coordinates an exploratory program for our University sophomores. This opportunity introduces students to potential careers through interactive workshops and links the student to an alumnus or professional who works in a field of interest to the student. Sophomore Career Connections provides students with the ability to build their professional network and gain valuable insight into their potential future career path.

College Success Coaching

The College Success Coaching Experience (CSCE) is a semester-long series of interactive academic success skills presentations and one-on-one coaching sessions. During CSCE sessions, students discover their strengths, learn how to apply those in the collegiate classroom, and build academic confidence through the learning and application of academic success skills. The CSCE class focuses on skills that are used in all content areas, including time management, organization, communication, study skills, and test-taking skills. Students learn how to and are given guidance in applying those skills to their first-semester classes. Class sections have a 1:20 Academic Success Coach to student ratio. The Academic Success Coach will conduct the class and mentor students during individual coaching sessions.

Academic Progress Monitoring

There are two key indicators that serve to foster or inhibit academic success: class attendance and completion of out-of-class assignments. Both indicators are monitored through the first year. Regardless of any class attendance policy, it is well documented that students who regularly attend all class meetings succeed; those who choose to skip class do not succeed. When excessive absence patterns are noted, students are typically advised of the potential impact on progress.

At completion of the sixth week of classes, and at the end of the eighth week, grades are calculated based on assignments completed to date. In-progress grades are distributed to first-year students through the assigned advisor. Second year students access grades online. Instructors are also encouraged to both express congratulations to those who have met notable success and concern for those who may be struggling. Specific suggestions for improvement and/or reasons for congratulations are then shared with student advisors.

At the end of each semester, student academic performance is formally reviewed to ensure reasonable progress. If students are below minimum standards, a formally structured academic success contract is required. Through the Academic Success Center, academic progress monitoring is put in place through a series of meetings during which continuous assessment of progress is made.

Tutoring and Supplemental Instruction (SI)

It is quite normal for students to encounter subject matter which proves challenging. To support instruction, peer tutors are employed to assist students over the rough spots in mastering content and developing study strategies which match the type of course. Tutoring is typically offered on a short-term basis in many 100 and 200 level courses. Additionally, academic support is offered in certain high-risk courses through a program known as supplemental instruction. SI features organized study sessions coached through upper-class students who have previously taken the course.

The Math Center

The primary purpose of the Math Center is to help students at Western New England have a successful experience with mathematics. The Math Center strives to support the goals of the Department of Mathematics and to promote quantitative literacy throughout the university community. The Math Center is committed to helping students do their individual best in mathematics courses taken at WNE. The staff of peer tutors offers support to promote the understanding of course material so that key concepts can be mastered.

The Math Center's services are available to all members of the WNE community. One-on-one tutoring is available by appointment. These half-hour tutoring sessions can be one time or weekly. Students are expected to be on time, have questions ready for tutors, and notify the Center at least two hours in advance if they are unable to attend a scheduled session. The Math Center also offers the possibility for walk-in tutoring on a space-available basis. A schedule showing available times by math course can be found in the Center.

The Writing Center

The University's Writing Center offers tutoring services to support students working on writing assignments in any course from across the curriculum. The Writing Center also can design individualized improvement programs or help students work on personal writing projects. The Center is equipped with two computer classrooms as well as print resources and a webpage. Trained peer tutors work with students at all ability levels in all phases of the writing process.

Celebrating Student Success

Student achievement is valued at Western New England University. Students can expect to hear from the Dean of First Year Students and Students in Transition or Academic Success Center not only when there is concern, but also when academic and personal goals have been met. Recognition is likewise noted through the freshman honor society, Alpha Lambda Delta. Eligibility is determined by grade point average at the end of the first semester of full-time enrollment or cumulatively at the end of the first year. Second year students are also eligible for election to the sophomore honor society.

Alumni Mentoring Initiative

During the first year, students often find that there is a lingering lack of clarity over academic and career direction. Formed as an extended part of the First Year program, volunteer alumni from the College of Engineering have been recruited and coached to offer mentoring partnerships which extend the range of the web of support characteristic of the First Year program. Students are assigned an alumni mentor through the first-year engineering seminar. Mentors and protégés are brought together in a collaborative program with the Office of Alumni Relations and the College of Engineering. Students are encouraged to take advantage of the mentoring relationship through a series of relationship “prompts,” activities designed around a career development theme through which alumni can provide perspective and advice.

Graduate Academic Information

Western New England University offers a wide range of programs leading to graduate degrees, certificates, and doctoral professional practice degrees. This section contains information relevant to WNE graduate degrees. Information on professional practice degrees is available in relevant handbooks in the College of Pharmacy and Health Sciences (Pharmacy and Occupational Therapy) and the School of Law.

Requirements for a Master's Degree

Requirements for a Master's Degree

In order to qualify for a master's degree, a student must:

- Be formally admitted to the degree program.
- Complete the required programs as approved by the dean of the degree-granting college within eight years prior to the date of graduation. All graduate courses transferred into the programs must be taken within this eight-year period as well.
- Apply no more than six credit hours of transfer credit toward 30-credit graduate programs or 12 credit hours of transfer credit toward 600-level courses in any graduate program requiring 36 or more credit hours. An exception is made for WNE Undergraduates Taking Graduate Courses as described in the Undergraduate Policies and Procedures section of the catalog, or for those who are concurrently enrolled in one of the University's dual degree programs. Final courses are normally taken at Western New England University, but in exceptional circumstances students may apply to the appropriate dean to have their final one, two, or three courses approved to be taken elsewhere.
- Take at least 24 credit hours of the master's degree graduate course requirements at the University.
- Attain an overall grade point average of 3.000 or higher. Overall average is the average of all courses that are applied toward the degree. The degree audit shows the grade point average in all courses completed to that point.
- A student continuously enrolled, with no interruption of academic program longer than one semester or two terms of absence, is expected to fulfill the requirements of the catalog current at the time of admission to the University. A student not continuously enrolled is expected to meet the requirements current at the time of readmission. A one-year leave of absence may be granted at the discretion of the appropriate dean.
- Complete an Application for Degree form, which will place the student's name on the graduation list for May, August, or December graduation as appropriate.

Graduate Academic Information

Credit Hour System

Credit Hour System

See the Credit Hour System description in the Undergraduate Academic Information section of this catalog.

Graduate Academic Information

Grading System

Grading System

In certain graduate courses a grade of "P" (Pass) is assigned if the course is satisfactorily completed. "P" has no grade point equivalent.

Additional information regarding grading in the professional courses is available in the handbooks for School of Law @ http://www1.wne.edu/law/current/student-handbook.cfm and the College of Pharmacy and Health Sciences @ http://www1.wne.edu/pharmacy-and-health-sciences/current/student-handbook.cfm

Work in graduate and professional courses is graded as follows:

	A (4.000)		
	A- (3.700)	B+ (3.300)	
	B (3.000)		
	B- (2.700)	C+ (2.300)	C (2.000)
	P (0)		
Failure	F (0)		

Graduate Academic Information

Course Withdrawal

Course Withdrawal

To withdraw from a course the student must complete a drop form or application for complete withdrawal available from Enrollment Services or the appropriate college. Absence from class without completing the form does not constitute withdrawal and may result in a failing grade.

If the student drops from a course before the drop deadline published on the Academic Calendar, no grade is assigned. If a student withdraws after the drop deadline, but prior to the last withdrawal date published in the Academic Calendar for that semester, a "W" is assigned. A student may not receive a grade of "W" to avoid the consequences of a breach of academic integrity. A grade of "W" carries no academic penalty or prejudice.

Graduate Academic Information

Academic Integrity

See the Academic Integrity policy in the Undergraduate Academic Academics Policies and Procedures section of this catalog.

Graduate Academic Information

Incomplete Work

Incomplete Work

An incomplete mark of "I" is awarded only when work is not completed due to circumstances beyond the student's control (such as serious illness). The student has six weeks from the last day of final class and/or examinations to satisfy course requirements. Extension may be granted only for continued circumstances beyond the student's control and must be approved by the instructor and the dean of the college. The "I" becomes "F" for work not completed after the six weeks, or by the conclusion of an approved extension period.

Graduate Academic Information

Graduate Academic Standing

Graduate Academic Standing

Graduate students are expected to maintain a high degree of academic excellence in all of their studies.

A graduate student must have a minimum grade point average of 3.000 in all courses applied toward the degree in order to qualify for a graduate degree. Subject to the approval of the dean of the college within which the student is enrolled, a course with a grade of "C+" or lower may be repeated and the grade point average will be computed on the basis of the most recent earned grade. Credit for the course will be awarded only once. The official transcript will show the complete record.

In cases where a course grade of "F" has been assigned as a penalty for academic dishonesty, the student may not replace that grade in the cumulative GPA. If the student is allowed to retake the course, the resulting grade will be counted as a separate course.

Any student who receives three or more grades of "C+" or lower, or two or more grades of "F" will be dismissed from the program. With regard to dismissal, all grades in all courses are considered. In all cases where a letter of intent to dismiss for academic reasons has been sent, the student has the right to appeal to the Graduate Committee within two weeks of the notice. If an appeal is successful and the student is allowed to continue, the conditions of continuance are spelled out for the student in a letter. If an appeal is unsuccessful, or if no appeal is filed, the student is formally dismissed and such action becomes part of the permanent record.

Graduate students who are conditionally re-admitted must fulfill all the conditions set forth by the appropriate Dean at the time of admission. Those conditions are recorded on the degree audit and are duly noted when satisfied.

Graduate courses in the Colleges of Arts and Sciences, Business, and Engineering may be audited on a space-available basis by alumni who have completed bachelor's or master's degrees at Western New England University and who also have the listed prerequisites for the course selected. Alumni may register to audit classes through Student Administrative Services. Courses in the School of Law are not available for alumni auditors. The University does not maintain any record of registration by alumni auditors.

Graduate Academic Information

Award of Degrees & Posthumous Degrees Policies

Award of Degrees and Posthumous Degrees Policies

See the Award of Degrees and Posthumous Degree policies in the Undergraduate Academic Information section of this catalog.

Graduate Certificate Programs

Western New England University offers graduate certificate programs in business, engineering and pharmacy.

Graduate Certificates in the College of Business

- Grad Certificate in Business Foundations
- Grad Certificate in Information Management
- Grad Certificate in Leadership
- Grad Certificate in Sport Leadership
- Grad Certificate in Strategic Decision-Making

Graduate Certificates in the College of Engineering

Admission Requirements:

1. Bachelor's degree in engineering, or a closely related field, from an accredited college or university.
2. Students seeking admission to the graduate certificate program without such a degree may petition to have their baccalaureate degree and professional experience accepted as a substitute.
3. Student earning this graduate certificate and seeking to admission to a master's program (IE or EMGT) must earn a minimum 3.000 GPA for the certificate. Only classes with "B" or better will transfer for credit.

- Grad Certificate in Engr Artificial Intelligence
- Grad Certificate in Engr Data Analytics
- Grad Certificate in Engr Green Belt
- Grad Certificate in Engr Ind Safety & Public Health
- Grad Certificate in Engr Operations Management
- Grad Certificate in Engr Operations Research
- Grad Certificate in Engr Project Management
- Grad Certificate in Engr Risk & Emer Man
- Grad Certificate in Engr Supply Chain

Graduate Certificates in the College of Pharmacy and Health Sciences

Admission Requirements:

1. Applicants must be enrolled in the PharmD program.
2. Applicants must submit an essay as to why they are interested in the certificate and be approved by the Chair of the DPAS and the Director/Dean of Professional Affairs to enroll in the rotation.

- Grad Certificate in Pharmacy Clinical Research

Dual Graduate/Doctoral Professional Practice Degree Programs

WNE offers several dual degrees at the graduate and doctor's-professional practice level.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/LLM

JD/LLM in Elder Law and Estate Planning

The JD/LLM Elder Law in Estate Planning dual-degree program allows students to earn both credentials in as few as four years and with cost savings amounting to one-third of the cost of the LLM degree if pursued outside the context of a dual-degree program.

Prospective students can simultaneously apply for admission to the JD and the LLM in Elder Law and Estate Planning programs by indicating this choice on the JD application form and submitting a one-page statement regarding their motivation for pursuing the JD/LLM combination. The application process is also open to those who have already matriculated but not yet completed the JD program.

JD students may enroll in up to six credits of LLM coursework that will count toward the credits required for the JD degree. Those enrolled in the dual-degree program, upon completion of the JD, will continue on to complete the LLM degree by earning 16 credits in the LLM program (as opposed to the 24 credits a student needs to earn the LLM in the absence of a dual-degree).

Please contact the Law School Admissions Office for more information.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/MBA

JD/MBA

The College of Business and School of Law at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in attaining their MBA while pursuing a career in law. This is a dual-degree program where students completing the requirements for each program will receive two separate degrees, one in business and one in law. Pursuing both degrees allows students to take advantage of cross credits, where nine credits of business coursework can be applied toward the 88 credits required for the JD degree, and nine credits of law coursework can be applied toward the 36 credits required for the MBA degree.

This is a structured program designed to meet the guidelines delineated by the American Bar Association and AACSB International accreditation. Candidates for the program must have a four-year undergraduate degree from an accredited college or university. Students are required to apply to both the MBA program through the College of Business and the JD program through the School of Law. Those interested in this degree option should contact the School of Law Admission Office and College of Business Associate Dean's Office for specific information on application for admissions.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/MRP

JD/MRP

Students may simultaneously complete the requirements for a Juris Doctor (JD) degree from the Western New England University School of Law and a Master of Regional Planning (MRP) degree from the University of Massachusetts Amherst. Both degrees can be completed full-time in four years. The curriculum integrates studies of the physical, environmental, social, cultural, economic, legal, and political facets of planning at all scales: urban, suburban, and rural. Those interested in this program must apply to each program separately.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/MS in Accounting

JD/MS in Accounting

The College of Business and School of Law at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in attaining their MS in Accounting while pursuing a career in law. This is a dual degree program, where students completing the requirements for each program will receive two separate degrees, one in business and one in law. Pursuing both degrees allows students to take advantage of cross credits, where six credits of business coursework can be applied toward the 88 credits required for the JD degree, and six credits of law coursework can be applied toward the 30 credits required for the MS in Accounting degree.

This is a structured program designed to meet the guidelines delineated by the American Bar Association and AACSB International accreditation. Candidates for the program must have a four-year undergraduate degree from an accredited college or university. Students are required to apply to both the MS in Accounting program through the College of Business and the JD program through the School of Law. Those interested in this degree option should contact the School of Law admission office and College of Business associate dean's office for specific information on application for admissions.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/MS in Organizational Leadership

JD/MS in Organizational Leadership

The College of Business and School of Law at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in a graduate leadership program while pursuing a career in law. This is a dual-degree program where students completing the requirements for each program will receive two separate degrees, one in business and one in law. Pursuing both degrees allows students to take advantage of cross credits, where six credits of business coursework can be applied toward the 88 credits required for the JD degree, and, six credits of law coursework can be applied toward the 30 credits required for the MS in Organizational Leadership degree.

This is a structured program designed to meet the guidelines delineated by the American Bar Association and AACSB International accreditation. Candidates for the program must have a four-year undergraduate degree from an accredited college or university. Students are required to apply to both the MS in Organizational Leadership program through the College of Business and the JD program through the School of Law. Those interested in this degree option should contact the School of Law Admission Office and College of Business Dean's Office for specific information on application for admissions.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/MS in Sports Leadership and Coaching

JD/MS in Sport Leadership and Coaching

The JD/MS in Sport Leadership and Coaching provides advanced sport management education to individuals seeking managerial and/or athletic coaching positions in sport organizations combined with the completion of a Juris Doctorate. The degree provides students the opportunity to earn a JD and an in-depth understanding of the core concepts necessary to run critical program functional areas like marketing, fundraising, player evaluation, and team leadership. The degree also facilitates the development

of analytical abilities required to make sound business decisions, fosters a deeper understanding of leadership theory, organizational dynamics and team performance, and the exploration of how individuals can motivate, build, and inspire a high performing team. Pursuing both degrees allows students to take advantage of cross credits, where six credits of business coursework can be applied toward the 88 credits required for the JD degree, and, nine credits of law coursework can be applied toward the 30 credits required for the MS in Sport Leadership and Coaching degree.

The JD/MS in Sport Leadership and Coaching features two one-week residencies, one offered at the beginning of the program, and the other, at the end of the program. Each residency will be facilitated by a series of graduate courses that will be offered online, with some optional in-class sessions.

This is a structured program designed to meet the guidelines delineated by the American Bar Association and AACSB International accreditation. Candidates for the program must have a four-year undergraduate degree from an accredited college or university. Students are required to apply to both the MS in Sport Leadership and Coaching program through the College of Business and the JD program through the School of Law. Those interested in this degree option should contact the School of Law Admission Office and College of Business Dean's Office for specific information on application for admissions.

Dual Graduate/Doctoral Professional Practice Degree Programs

JD/MSW

JD/MSW

Students may simultaneously complete the requirements for a Juris Doctor (JD) from the Western New England University School of Law and a Master of Social Work (MSW) from the Springfield College School of Social Work. Both degrees can be completed full-time in four years. The JD/MSW may be especially useful in such practice areas as representing people with disabilities, as well as in child welfare, family law, juvenile justice, mental health, social welfare policy, domestic violence, law enforcement, human rights, and legal aid services. Those interested in this program must apply to each program separately.

Dual Graduate/Doctoral Professional Practice Degree Programs

MS in Engineering Management/MBA

MS in Engineering Management/MBA

The Colleges of Business and Engineering offer a dual-degree MS in Engineering Management/MBA for those in the engineering profession who want to advance their knowledge and improve their management career opportunities in engineering and technology-oriented companies. By pursuing the combined degree program, students earn the MS/MBA in 48 credits, taking advantage of 18 credits that can be applied to both degrees.

Candidates for the program must have a four-year undergraduate degree from an accredited college or university. Those interested in this degree option should contact the Admissions Office for specific information about the application process.

Dual Graduate/Doctoral Professional Practice Degree Programs

PharmD/MBA

PharmD/MBA

The College of Business and the College of Pharmacy and Health Sciences at Western New England University have collaborated to offer a program for those students interested in attaining their MBA while pursuing a career in pharmacy. This is a dual-degree program where students completing the requirements for each program will receive two separate degrees, one in business and one in pharmacy. Pursuing both degrees allows students to take advantage of cross credits, where six credits of business coursework can be applied toward the 146 credits required for the PharmD degree, and, nine credits of pharmacy coursework can be applied toward the 36 credits required for the MBA degree.

This is a structured program designed to meet the guidelines delineated by the American Council for Pharmaceutical Education (ACPE) and AACSB International accreditation. Candidates for the MBA must have completed the PharmD degree or have a four-year undergraduate degree from an accredited college or university to be awarded the MBA. Those interested in this option should contact the College of Pharmacy and Health Sciences Admission Office and College of Business Associate Dean's Office for specific information on application for admissions.

Dual Graduate/Doctoral Professional Practice Degree Programs

PharmD/MS in Organizational Leadership

PharmD/MS in Organizational Leadership

The College of Business and the College of Pharmacy and Health Sciences at Western New England University have collaborated to offer a program for those students interested in pursuing a graduate degree in leadership while pursuing a career in pharmacy. This is a dual-degree program where students completing the requirements for each program will receive two separate degrees, one in business and one in pharmacy. Pursuing both degrees allows students to take advantage of cross credits, where six credits of business coursework can be applied toward the 146 credits required for the PharmD degree, and, nine credits of pharmacy coursework can be applied toward the 30 credits required for the MS in Organizational Leadership degree.

This is a structured program designed to meet the guidelines delineated by the American Council for Pharmaceutical Education (ACPE) and AACSB International accreditation. Candidates for the MS in Organizational Leadership degree must have completed the PharmD degree or have a four-year undergraduate degree from an accredited college or university to be awarded the MS in Organizational Leadership. Those interested in this degree option should contact the College of Pharmacy and Health Sciences Admission Office and College of Business Associate Dean's Office for specific information on application for admissions.

Dual Graduate/Doctoral Professional Practice Degree Programs

PharmD/MS in Pharmaceutical Sciences

PharmD/MS in Pharmaceutical Sciences

The College of Pharmacy and Health Sciences offers both the professional Doctorate of Pharmacy (PharmD) and the thesis-based MS in Pharmaceutical Sciences. The MSPS program offers students a wide array of research focus areas (using sequence electives) in which to develop their Master's thesis and research, including pharmacology/neuropharmacology; medicinal chemistry and drug development; pharmaceutics and drug delivery; pharmacogenomics; biomedical sciences; and pharmacoeconomics and healthcare data analytics. The description of what sequence electives to take, dependent on a student's focus area interests can be found in the MS in Pharmaceutical

Sciences program description in this catalog. The intent of this dual-degree option is to expand the opportunities available to pharmacy graduates, particularly those pursuing clinical fellowships or residencies with an eventual goal of working in the pharmaceutical industry, academics, or at an academic medical center.

This is a dual-degree program, where students completing the requirements for each program may receive two separate degrees, the PharmD and the MS in Pharmaceutical Sciences, within five years of entry as a PharmD student. Students are initially admitted only into the PharmD degree portion of the program. Transition into the MSPS program is not automatic, nor is acceptance into the MSPS program guaranteed, but requires application and acceptance into the MSPS program. The MSPS program admission requirements can be found in the MS in Pharmaceutical Sciences program description in this catalog.

PharmD students are eligible to apply for admission to the MSPS program after January 1 during their first year in the PharmD program. Application to the MSPS program could occur later in the PharmD program, but this could impact the timeline to completion. Candidates must successfully submit their application materials to be considered for enrollment in the MSPS portion of the dual-degree option.

The PharmD program consists of 146 credits (refer to the Doctor of Pharmacy program listing in this catalog for details) and the MSPS program consists of 38 credits (refer to the MS in Pharmaceutical Sciences program in this catalog for details). The dual-degree option was designed to take advantage of courses already part of the PharmD program, so the two programs can share 18-24 credits, depending on sequence elective choices. With required and elective course sharing, the dual-degree program can be accomplished in five years, one year past the completion of the PharmD degree. In addition, to accommodate those students who elect to delay taking of the NAPLEX/MPJE (the pharmacist licensing examinations) until they finish the MSPS program, the mock NAPLEX examinations and week of NAPLEX/MPJE review would be available to these dual-degree students as an option during the fifth year of the dual-degree program.

Total MSPS Credit Hours: 38

Degree Requirements

The semester-by-semester PharmD-MSPS dual-degree program course listings below show those courses required in the PharmD program that can count as sequence electives in the MSPS program (PHAR designated courses), or those specific to the MSPS (PHRSC designated courses).

Course Sequence

1st Year PharmD - Fall Semester

PHAR 512	Immunology	3 cr.
PHAR 513	Biochemistry	3 cr.
PHAR 514	Pharmaceutics I	2 cr.

1st Year PharmD - Spring Semester

PHAR 522	Pathophysiology	3 cr.
PHAR 523	Genetics & Genomics	2 cr.
PHAR 524	Pharmaceutics II	2 cr.
PHAR 525	Pharmaceutics II Lab	1 cr.

2nd Year PharmD/1st Year MSPS - Summer Semester

PHAR 642/643	IPPE Community or Health System	2 cr.

2nd Year PharmD/1st Year MSPS - Fall Semester

PHAR 611/ PHRSC 515	Principles of Pharmacology	3 cr.
PHRSC 529	Responsible Conduct of Research	3 cr.
PHAR 612	Principles of Medicinal Chemistry	3 cr.

3rd Year PharmD/2nd Year MSPS - Summer Semester

PHAR 642/643	IPPE Community or Health System	2 cr.

3rd Year PharmD/2nd Year MSPS - Fall Semester

PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.

3rd Year PharmD/2nd Year MSPS - Spring Semester

PHRSC 520	Seminar & Journal Club 2	1 cr.	
PHRSC 526	Analytical Techniques Lab	1 cr.	

4th Year PharmD – Summer, Fall, and Spring Semesters

No PHRSC	No MSPS Courses	

5th Year Post-PharmD/3rd Year MSPS - Summer Semester

PHRSC 528	Thesis Research 1	2 cr.

5th Year Post-PharmD/3rd Year MSPS - Fall Semester

PHRSC 618	Thesis Research 2	3 cr.
PHRSC 630	Scientific Communication	3 cr.

5th Year Post-PharmD/3rd Year MSPS - Spring Semester

PHRSC 628	Thesis Research 3	3 cr.

Total MSPS Program Credit Hours: 38

Dual Graduate/Doctoral Professional Practice Degree Programs

PharmD/MS in Pharmacogenomics

PharmD/MS in Pharmacogenomics

The College of Pharmacy and Health Sciences offers both the professional Doctorate of Pharmacy (PharmD) and the MS in Pharmacogenomics (known as the MSPGx program). The intent of this dual-degree option is to expand the opportunities available to pharmacy graduates, particularly those pursuing clinical fellowships or residencies with an eventual goal of working in clinical pharmacogenomics-based positions, the pharmaceutical industry, or academics.

This is a dual-degree program, where students completing the requirements for each program may receive two separate degrees, the PharmD and the MS , within four years of entry as a PharmD student. Students are initially admitted only into the PharmD degree portion of the program. Transition into the MSPGx program is not automatic, nor is acceptance into the MSPGx program guaranteed, but requires application and acceptance into the MSPGx program. The MSPGx program admission requirements can be found in the MS in Pharmacogenomics program description in this catalog.

PharmD students are eligible to apply for admission to the MSPGx degree program during their first semester in the PharmD program. Application to the MSPGx program could occur later in the PharmD program, but this could impact the timeline to completion. Candidates must successfully submit their application materials to be considered for enrollment in the MSPGx portion of the dual degree option.

The PharmD program consists of 146 credits (refer to the Doctor of Pharmacy program listing in this catalog for details) and the MSPGx program consists of 41 credits (refer to the MS in Pharmacogenomics program in this catalog for details). The dual-degree option was designed to take advantage of courses already part of the PharmD program, so the two programs share 14 required and up to nine elective credits. With required and elective course sharing, taking the second and third year PHAR IPPE courses during the prior summer semesters, and taking the Applied Pharmacogenomics experiential course during the summer, the dual-degree program can be accomplished in four years, essentially finishing at the same time as the PharmD degree.

Total Credit Hours: 41

Degree Requirements

The semester-by-semester PharmD/MS in Pharmacogenomics dual-degree program course listings below only show those courses required in both programs (PHAR-designated courses), those that are required in one program but count as an elective in the other (PHRSC 527, 551, and 553), or those specific to the MSPGx (the remaining PHRSC-designated courses).

Course Sequence

1st Year PharmD - Fall Semester

PHAR 513	Biochemistry	3 cr.
PHAR 516	Pharmacy Ethics	3 cr.

Subtotal: 6

1st Year PharmD - Spring Semester

PHAR 522	Pathophysiology	3 cr.
PHAR 523	Basic Prin. Genetics & Genomics	2 cr.
PHAR 526	Pharmacy Outcomes	2 cr.
PHRSC 552	Advanced Genetics and Genomics	1 cr.

Subtotal: 8

2nd Year PharmD/1st Year MSPGx - Fall Semester

PHAR 611	Principles of Pharmacology	3 cr
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 551	Introduction to Genetics and Genetic Counseling	3 cr.

Subtotal: 7

2nd Year PharmD/1st Year MSPGx - Spring Semester

PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 553	Genetic Data Analysis - Bioinformatics	3 cr.

Subtotal: 4

3rd Year PharmD/2nd Year MSPGx - Summer Semester

PHRSC 554	Applied Pharmacogenomics Experience	6 cr.

Subtotal: 6

3rd Year PharmD/2nd Year MSPGx - Fall Semester

PHRSC 527	Data Analysis & Biostatistics	3 cr.

Subtotal: 3

3rd Year PharmD/2nd Year MSPGx - Spring Semester

PHRSC 526	Analytical Techniques Lab	1 cr.

Subtotal: 1

4th Year PharmD/3rd Year MSPGx – Summer, Fall, or Spring Semesters

PHRSC 555	Clinical Pharmacogenomics Experience	6 cr.

Subtotal: 6

Subtotal: 41

Total Credit Hours: 41

MSPGx Program Degree completion requirements:

1) All courses passed ("C" or better), with no more than two courses with a grade of "C" or "C+'" and
2) Attain an overall grade point average of 3.000 or higher.

Undergraduate Costs

2023-2024 Tuition and Fees

Undergraduate Full-time Students (12-18 credit hours per term)

BASIC ANNUAL CHARGES		
Tuition	$43,380*	
Student Activities Fee	$300	
Comprehensive Services Fee	$2,550	
HEALTH SERVICES FEE		
Full-time Students	$200	
Tuition and Fees for Full-time Students	**$46,430**	
RESIDENTIAL FEE- NEW & TRANSFER STUDENTS**		
Standard Room and Meal Plan	$14,900	
Premium Room and Meal Plan	$16,900	
Total Tuition, Fees, Room & Food	**$61,330**	
HEALTH INSURANCE FEE (subject to waiver)	$3,067	

*Students enrolled in more than 18 credit hours are charged at a rate of $1,445 per credit hour for each credit over 18

** Returning undergraduate students should refer to the Residential Fees section of this catalog under Fees, Room and Meal Plans

Winter and Summer Session Tuition

Tuition per credit hour $525

Undergraduate Part-time Students (Less than 12 credit hours per semester)

- Tuition per credit hour $1,445
- Health Services Fee $50 per semester

Tuition and Fee Due Dates

Tuition, fee, room and board charges are due and payable as follows:

- **Fall** by **August 1**
- **Spring** by **January 2**
- **Summer** by **May 1**

In order to avoid unnecessary delay at the time of registration, all students are advised to remit payments prior to the due dates.

Late Payment Charge

A finance charge will be computed by a period rate of one percent per month, which is an annual percentage rate of 12 percent applied to the prior balance after deducting current payments and/or credits appearing on the statement. In no case will a student be able to continue enrollment if the previous semester's charges are not paid.

Note: All figures listed above are subject to change.

Graduate Costs

2023-2024 Tuition and Fees for Graduate Students

Graduate students are charged $1,000 per credit hour except as follows by program:

PROGRAM SPECIFIC CHARGES		
MA in English for Teachers	$525 per credit	
MA in Mathematics for Teachers	$525 per credit	
MS in Computer Science	$1,325 per credit	
MS in Business Analytics & Info Management	$1,050 per credit	
Engineering MS, MSE and PhD	$1,325 per credit	
NECC Students		
MS in Applied Behavior Analysis	$960 per credit	
PhD in Behavior Analysis	$1,270 per credit	
Non-NECC MS in Applied Behavior Analysis	$1,325 per credit	
Non-NECC PhD in Behavior Analysis	$1,575 per credit	
HEALTH INSURANCE FEE (subject to waiver)	$3,067	
Health Services Fee (per semester)	$100 (full-time)/$50 (part-time)	

Tuition and Fee Due Dates

Tuition, fee, room and board charges are due and payable as follows:

- **Fall** by **August 1**
- **Spring** by **January 2**
- **Summer** by **May 1**

In order to avoid unnecessary delay at the time of registration, all students are advised to remit payments prior to the due dates.

Late Payment Charge

A finance charge will be computed by a period rate of one percent per month, which is an annual percentage rate of 12 percent applied to the prior balance after deducting current payments and/or credits appearing on the statement. In no case will a student be able to continue enrollment if the previous semester's charges are not paid.

Note: All figures listed above are subject to change.	

School of Law Costs

2023-2024 Tuition and Fees

Juris Doctor

Fees include registration and general service fees, use of the Anthony S. Caprio Alumni Healthful Living Center (CAHLC) by full-time students, technology fee, Student Bar Association fee, Health Services fee, and Academic and Bar Success Materials. Part-time students who want to use the CAHLC pay an additional $200 per year.

Massachusetts law requires documentary proof of health insurance for all students. Contact the Center for Health and Wellness for more information at 413-782-1211.

JD Basic Annual Charges

Full-time (12-16 credit hours per term)			**Part-time (8-11 credit hours per term)**	
Tuition	$47,450		Tuition	$31,540
Comprehensive Services Fee	$1,620		Comprehensive Services Fee	$660
Student Bar Association Fee	$200		Student Bar Association Fee	$150
Academic and Bar Success Materials Fee	$600		Academic and Bar Success Materials Fee	$450
Health Services Fee	$200		Health Services Fee	$100
Total	**$50,070**		**Total**	**$32,900**

HEALTH INSURANCE FEE (subject to waiver)	$3,067

- Full-time students who enroll in more than 16 credit hours are charged at a rate of $1,620 per credit hour for each credit over 16
- Part-time students taking less than eight credits are charged $1,620 per credit hour
- Audit Fee is $50 per course

Summer Charges

- Summer courses are charged at a rate of $1,620 per credit hour

LLM Charges

- Tuition is charged on a per credit hour basis at a rate of $1,650 per credit
- Comprehensive Services Fee of $320 per semester
- The cost for LLM Alumni to audit a course is $375 per course

MS in Elder Law and Estate Planning Charges

- Tuition is charged on a per credit hour basis at a rate of $1,115 per credit.
- Comprehensive Services Fee of $320 per semester
- Health Services Fee per semester of $100 (full-time)/$50 (part-time)
- The cost for LLM Alumni to audit a course is $375 per course

Tuition and Fee Due Dates

Tuition, fee, room and board charges are due and payable as follows:

- **Fall** by **August 1**
- **Spring** by **January 2**
- **Summer** by **May 1**

In order to avoid unnecessary delay at the time of registration, all students are advised to remit payments prior to the due dates.

Late Payment Charge

A finance charge will be computed by a period rate of one percent per month, which is an annual percentage rate of 12 percent applied to the prior balance after deducting current payments and/or credits appearing on the statement. In no case will a student be able to continue enrollment if the previous semester's charges are not paid.

Note: All figures listed above are subject to change.

School of Law Costs

Financial Aid

Financial Aid

In order to be considered for financial aid, a student in the School of Law must have final acceptance into a degree program and be enrolled in a minimum of six credits per semester. Financial need-based resources, including low interest federal loans, may be available for eligible students.

To apply for financial aid, file the Free Application for Federal Student Aid (FAFSA) at studentaid.gov. Additional information can be found on the Western New England University Enrollment Services webpage.

Financial Aid - Grad PLUS and Private Loans

Students may borrow the remainder of their financial aid budget with the credit-based Grad PLUS or private loans. The main features to compare are:

1. APR% which balances fees and interest rates
2. Repayment period
3. Interest rate capitalization frequency
4. Deferability

Eligibility and Loan Amounts

Private loans are available for all students, some even for those taking fewer than six credits. Grad PLUS loans are only offered to those taking six or more credits per semester. Students may borrow up to your cost of attendance minus any other aid. Students who are in default on any loan or in bankruptcy are typically ineligible for these loans.

The Grad PLUS Loan is credit-based with no debt-to-income test. Repayment is deferred until six months after the end of enrollment.

Private Loans: Visit Elm Select for a listing of the loans listed below with their current terms. Note that almost all private loans offer better rates if approved with a credit-worthy co-signer.

Federal Direct Student Loans

Western New England University participates in the Federal Direct Loan program, which allows the University to receive loan funds directly from the U.S. Department of Education and to disburse them to eligible students. The Free Application for Federal Student Aid (FAFSA) form is the application for this program and can be completed on-line at studentaid.gov. Please use the IRS Data Retrieval Process when filing the FAFSA. If filing the FAFSA before completing federal income tax forms, update the FAFSA using the IRS Data Retrieval Tool at least two weeks after the tax returns have been filed.

Federal Direct Loans are government-funded loans. Up to $20,500 can be borrowed per year. All Federal Direct Loans for law students are unsubsidized loans. Actual Direct Loan disbursements are reduced by origination fees which are retained by the government.

Eligibility and Loan Amounts

Students must be enrolled at least half-time in a degree program to receive Federal Direct student loan funds. Students must be U.S. citizens, eligible non-citizens, or permanent residents to receive Federal Direct Loans. They must also not be in default on a prior student loan and not declared bankruptcy in the last seven (7) years.

Repayment Requirements

Repayment begins six months after enrollment ceases to be at least half-time. The maximum payback period is 25 years.

Sample Loan Repayment Schedule

Sample repayment calculators are found on most private and federal lender sites. The federal site is studentaid.gov.

Massachusetts Bar Foundation Emergency Loan Fund

The School of Law occasionally loans small amounts of money to students on a short-term basis. These loans do not exceed $500 and the interest rate is 12% annually. Contact the Associate Dean for Law Student Affairs for an application.

Direct Loan Promissory Note

The promissory notes for the Federal Direct Unsubsidized loans, as well as the Grad PLUS loan, are electronically signed at studentaid.gov. Students may sign in using their FSA ID.

Income-based Repayment and Loan Forgiveness

Loan repayment plans and loan forgiveness may be available. See studentaid.gov.

School of Law Costs

Scholarships

Scholarships

Western New England University School of Law is committed to making a legal education affordable for our students. Over the past three years, an average of 75% of Western New England University law students received scholarships and 90% received some form of financial aid overall. Law school is an important investment. We work with students to assure they have the resources available to you to finance legal education.

- **New Students**
- **Returning Students**

School of Law Costs

Withdrawal and Refund Policies

Withdrawal & Refund Policies

Students in the School of Law considering withdrawing from a semester should consult the Procedure for Withdrawing policy and the Withdrawal and Refund policy located in this catalog.

School of Law Costs

Employer Reimbursement Payment Plan

Employer Reimbursement Payment Plan

Employer Reimbursement Payment Plan is designed for students receiving reimbursement from their employer for tuition and fees. Students may download a copy of our **Employer Reimbursement Extension Plan** from the Enrollment Services webpage.

School of Law Costs

Company or Government Direct Payment

Company or Government Direct Payment

Students whose employer pays the University directly must provide Western New England University with an employer authorization form or a letter from their employer on company letterhead, indicating their commitment to pay under direct billing. The letters should also include billing contact information. New authorization is required each semester and can be faxed to the Enrollment Services Office, Attention Billing at 413-796-2081.

Occupational Therapy Costs

2023-2024 OTD Tuition and Fees

Tuition per Credit	$1,020
Supplemental Fee	$330
Comprehensive Services Fee	$560
Student Fee	$185
Health Services Fee	$100
Health Insurance Fee (subject to waiver)	$3,067

Tri-Semester consists Fall, Spring and Summer

Tuition and Fee Due Dates

Tuition, fee, room and board charges are due and payable as follows:

- **Fall** by **August 1**
- **Spring** by **January 2**
- **Summer** by **May 1**

In order to avoid unnecessary delay at the time of registration, all students are advised to remit payments prior to the due dates.

Late Payment Charge

A finance charge will be computed by a period rate of one percent per month, which is an annual percentage rate of 12 percent applied to the prior balance after deducting current payments and/or credits appearing on the statement. In no case will a student be able to continue enrollment if the previous semester's charges are not paid.

Note: All figures listed above are subject to change.

Pharmacy Costs

2023-2024 PharmD Tuition and Fees

Tuition	$45,500
Pharmacy Fee	$810
Comprehensive Services Fee	$1,620
Student Activities Fee	$220
Health Services Fee	$200
Health Insurance Fee (subject to waiver)	$3,067

Pharmacy MS Degree Program Tuition and Fees

- Tuition at $1,050 per credit
- Comprehensive Services Fee at $810 per year
- Pharmacy Fee at $405 per year
- Laboratory Fee at $1,000 per credit
- Health Services Fee at $100 per semester (full-time) and $50 per semester (part-time)
- Health Insurance Fee (subject to waiver) at $3,067

Tuition and Fee Due Dates

Tuition, fee, room and board charges are due and payable as follows:

- **Fall** by **August 1**
- **Spring** by **January 2**
- **Summer** by **May 1**

In order to avoid unnecessary delay at the time of registration, all students are advised to remit payments prior to the due dates.

Late Payment Charge

A finance charge will be computed by a period rate of one percent per month, which is an annual percentage rate of 12 percent applied to the prior balance after deducting current payments and/or credits appearing on the statement. In no case will a student be able to continue enrollment if the previous semester's charges are not paid.

Note: All figures listed above are subject to change.

Financial Aid

Financial Aid

The University offers a program of financial assistance through scholarships, grants, loans, and part-time employment. Resources are, however, limited. Students and their families are expected to defray as much of their educational expenses as possible. Financial aid should be considered as supplemental assistance. Financial aid programs, policies, and procedures for applying are subject to change. Visit the Enrollment Services website or contact Financial Aid for current details.

Work opportunities are available both on campus and in the community, and many students earn a portion of their college expenses through part-time employment. Because of the academic demands upon a student's time, no student should work more than 20 hours per week.

Prospective students must be officially accepted for admission into a degree program at the University before their applications for financial assistance will be considered. Part-time undergraduate students must have final acceptance into a degree program and be enrolled in at least six credits per term to be eligible for financial aid. Graduate and professional practice doctoral students in the College of Pharmacy and Health Sciences, and the School of Law, must be enrolled in at least six credits per term to be eligible for financial aid. Graduate students in Arts and Sciences, Business and Engineering must have final acceptance into a degree program and be enrolled in at least three credits per term to be eligible for financial aid.

Students applying for any federal or state aid must submit the Free Application for Federal Student Aid (FAFSA) for processing as soon as possible after October 1. These forms may be accessed at studentaid.gov. Applications for prospective students are processed on a rolling basis beginning on December 1. All FAFSAs for returning students must be received by Western New England University before March 1 in order to receive priority consideration. Verification of income will be verified by the completion of the IRS Data Retrieval on the FAFSA. Late applicants may be considered for financial aid if sufficient funds are available.

Aid is generally disbursed on an August to May basis. All students must reapply for financial aid each year, and aid in any year does not guarantee aid in subsequent years.

Students must make Satisfactory Academic Progress toward their degree requirements to qualify for financial aid and scholarships. Satisfactory Academic Progress includes maintaining a prescribed grade-point average and successfully completing a prescribed percent of courses attempted. The complete Satisfactory Academic Progress policy is available online on the Enrollment Services website.

Financial Aid

Scholarships & Grants

Scholarships and Grants

At Western New England University, we recognize the accomplishments and financial need of our students through a variety of scholarships and awards. Students are automatically considered during the admissions application process for merit-based scholarships. Students can apply for additional need-based assistance by filing a FAFSA. Students must maintain Satisfactory Academic Progress to maintain eligibility for financial aid.

Western New England University merit and need-based scholarships and grants are not tuition-specific, and are intended to pay for billed charges rather than external costs to the University (eg. off-campus housing). Western New England financial aid will be reduced if combinations of grants and scholarships from all sources exceed the billed charges and may be adjusted when tuition-based external awards are given. Tuition-based external awards and scholarships are taken into consideration first in awarding policies.

Western New England University grants and awards are funded in part by generous gifts from Western New England donors. Student recipients are matched based upon donor specified criteria and once identified, Western New England University grants or scholarship will have a portion of that award renamed according to the proportion that was funded by the specific donor. Renamed awards are not extra money in the award, they are renamed in honor of the individual(s) who committed to investing in student success here at Western New England. We greatly appreciate those who have come before us, and in appreciation of their gift, recipients of endowed funds may be requested to compose a letter of thanks and create a profile that highlights their experiences on campus. Students may also be asked to attend an event to network with fellow recipients and donors. A list of WNE donor-funded scholarships and grants can be found at the WNE Scholarship Directory.

Financial Aid

Federal Financial Assistance Programs

Federal Financial Assistance Programs

The U.S. Department of Education provides financial aid for higher education. The following paragraphs serve as a guide to the six major financial aid programs in the U.S. Department of Education. These programs are available to full-time and part-time undergraduate students. To apply, go to studentaid.gov.

Federal Pell Grants

The Pell Grant program is available to undergraduate students demonstrating financial need. Eligible students may receive up to $7,395 each year. Students may apply for these grants by submitting the Free Application for Federal Student Aid.

Federal Supplemental Educational Opportunity Grants

Supplemental Educational Opportunity Grants are available to a limited number of undergraduate students with extreme financial need. These grants generally range from $200 to $4,000 a year.

Federal Work-Study

Part-time student employment is available to many students with financial need.

Federal Direct Ford Student Loans

Eligibility for a subsidized loan is based on financial need as determined by analysis resulting from filing a Free Application for Federal Student Aid (FAFSA). If a student does not qualify for a need-based loan, the student may apply using the same application process and loan limits for an unsubsidized loan. The interest that accrues during periods of enrollment for a subsidized loan is paid by the federal government. The interest that accrues during periods of enrollment for an unsubsidized loan is paid by the student. Application can be made by completing the FAFSA. Freshman students may borrow up to $3,500 per year, sophomores may borrow up to $4,500 per year, and juniors and seniors may borrow up to $5,500 per year. All undergraduate students may borrow up to an additional $2,000 with an unsubsidized loan. Graduate students may borrow up to $20,500 per year. The total amount that undergraduates may borrow is $31,000, while the total for graduate students is $138,500 (including undergraduate loans). First and second year independent students may borrow up to $4,000 additionally under the unsubsidized loan program. Third and fourth year students may borrow up to $5,000 additionally under the unsubsidized loan program.

Federal Direct Parent Loan for Undergraduate Students (PLUS)

Parents of dependent undergraduate students may borrow up to the cost of attendance minus any other financial aid resources under the PLUS Program. The interest rate for the PLUS loan is adjusted annually with a cap of nine percent. To apply go to studentaid.gov for application and Master Promissory Note.

Financial Aid

Other Financial Assistance

Other Financial Assistance

State Scholarships

Many states have established scholarship and grant programs to assist residents of their state. In Massachusetts, for example, eligible students may receive up to $2,800 while attending a private institution within the Commonwealth. Other states such as Pennsylvania and Vermont have similar programs. Application can be made by completing the Free Application for Federal Student Aid. These programs are available to full-time undergraduate students.

Outside Assistance

Many scholarship and financial assistance programs are available to deserving students through local and state civic groups, clubs, and organizations. Students are urged to seek out such programs in their local areas. Enrollment Services also has several external scholarship listings on its webpages for students to utilize. Students are encouraged to use internet websites such as Scholarships.com and Fastweb to find scholarships they may qualify for.

Alternative Financing

Several banks offer loans to students and parents to help pay for college. Loans can range from $2,000 to cost of attendance. Interest rates may be fixed or variable. No collateral is required, and borrowers must have a good credit rating and the ability to repay. Enrollment Services has additional information on their website. These programs are available to full-time and part-time students.

Joan B. Mulcahy Student Loan Fund

In 1971 an emergency student loan fund was established through the generosity of faculty, staff, students, and friends of the University in memory of Joan B. Mulcahy. This fund is used to assist students in need of lesser loans for relatively short periods of time and for help as emergencies develop. The fund is self-supporting through repayments, and loans are granted on an interest-free basis. The fund is administered by the dean of students. This program is available to full-time and part-time undergraduate students.

General Financial Information

Checks or money orders should be made payable to Western New England University. If sent by mail, they should be addressed to Student Accounts.

The trustees of the University reserve the right to change tuition rates or fees whenever it is deemed necessary.

Students are not permitted to attend any University exercise or class session until they have complied with all regulations concerning registration and have satisfied all financial obligations or made satisfactory arrangements for payment with Enrollment Services.

All financial obligations to the University must be met before a student may qualify for re-enrollment, a certificate of honorable dismissal, a transcript, or a diploma. The University retains the right under Title IV regulations to withhold a student's transcripts because of delinquent loans.

Tuition and fees are due and payable by August 1 for the fall semester, by January 2 for the spring semester, by May 1 for the summer term, or at the time of registration unless arrangements have been made for payments.

Acceptance Deposit

Candidates for full-time admission or readmission, upon receiving final notice of acceptance from the director of admissions, are obliged to forward a nonrefundable acceptance deposit of $200. Payment of this fee must be made by the date indicated in the candidate's notification of acceptance and will not, under any circumstances, be refunded. The deposit will be applied toward the tuition charges in the first semester of attendance in the academic year for which acceptance has been granted.

Auditing

There are no special rates for auditing a class. Students granted permission to audit a course must pay the regular tuition and fees which apply to the course.

Employer Extension Plan

This tuition is appropriate for students who receive reimbursement that is paid directly to them, not to the University. Under this plan students have their employer verify eligibility to participate in the plan. Students may defer two-thirds of their tuition payment until 30 days after the semester is completed.

Expenses for Books and Materials

The cost of necessary books, equipment, and materials varies depending on the courses taken. The cost usually ranges from $1,000 to $1,400 per year.

Payment Plan

Western New England University has partnered with Official Payments to offer a secure and convenient payment plan option for fall and spring semesters. Enrollment in the payment plan is by semester. The enrollment fee is $50 (non-refundable) per semester. The fall semester plan begins July 15 and runs through November 15. The enrollment period for this plan begins in July. The spring semester plan begins December 1 and runs through April 1. The enrollment period for this plan begins in November. Before enrolling in your plan, please have all private loans and/or outside scholarships in place and waive the health insurance, if applicable. If there are any questions, please contact Enrollment Services at 413-796-2080.

Sibling Discount

This is a $1,000/year sibling discount offered to each sibling when a family has more than one full-time undergraduate child attending Western New England University in a given year. Each student receives a $1,000 credit applied to the tuition billing. The discount only applies to sibling relationships and is only available to full-time undergraduate students.

Tuition Paid Directly by Employers

Students whose tuition is underwritten by their employers must furnish at the time of registration, or immediately thereafter, an authorization from the employer indicating that the company is directly paying the cost of tuition. Students with direct pay by their employers remain responsible for their bills.

Fees, Room, & Meal Plans

Fees, Room, and Meal Plans

Comprehensive Services Fee

The Comprehensive Services Fee covers some of the costs associated with the Caprio Alumni Healthful Living Center, Campus Center, health services, counseling, placement services, technology fees, and other support activities at the University. The fee is $1,275 per semester for full-time undergraduate students.

Health Insurance Fee

The Commonwealth of Massachusetts requires all students enrolled at or above a three-quarter full-time load to have health insurance, and coverage must meet minimum standards defined by the state. Students enrolled for nine or more credits (five credits for graduate students in the Colleges of Arts and Sciences, Business or Engineering), must have coverage unless they are enrolled in fully-online programs.

To ensure students meet the state's health insurance coverage requirements, the University makes available a general health insurance program provided by an outside carrier. Coverage begins at the start of the school year and continues for twelve months. The fee appears on the student's charges in Self-Service. Students with comparable coverage may request a waiver by completing the online waiver form accessible in Self-Service; only approved waiver requests will have the annual fee removed. Students who do not complete the waiver and receive an official approval of such by the required deadline will be responsible for the fee on their account. See Immunization and Health Record Requirements in the Legal Matters section of this catalog for insurance requirements necessary for registration.

Health Services Fee

The Health Services Fee enables all matriculated undergraduate and graduate students (full-time and part-time) at WNE to access the services provided by the Center for Health and Wellness (Health Services, Counseling Services, and Health Promotion, Prevention, and Education Services) with no additional charges. The fee is $100 per semester for full-time students and $50 per semester for part-time students.

Laboratory Fees

Laboratory fees are required for some courses and are indicated in the course descriptions. The charge covers the use of laboratory equipment, machinery, chemicals, supplies, computers, and business machines. The laboratory fees are payable at the time of registration and are not refundable.

Student Activities Fee

Each full-time undergraduate student, by vote of the Student Association and endorsement of the Student Senate, is assessed $150 per semester as a Student Activities Fee. Payable at the beginning of each semester, the fee is not refundable. Funds are allocated through the Student Senate and provide the principal source of funding for social and cultural programming, traditional events; student clubs and organizations; student publications such as the newspaper and yearbook; and the radio station. The Student Activities Fee also supports publication of the Student Handbook and allows for cooperative funding of such programs as new student orientation, minority and international student groups, and Family and Friends Weekend.

Residential Fees for 2023-2024

New and transfer undergraduate students normally reside in residence halls composed of traditional rooms and suites, and they are required to participate in a meal plan. The housing and food rates are as follows (all double occupancy rooms):

New and Transfer Students

- Standard Housing: Quad (Berkshire, Franklin, Hampden), Windham - $14,900
- Premium Housing: Commonwealth Hall and LaRiviere Center- $16,900

Returning Undergraduate Students

Returning undergraduates normally reside in the apartments or townhouses, all of which have kitchens. Various dining options are available. Housing room rates are as follows:

- Gateway Apartments (standard housing/double-occupancy) *$10,500
- Evergreen Village/Southwood (double-occupancy) *$13,000
- Southwood (single occupancy) *$14,100

*Room fee only

General Housing Policy

Students are required to live in University housing their first two years unless granted an exception to live off campus. Students must be actively enrolled at the University as a full-time, undergraduate degree candidate. The Resident Student Housing Agreement is binding for the full academic year unless the student starts mid-year, graduates, or withdraws from the University. Students who are not required, but request, to live on campus must complete a housing application and pay a nonrefundable, nontransferable housing verification payment to participate in the housing selection process.

Payments and Billing for Campus Housing

The procedure differs for incoming and currently matriculating students, as follows:

For incoming students, the housing verification payment (to the amount of $300) is due immediately upon notification of acceptance from the Admissions Office or as otherwise defined by the University. Receipt of this payment also authorizes student-initiated participation in the online housing selection process.

Currently matriculated students are expected to provide the housing verification payment (to the amount of $300) by the application deadline. This is a non-refundable, non-transferable payment. Receipt of this payment authorizes student-initiated participation in the online housing selection process as a returning student. To confirm campus residency, the student is responsible for completing all components of the online process. Otherwise, the University rightfully presumes the student, if not required to live on campus, has made other arrangements for accommodations as a commuter. Any student who submits this payment late will be placed on a waiting list and will choose their housing on a space-available basis after students who submitted their housing verification payment on time. Proper submission of the housing verification payment and completion of the online process will result in the appropriate residency fee (room and board charge, if applicable) billed to the student's account with the University.

Students who are required to live on campus but do not select housing for themselves will be assigned and financially responsible for housing as long as they are enrolled and required to live on campus.

Change to Commuter Status

Students may not change to commuter status while they are required to live on campus. If a student who is not required to live on campus notifies the Office of Residence Life, in writing, of their decision to commute for the fall or spring semester by the first Monday in August, then all room and board charges for the respective fall or spring semester, except the housing verification payment, will be credited to the student's account. After the deadline, the student is obligated to the Housing Agreement for both the fall and spring semester.

Complete Withdrawal from the University

All room and board charges except the housing verification payment will be credited to the student's account if they have officially withdrawn from the University prior to the first day of classes for the semester.

All rates are for occupancy on a semester-basis and are refunded according to the Tuition, Room and Meal Plan Refund Schedule. Status as a full-time student must be maintained through mid-semester to qualify for university housing. Failure to meet the established payment deadlines releases the University from any obligation to maintain the housing reservation.

Normally, University residence units must be vacated during regularly scheduled vacation periods. At the close of the academic year for which residency has been authorized, all of the student's personal property is to be removed from the premises and the appropriate checkout procedure is to have been completed. Items left behind shall be considered abandoned and disposed of by the University.

University insurance does not cover students' personal property. Students should obtain their own renter's insurance or make sure their belongings are covered by their family/parents' homeowner's or renter's insurance.

Residence Hall/Area Damage Deposit

Students are required to leave their living space in good order when departing from the University. A damage deposit of $100 per student is required of all resident students. Damages are charged against occupants when necessary. This deposit is refundable at the end of the senior year or on withdrawal from the University. The refund will be based upon the condition of the living space at the time of departure.

Meal Plans

Students residing in traditional or suite-style units are required to participate in a comprehensive meal plan. As such, they will be assigned to the 7-day All Access Meal Plan by the Office of Residence Life. Students residing in Gateway Village apartments, Evergreen Village, Southwood Hall, or commuting may choose to participate in a variety of alternative meal plans. Individual meals are also available on a cash basis. Meal points may be purchased in a variety of denominations and can be used for any food service on campus.

No meals are served during regularly scheduled vacation periods.

Meal plan fees are billed on a semester basis and are due with other student charges. Meal plan fees are refunded according to the Tuition, Room and Meal Plan Refund Schedule. Food Service professionals are available to assist with dietary concerns, such as food allergies. Detailed documentation from a physician, outlining specific food restrictions and/or needs, should be provided to the Office of Residence Life. An opportunity will then be coordinated to review specific dietary concerns with personnel in Food Service.

Students who fail to follow this process, regardless of its outcome, are not relieved of financial obligations.

Veterans Benefits and Transition Act of 2018 S.2248 Section 103.1(b)

A Covered Individual is any individual who is entitled to educational assistance under chapter 31, Veteran Readiness and Employment, or chapter 33, Post-9/11 GI Bill ®benefits. Covered individuals must provide Western New England University with a Certificate of Eligibility and DD-214 in order to be certified for benefits.

Western New England University will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

Any covered individual is permitted to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website – eBenefits, or a VAF 28-1905 form for chapter 31 authorization purposes) and ending on the earlier of the following dates: The date on which payment from VA is made to the institution. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility

Procedure for Withdrawing

There are many academic and financial implications for students who withdraw once a semester has started. Students are encouraged to speak with their academic advisor and with Enrollment Services to understand the impact such a decision will have.

If it becomes necessary for undergraduate degree students to withdraw or request a leave of absence from the University, the WNE University Withdrawal/Leave Form must be submitted. Absence from class without completing the official withdrawal/leave process does not constitute withdrawal nor does the submission of course drop forms. Undergraduate students: please note that mid-semester **Medical Leave** requests require you to submit supporting documentation to the dean of students.

Students considering a leave of absence or withdrawal are urged to use the Withdrawal Checklist, and to speak with their academic advisor and Enrollment Services. Withdrawal and leave requests will be made part of the student's permanent record maintained in Enrollment Services.

When extenuating circumstances prevent a student from filing the form on the website, an application for withdrawal by email is acceptable. The email should state the reasons necessitating the withdrawal and should be directed to Enrollment Services at records@wne.edu.

The effective date of an official withdrawal is the date the student submits the WNE University Withdrawal/Personal Leave Form or otherwise notifies the registrar's office of such in writing, or the last documented date of an academically-related activity in which the student participated if that date is later than the date of notification. If a student leaves the University without providing official notification, the withdrawal date is the midpoint of the payment period or period of enrollment, as applicable, or the last documented date of an academically-related activity in which the student participated. Academically-related activities include physically attending a class where there is an opportunity for direct interaction between the instructor and students; submitting an academic assignment; taking an exam; participating in an interactive tutorial or computer-assisted instruction; attending a study group that is assigned by the University; participating in an online discussion about academic matters; and initiating contact with a faculty member to ask a question about the academic subject studied in the course.

Financial Implications of Withdrawal After the First Day of Classes

Any approved tuition, room and board refunds will be computed on the basis of the effective date described above. Absence from class without completing a withdrawal form does not constitute withdrawal nor does the submission of course drop forms. Refunds are made in accordance with the Withdrawal and Refund Policy. Students who withdraw with an unpaid balance will be financially liable for any amount remaining unpaid after a refund credit, if any, has been applied to the balance. Students who withdraw from the University will have transcripts and diplomas withheld until all financial obligations have been met.

Any refund resulting from a reduction in the number of hours registered will be made on the basis of the above schedule. Full-time students will not have any adjustment in tuition if, after the course reduction, they are still enrolled full-time according to their academic program's guidelines. Questions about full-time status should be directed to the University Registrar.

The Higher Education Amendments of 1998 require students receiving Federal Title IV financial assistance who withdraw or otherwise cease attendance on or before 60 percent of the way through the semester to have their assistance reduced based on calendar days enrolled versus the length of the semester. Programs affected are Pell Grants, Supplemental Education Opportunity Grants, Federal Direct Ford Subsidized Loans, Federal Direct Ford Unsubsidized Loans, and Federal Direct Ford Plus Loans but not Federal Work-Study. The calculation of the amount to be returned to these funds may result in the student owing a balance to the University and/or the Federal Government. Institutional scholarships and grants will be adjusted according to the same percentage as tuition charges. State Aid will be adjusted according to the same percentage as the federal aid.

Withdrawal and Refund Policy

The University operates on an academic term basis for which commitments are made to teaching staff and to others whose services are essential to the operation of the University. As such, fees (other than tuition, and room and board) are non-refundable. Tuition, Room and Board charges are refunded only as stated in the Refund Schedule below. Additionally, tuition and fees are not transferable to future semesters. Refunds will only be granted to students who voluntarily withdraw and comply with the Procedures for Withdrawing as outlined in this catalog. Students who are suspended, dismissed or are otherwise involuntarily withdrawn from the University will not receive refunds. Enrollment and housing deposits are not refundable.

Tuition, Room and Meal Plan Refund Schedule

Tuition, room and meal plan refunds are made to students who voluntarily withdraw based on the following:

15-week/16-week Class Schedule and Meal Plans (refund period is four weeks):

- 100% of the tuition charge, less the tuition deposit, will be refunded if the official withdrawal date is prior to the first day of the term
- 80% of the tuition charge will be refunded if the official withdrawal date is during the first week of the term
- 60% of the tuition charge will be refunded if the official withdrawal date is during the second week of the term
- 40% of the tuition charge will be refunded if the official withdrawal date is during the third week of the term
- 20% of the tuition charge will be refunded if the official withdrawal date is during the fourth week of the term
- No Room and Board Refunds will be granted after the 4th week of the term

11-week/12-week Class Schedule (refund period is three weeks):

- 100% prior to the first day of the term
- 80% during the first week of the term
- 50% during the second week of the term
- 25% during the third week of the term
- No refunds after the third week of the term

8-week Class Schedule (refund period is two weeks):

- 100% prior to the first class meeting
- 75% through the third day of the term
- 50% through the sixth day of the term
- 25% through the tenth day of the term
- No refunds after the tenth day of the term

6-week Class Schedule (refund period is one week):

- 100% prior to the first class meeting
- 75% through the first day of the term
- 50% through the third day of the term
- 25% through the fifth day of the term
- No refunds after the fifth day of the term

3-week Winter Class Schedule (refund period is three days):

- 100% prior to the first class meeting
- 75% through the first day of term
- 50% through the second day of term
- 25% through the third day of term
- No refunds after the third day of term

All Programs

AC.BSBA - BSBA in Accounting

General

College/School
College of Business

Department(s) ~
Accounting & Finance

Program Title ~
BSBA in Accounting

Program Code ~
AC.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

The course of study for accounting majors is designed to provide the professional education needed for careers in private industry, government, public accounting, or not-for-profit organizations. The combination of training in accounting, business subjects, and the arts and sciences prepares you for potential advancement to positions of managerial responsibility.

Requirements

Free Form Requirements
Accounting Major

General Information

The course of study for Accounting majors is designed to provide the professional education needed for careers in private industry, government, public accounting, or not-for-profit organizations. The combination of training in accounting, business subjects, and the arts and sciences prepares the student for potential advancement to positions of managerial responsibility.

Students desiring to prepare for the CPA examination are advised to consult the Accountancy Board of the state of their choice to ensure that they will be able to meet the educational requirements of that jurisdiction. Students have the opportunity to continue in a Master of Science in Accounting program designed to meet the 150-hour academic requirement that has been adopted by most states. Accounting majors who desire preparation to meet the requirements of a particular state may, if necessary, modify their program of study in conference with, and approval of, their department chair.

Career Preparation

In order to help students understand careers available to Accounting majors, faculty in the Accounting department designed activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshman year is accomplished in Introduction to Business Seminar (BUS 110), a seminar where alumni, practitioners, and recruiters introduce students to career opportunities, CPA licensing, and other credentialing.
2. Career Investigation in the sophomore year courses includes classroom assignments in AC 201 and AC 202 and "Meet the Firms Night", where the students meet recruiters in a casual setting.
3. Career Determination in the junior year engages students in résumé and cover letter writing and mock interviews.
4. Career Implementation in the senior year includes examination of professional certifications.
5. Students complete their preparation through a required internship.

Career Opportunities

Accounting majors find positions in national and regional public accounting, corporate and financial accounting, taxation, internal audit, and governmental and nonprofit accounting. The major provides an excellent foundation for legal careers and advanced business degrees.

Program Learning Goals

Having completed a major in Accounting, the student will have the ability to:

1. Understand the accounting conceptual framework as it relates to the measurement and reporting of financial information.
2. Understand the use of accounting information in the planning, controlling, and decision-making processes in organizations.
3. Understand internal control objectives and auditing standards and practices.
4. Understand the basic concepts of federal taxation.
5. Understand issues associated with the design and implementation of accounting information systems.

DEGREE REQUIREMENTS

REQUIRED ACCOUNTING COURSES (27 CREDIT HOURS)

AC 204	Tools & Concepts in Accounting	3 cr.
AC 305	Financial Reporting II	3 cr.
AC 306	Financial Reporting III	3 cr.
AC 311	Municipal & Fund Accounting	3 cr.
AC 313	Taxation of Individuals	3 cr.
AC 330	Accounting Information Systems	3 cr.
AC 414	Taxation of Entities	3 cr.
AC 419	Auditing and Assurance Services	3 cr.
AC 440	Accounting Analytics	3 cr.
Total Credit Hours:		**27**

ELECTIVES (15 CREDIT HOURS)

GEN XXX	General Electives	15 cr.
Total Credit Hours:		**15**

TOTAL CREDIT HOURS: 42

ACCOUNTING SUGGESTED SEQUENCE OF COURSES

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111 - MATH 123	Analysis for Business and Economics or Calculus I for Management, Life, and Social Sciences	3 cr. - 3 cr.
ENGL 132	English Composition I	3 cr.
SO 101 - PSY 101	Introduction to Sociology or Introduction to Psychology	3 cr. - 3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 111	Principles of Microeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 201/HONB 203	Financial Reporting I	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

AC 202	Managerial Accounting	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
PH 211 - MAN 240	Business Ethics or Business & Society	3 cr. - 3 cr.
FIN 214	Introduction to Finance	3 cr.
AC 204	Tools & Concepts in Accounting	3 cr.

Subtotal: 15

Junior Year - Fall Semester

AC 305	Financial Reporting II	3 cr.
AC 313	Taxation of Individuals	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BUS 326 - BUS 312/HONB 312	Business Planning for New Ventures or Business Processes and Enterprise Resource Planning with SAP	3 cr. - 3 cr.
COMM 233	Business Writing and Communication	3 cr.

Subtotal: 15

Junior Year - Spring Semester

AC 306	Financial Reporting III	3 cr.
AC 414	Taxation of Entities	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

AC 311	Municipal & Fund Accounting	3 cr.
AC 330	Accounting Information Systems	3 cr.
AC 419	Auditing and Assurance Services	3 cr.
GEN XXX	General Elective	3 cr.
BAIM 310 - BAIM 312	Quality and Operations Management or Quality and Operations Management with SAP	3 cr. - 3 cr.

Subtotal: 15

Senior Year - Spring Semester

AC 440	Accounting Analytics	3 cr.
AC 480 - GEN XXX	Internship in Accounting or General Elective	3 cr. - 3 cr.
BUS 423/BME 423/ME 423 - BUS 450/HONB 450	Product Development and Innovation or Business Strategy	3 cr. - 3 cr.
GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of course work in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: all upper level AC.

AC.MS - MS in Accounting

General

College/School
College of Business

Department(s) ~
Accounting & Finance

Program Title ~
MS in Accounting

Program Code ~
AC.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

This program provides students with the opportunity to develop skills in planning, controlling, evaluation, and analysis that characterize a successful career in accounting.

Requirements

Free Form Requirements
MS in Accounting

Purpose

The MS in Accounting degree provides students with the opportunity to develop skills in planning, controlling, evaluation, and analysis that characterize a successful career in accounting. Graduates of this program satisfy the requirements to sit for the CPA exam in Massachusetts. Graduates of this program who have an undergraduate degree in business are also eligible to sit for the CPA exam in Connecticut. Students taking the CPA exam in other jurisdictions must check the requirements of the respective jurisdiction.

Program Learning Goals

1: Analyze business decisions using the core accounting skills of reporting, audit, tax, and technology.2: Create financial information through business reporting and analysis.
3: Evaluate financial choices with tax compliance and planning skills.
4: Understand the risks and rewards to business through information systems and controls.
5: Demonstrate proficiency in using ethical reasoning skills.

Structure

The MS in Accounting consists of three areas: undergraduate foundation courses, required accounting courses, and elective courses. These three areas are discussed below.

Degree Requirements

Undergraduate Foundation Courses 24 credit hours

AC 101/HONB 203	Financial Reporting I	3 cr.
AC 202	Managerial Accounting	3 cr.
AC 305	Financial Reporting II	3 cr.
AC 306	Financial Reporting III	3 cr.
AC 313	Taxation of Individuals	3 cr.
AC 330	Accounting Information Systems	3 cr.
AC 419	Auditing and Assurance Services	3 cr.
AC 440	Accounting Analytics	3 cr.

Subtotal: 24

Students admitted into the MS in Accounting program must have completed the undergraduate courses with a “B” average or better and no grade below a “C.” For purposes of admission only the highest grade achieved in each of the undergraduate courses will be considered. Students who are lacking some or all of the undergraduate foundation courses may be conditionally admitted to the program but must complete all remaining undergraduate core courses within a two-year period. During this time they will be allowed to take no more than two graduate courses toward the MS in Accounting degree. Grades on the undergraduate core courses taken after admission to the program will not be included in the GPA calculations of the program. The GPA calculation of the MS in Accounting program will be based solely on graduate coursework.

Required Courses 21 credit hours

AC 610	Cost-Based Decision-Making	3 cr.
AC 621	Advanced Financial Accounting	3 cr.
AC 640	Adv. Accounting Information Systems	3 cr.
AC 646	Selected Topics in Taxation	3 cr.
AC 660	Adv. Accounting Analytics	3 cr.
FIN 612	Business Analysis and Valuation	3 cr.
FIN 630	Managerial Finance	3 cr.

Subtotal: 21

In addition to these courses, students complete their degree program by choosing electives.

Electives 12 credit hours

GEN 6XX	Electives	9 cr.
GEN 6XX*	Non-AC Elec	3 cr.

Subtotal: 9-12*

Total Minimum Credit Hours: 30-33*

Students who have earned 24 undergraduate credit hours in non-accounting business courses are required to complete three graduate business courses (9 credit hours). This may be satisfied with any three graduate business electives that would include at least one graduate Accounting Elective (excluding AC 630).

*Non-Accounting Business Elective Requirement

Students who have taken less than two non-accounting undergraduate business courses must take four non-accounting graduate business electives (33 credits degree total). The non-accounting business course requirement can otherwise be fulfilled with either (a) at least 24 undergraduate non-accounting business credits, or (b) at least 18 non-accounting undergraduate business credits plus one graduate non-accounting business elective course (three graduate credits), (c) at least twelve non-accounting undergraduate business credits plus two graduate non-accounting business elective courses (six graduate credits) or (d) at least six undergraduate non-accounting business credits plus three graduate non-accounting business elective courses (nine graduate credits). One non-accounting business course must be a business law course.

Total: 57

ACACC.BSBA - BSBA in Accounting - Four-Year BSBA/MS

General

College/School
College of Business

Department(s) ~
Accounting & Finance

Program Title ~
BSBA in Accounting - Four-Year BSBA/MS

Program Code ~
ACACC.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This program allows undergraduate accounting majors to accelerate completion of both the bachelor's in Accounting and the master's degree in Accounting and Finance in four years.

Requirements

Free Form Requirements
Four-year BSBA in Accounting/MS in Accounting and Finance

General Information

This program allows full-time undergraduate Accounting majors to accelerate the completion of both the bachelor's and master's degrees. Students accepted into this program can earn the MS in Accounting and Finance degree in as few as four years.

This dual-degree program is a combination of the undergraduate Accounting major and the MS in Accounting and Finance. With permission of the department chair, students are able to take any graduate course once they have completed the undergraduate prerequisite with a "B" or better grade. Students taking the CPA exam must check the requirements of the respective jurisdiction.

This program requires up to 18 credit hours a semester, summer study, and some graduate study prior to an undergraduate degree. Some instruction takes place online. Students seeking admission to the program at the time of admission to the University must take either the SAT or the ACT entrance exam and complete the Accelerated Accounting Program application. Students seeking admission to the program at a later time must have earned a "B+" average or better in AC 200, AC 202, and AC 305, as well as a minimum 3.000 cumulative BSBA GPA. Students who wish to have a less-intensive undergraduate experience can move to the Five-Year program. To complete the accelerated program students must earn an average GPA of 3.000 or higher in AC 610, AC 621, AC 640, AC 646, AC 660, FIN 612, FIN 630, and three electives.

Accounting Suggested Sequence of Courses (4 year BSBA /MS)

First Year - Fall Semester

BUS 110	Introduction to Business Seminar	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
ENGL 132	English Composition I	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
EC 111	Principles of Microeconomics	3 cr.
PSY 101 - SO 101	Introduction to Psychology or Introduction to Sociology	3 cr. - 3 cr.

Subtotal: 18

First Year - Spring Semester

GEN XXX	General Elective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
ENGL 133	English Composition II	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.
MAN 204/HONB 204	Management and Organizational Behavior	3 cr.

Subtotal: 18

Sophomore Year - Summer

GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 6

Sophomore Year - Fall Semester

AC 200	Financial Accounting	3 cr.
HIST XXX	Historical Perspective	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
FIN 214	Introduction to Finance	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.

Subtotal: 18

Sophomore Year - Spring Semester

AC 202	Managerial Accounting	3 cr.
AC 204	Tools & Concepts in Accounting	3 cr.
AC 313	Taxation of Individuals	3 cr.
BAIM 312	Quality and Operations Management with SAP	3 cr.
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
COMM 233	Business Writing and Communication	3 cr.

Subtotal: 18

Junior Year - Summer

GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 6

Junior Year - Fall Semester

AC 305	Financial Reporting II	3 cr.
AC 414	Taxation of Entities	3 cr.
AC 419	Auditing and Assurance Services	3 cr.
BUS 450/HONB 450 - BUS 423/BME 423/ME 423	Business Strategy or Product Development and Innovation	3 cr. - 3 cr.
MAN 240/HONB 240 - PH 211	Business and Society or Business Ethics	3 cr. - 3 cr.
CUL XXX	Global Cultures Perspective	3 cr.

Subtotal: 18

Junior Year - Spring Semester

AC 306	Financial Reporting III	3 cr.
AC 311	Municipal & Fund Accounting	3 cr.
AC 330	Accounting Information Systems	3 cr.
AC 440	Accounting Analytics	3 cr.
AC 480 - GEN XXX	Internship in Accounting or General Elective	3 cr. - 3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 18

Senior Year - Summer

AC 640	Adv. Accounting Info Systems	3 cr.
AC 660	Adv Accounting Analytics	3 cr.
FIN 610	Financial Tax Planning	3 cr.
FIN 630	Managerial Finance	3 cr.

Subtotal: 12

Fourth Year - Fall

AC 621	Advanced Financial Accounting	3 cr.
AC 646	Selected Topics in Taxation	3 cr.
FIN 612	Business Analysis and Valuation	3 cr.

Subtotal: 9

Fourth Year - Spring

AC 610	Cost-Based Decision-Making	3 cr.
BL 640	Business Law	3 cr.
FIN 617	Investment Theory and Practice	3 cr.

Subtotal: 9

Total Credit Hours: 150

Students must take 30 credit hours of course work in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: all upper level AC.

ACACC.MS - MS in Accounting - Four-Year BSBA/MS

General

College/School
College of Business

Department(s) ~
Accounting & Finance

Program Title ~
MS in Accounting - Four-Year BSBA/MS

Program Code ~
ACACC.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

This program allows accounting majors to accelerate completion of both the bachelor's and master's degrees in Accounting in four years.

Requirements

Free Form Requirements
Four-year Accelerated BSBA/MS in Accounting

General Information

This program allows full-time undergraduate Accounting majors to accelerate the completion of both the bachelor’s and master’s degrees in Accounting. Students accepted into this program can earn the MS in Accounting degree in as few as four years.

This dual-degree program is a combination of the undergraduate Accounting major and the MS in Accounting. With permission of the department chair, students are able to take any graduate course once they have completed the undergraduate prerequisite with a “B” or better grade. Students taking the CPA exam must check the requirements of the respective jurisdiction.

This program requires up to 18 credit hours a semester, summer study, and some graduate study prior to an undergraduate degree. Some instruction takes place online. Students seeking admission to the program at the time of admission to the University must take either the SAT or the ACT entrance exam and complete the Accelerated Accounting Program application. Students seeking admission to the program at a later time must have earned a “B+” average or better in AC 101/HONB 201, AC 202, and AC 305, as well as a minimum 3.000 cumulative BSBA GPA. Students who wish to have a less-intensive undergraduate experience can move to the Five-Year program. To complete the accelerated program students must earn an average GPA of 3.000 or higher in AC 610, AC 621, AC 640, AC 646, AC 660, FIN 612, FIN 630, and three electives.

Accounting Suggested Sequence of Courses (Four-year BSBA /MS)

First Year - Fall Semester

BUS 110	Introduction to Business Seminar	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
ENGL 132	English Composition I	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
EC 111	Principles of Microeconomics	3 cr.
PSY 101	Introduction to Psychology	3 cr.
	or	
SO 101	Introduction to Sociology	3 cr.

Subtotal: 18

First Year - Spring Semester

AC 101/HONB 203	Financial Reporting I	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
ENGL 133	English Composition II	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.
MAN 204/HONB 204	Management and Organizational Behavior	3 cr.

Subtotal: 18

Sophomore Year - Summer

GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 6

Sophomore Year - Fall Semester

AC 202	Managerial Accounting	3 cr.
AC 305	Financial Reporting II	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
FIN 214	Introduction to Finance	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.

Subtotal: 18

Sophomore Year - Spring Semester

AC 306	Financial Reporting III	3 cr.
BAIM 312	Quality and Operations Management with SAP	3 cr.
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
AC 313	Taxation of Individuals	3 cr.
COMM 233	Business Writing and Communication	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 18

Junior Year - Summer

GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 6

Junior Year - Fall Semester

AC 440	Accounting Analytics	3 cr.
AC 414	Taxation of Entities	3 cr.
AC 419	Auditing and Assurance Services	3 cr.
BUS 450/HONB 450	Business Strategy	3 cr.
	or	
BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
MAN 240/HONB 240	Business and Society	3 cr.
	Or	
PH 211	Business Ethics	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.

Subtotal: 18

Junior Year - Spring Semester

AC 311	Municipal & Fund Accounting	3 cr.
AC 480	Internship in Accounting	3 cr.
	Or	
GEN XXX	General Elective	3 cr.
AC 330	Accounting Information Systems	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 18

Senior Year - Summer

AC 640	Adv. Accounting Info Systems	3 cr.
AC 660	Adv Accounting Analytics	3 cr.
FIN 612	Business Analysis and Valuation	3 cr.
FIN 617	Investment Theory and Practice	3 cr.

Subtotal: 12

Fourth Year - Fall

AC 621	Advanced Financial Accounting	3 cr.
AC 646	Selected Topics in Taxation	3 cr.
FIN 630	Managerial Finance	3 cr.

Subtotal: 9

Fourth Year - Spring

AC 610	Cost-Based Decision-Making	3 cr.
BL 640	Business Law	3 cr.
FIN 610	Financial Tax Planning	3 cr.

Subtotal: 9

Total Credit Hours: 150

Students must take 30 credit hours of course work in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: all upper level AC.

ACTS.BS - BS in Actuarial Science

General

College/School
College of Arts & Sciences

Department(s) ~
Mathematical Sciences

Program Title ~
BS in Actuarial Science

Program Code ~
ACTS.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The Actuarial Science major trains students in the mathematical, statistical, and business techniques needed to assess and manage risk in a variety of settings including insurance, health care, business, and finance. The job of actuary is a challenging and rewarding one that is often ranked at or near the top of annual "best jobs" lists.

Requirements

Free Form Requirements
Actuarial Science Major

General Information

Actuaries are business professionals who quantify, model, and analyze risk in a business environment. Wherever risk or uncertainty is present, such as in the contexts of life, property or casualty insurance, health care, or in the financial management of pensions or annuities, actuaries are needed to understand and manage that risk. An actuary needs to have a solid grounding in the theory and applications of calculus, probability and statistics, mathematical finance including interest theory, and various mathematical modeling techniques.

In addition to their mathematical analysis and problem-solving abilities, actuaries need to have excellent oral and written communication skills as well an understanding of economics, finance, and corporate structure and decision making. An ideal actuary has mastery of technical mathematical material, can apply it in its proper context, and can communicate it to an appropriate audience.

Career Opportunities

The job of actuary is consistently rated very highly in terms of job satisfaction, salary, employment outlook, work environment, and growth opportunity. One can usually find it at or near the top of annual “best jobs” lists. Actuaries are in high demand and are most commonly employed in the insurance, financial services, and health care industries as well as in government agencies. The numerous such companies present in the Springfield-Hartford corridor means that actuarial jobs are relatively plentiful, and even more opportunities are possible in the greater Boston and New York areas. Graduates of Western New England have obtained positions at many of these companies.

Program Objectives

The Actuarial Science major is housed within the Department of Mathematics and follows the educational recommendations of the two largest actuarial-related professional societies in the US: the Society of Actuaries (SOA) and the Casualty Actuary Society (CAS). A student who successfully completes the Actuarial Science major will:

- Demonstrate knowledge of mathematical concepts needed for actuarial science.
- Demonstrate knowledge of foundational concepts in probability, introductory statistics, and interest theory.
- Demonstrate the ability to apply foundational concepts to actuarial modeling.
- Demonstrate the ability to effectively communicate actuarial mathematics in written form.
- Demonstrate the ability to effectively communicate actuarial mathematics orally

- Use relevant and current technology to aid the understanding of concepts related to actuarial science or to construct actuarial models
- Interpret and communicate correctly the results from technology
- Demonstrate success in learning mathematical concepts independently.

The SOA and CAS credential professional actuaries through a widely recognized and respected process that involves exams, coursework, and work experience. The Actuarial Science major involves coursework that covers the majority of the syllabi for Exam P/1 (Probability), Exam FM/2 (Financial Mathematics), Exam IFM/3F (Investments and Financial Markets), Exam LTAM (Long Term Actuarial Mathematics), and Exam SRM (Statistics for Risk Modeling). Although not a requirement, students are strongly encouraged to pass at least one if not both of Exams P/1 and FM/2 before graduation. In addition, students can take courses that will lead to credit for all three of the Validation by Educational Experience (VEE) areas required of the SOA and CAS.

Degree Requirements

Required Mathematics and Computer Science courses (54 credit hours)

CS 170	Technology in Mathematics	3 cr.
CS 171	Programming for Mathematics	4 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
MATH 127	Calculus I with Pre-Calculus Review	5 cr.
	or	
MATH 133	Calculus I	4 cr.
MATH 134	Calculus II	4 cr.
MATH 221	Introductory Probability & Statistics II	3 cr.
MATH 235	Calculus III	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.
MATH 306	Linear Algebra	3 cr.
MATH 310	Theory of Interest	3 cr.
MATH 372	Probability	3 cr.
MATH 383	Mathematical Statistics	3 cr.
MATH 384	Applied Regression & Time Series	3 cr.
MATH 401	Actuarial Models I	3 cr.
MATH 402	Actuarial Models II	3 cr.
MATH 405	Applied Stochastic Processes	3 cr.
MATH 406	Mathematical Finance	3 cr.

Subtotal: 54-55

Other required courses (6 credits)

EC 111	Principles of Microeconomics	3 cr.
EC 112	Principles of Macroeconomics	3 cr.

Subtotal: 6

Actuarial Exams and VEE Credits

The following courses help prepare students for the corresponding SOA or CAS exams. It should be noted that preparing for an exam requires independent study beyond the coursework. For complete topics, consult the exam syllabi as published by the SOA or CAS.

SOA Exam	CAS Exam	Course(s)
Exam P	Exam 1	MATH 372
Exam FM	Exam 2	MATH 310
Exam IFM	Exam 3F	MATH 406
Exam LTAM		MATH 401 & MATH 402
Exam SRM		MATH 383 & MATH 384

The Validation by Educational Experience (VEE) requirement of the SOA and CAS can be obtained by taking the following courses. Although VEE experiences can be completed independently of the exam process, a student needs to have passed at least two exams before applying for VEE credit.

VEE Topic	Courses
Economics	EC 111 & EC 112
Accounting and Finance	AC 101/HONB 203 & FIN 214 & FIN 317 & FIN 320
Mathematical Statistics	MATH 383

Obtaining a Minor

A student obtaining an Actuarial Science major can complete the requirements for the Mathematical Sciences minor by taking one additional course: MATH 418 or MATH 421. Other minors that pair well with the Actuarial Science major include the Statistics minor, the Computer Science minor, the Economics minor, and the Finance minor.

Other Recommended Courses

A student who wishes to use their general electives to obtain additional coursework that supports a career in the actuarial sciences could take any of the following. See the section below on Actuarial Exams and VEE Credits.

AC 101/HONB 203	Financial Reporting I	3 cr.
AC 202	Managerial Accounting	3 cr.
EC 317	Management Issues for Professionals	3 cr.
EC 386	Econometrics	3 cr.
FIN 214	Introduction to Finance	3 cr.
FIN 317	Investments	3 cr.
FIN 318	Security Analysis	3 cr.
FIN 320	Intermediate Corporate Finance	3 cr.
FIN 350	Advanced Corporate Finance	3 cr.

Subtotal: 27

Actuarial Science Suggested Sequence of Courses

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 127	Calculus I with Pre-Calculus Review	5 cr.
	or	
MATH 133	Calculus I	4 cr.
GUR xxx	General University Requirement	3 cr
GUR xxx	General University Requirement	3 cr

Subtotal: 15-16

Freshman Year - Spring Semester

CS 170	Technology in Mathematics	3 cr.
ENGL 133	English Composition II	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
MATH 134	Calculus II	4 cr.
GUR xxx	General University Requirement	3 cr

Subtotal: 16

Sophomore Year - Fall Semester

MATH 221	Introductory Probability & Statistics II	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.
MATH 310	Theory of Interest	3 cr.
GEN XXX	General Elective	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

MATH 235	Calculus III	3 cr.
MATH 372	Probability	3 cr.
CS 171	Programming for Mathematics	4 cr.
EC 112	Principles of Macroeconomics	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Junior Year - Fall Semester

MATH 306	Linear Algebra	3 cr.
MATH 383	Mathematical Statistics	3 cr.
MATH 405	Applied Stochastic Processes	3 cr.
GUR xxx	General University Requirement	3 cr
GEN 3XX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

MATH 384	Applied Regression & Time Series	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GUR xxx	General University Requirement	3 cr
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

MATH 401	Actuarial Models I	3 cr.
GUR xxx	General University Requirement	3 cr
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

MATH 402	Actuarial Models II	3 cr.
MATH 406	Mathematical Finance	3 cr.
GEN XXX	General Elective	1 cr.
GEN XXX	General Elective	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.

Subtotal: 13

Total Minimum Credit Hours: 120

**In alternate years, MATH 401-MATH 402, and MATH 406 should be taken in the junior year with MATH 383-MATH 384 and MATH 405 taken in the senior year.

Note: The order of the General University Requirement courses can be altered (ARTS, CUL, HIST, LAB, LAB/NSP, PH).

AMST.BA - BA in American Studies

General

College/School
College of Arts & Sciences

Department(s) ~
English & Cultural Studies

Program Title ~
BA in American Studies

Program Code ~
AMST.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The American Studies major is the perfect combination of English and history that allows you to dig deeper into American identities, culture, and history. Using both literature and visual media, you will make meaningful connections between society and culture today and in the past.

Requirements

Free Form Requirements
American Studies Major

General Information

American Studies majors take a broad, inter-disciplinary approach to the meaning and nature of culture in the United States including the context of European colonialism—an inquiry that explores the idea of America as a contested site of meaning. Literature is the core of the program, but majors position their literary study in a comparative analysis of visual media and history to supplement their understanding of the relationship between cultural expressions and their context in social, political, and economic change.

Career Opportunities

Combining a specialization in American culture with emphasis on critical reading, writing, and thinking throughout the course of study, American Studies majors have many opportunities for graduate study and employment. They graduate prepared for the fields of law and politics, technical writing, editing, journalism, and teaching. Students competing for positions specifically focused on American literature or culture will be able to present themselves as specialists in that field. The cultural and historical context of the American Studies program serves majors in business fields reliant on the interpretation of cultural trends and meaning such as marketing and media research, publishing, and public relations.

Program Objectives

- To offer a broad, inter-disciplinary approach to the culture of the United States.

- To provide in-depth exposure to the forms and development of American, including African American, literature situated in the broad Anglophone tradition and history of colonization.
- To analyze film and visual media as a part of the larger American cultural discourse and sharpen students' awareness of the techniques and traditions particular to visual media.
- To supplement students' understanding of literary and visual media with historical context.
- To develop students' ability to read, analyze, and interpret a variety of cultural texts.
- To develop students' ability to produce clear, nuanced, and rhetorically sophisticated academic writing.

Degree Requirements

Each of the following courses in American Literature and Literary Studies:

ENGL 223	African American Literature I	3 cr.
ENGL 224	African American Literature II	3 cr.
ENGL 251	American Literature I	3 cr.
ENGL 252	American Literature II	3 cr.
ENGL 302	Approaches to the Study of Literature	3 cr.
ENGL 3xx	Topics in American Studies (ENGL 322 or ENGL 357)	3 cr.
ENGL 2xx/3xx	Studies in Transatlantic Culture - ENGL 231, 232, 327, 328 or 341	3 cr.
ENGL 336	Ethnic American Literature	3 cr.
ENGL 338/411	Major Authors	3 cr.
	or	
ENGL 345	Major African American Writers	3 cr.
ENGL 410	English Seminar	3 cr.

Subtotal: 30

Any two of the following courses in Film and Media Studies or Communication, one of which must be FILM xxx:

FILM 201	Studies in Mainstream Film Genres	3 cr.
FILM 210	Mass Media in Film	3 cr.
FILM 290	Special Topics in Film	1-3 cr.
FILM 304	Science Fiction Film	3 cr.
FILM 340	Director's Signature	3 cr.
FILM 370	Women and Film	3 cr.
FILM 390 - 393	Special Topics in Film	1-3 cr.
COMM 324	Media Industries, Government, and Society	3 cr.
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.

Subtotal: 6

Any two of the following courses from the Department of History:

HIST 25x	Courses in American History	3 cr.
HIST 35x	Courses in American History	3 cr.

Subtotal: 6

Subtotal: 42

American Studies Suggested Sequence of Courses

First Year - Fall Semester

ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
GEN XXX	General Elective	3 cr.
CS 13X	Computer Competence	3 cr.

Subtotal: 15

First Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PH XXX	Ethical Perspective	3 cr.
GEN XXX	General Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

ENGL XXX	Two literature survey courses from among ENGL 231, 232, 251 or 252	3 cr.
ENGL XXX	Two literature survey courses from among ENGL 231, 232, 251 or 252	3 cr.
SBP XXX	Social Science Perspective	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

ENGL XXX	Two literature survey courses from among ENGL 231, 232, 251 or 252	3 cr.
ENGL XXX	Two literature survey courses from among ENGL 231, 232, 251 or 252	3 cr.
HIST 25x	Courses in American History	3 cr.
GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

ENGL 302	Approaches to the Study of Literature	3 cr.
ENGL 336	Ethnic American Literature	3 cr.
FILM 2xx	One from among FILM 201, 210, 212 or 290	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

ENGL 2xx/3xx	Studies in Transatlantic Culture - ENGL 231, 232, 327, 328 or 341	3 cr.
ENGL 3xx	Topics in American Studies (ENGL 322 or ENGL 357)	3 cr.
FILM/COMM 3xx	One from among FILM 340, 390 or COMM 324, 326	3 cr.
HIST 35x	Courses in American History	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

ENGL 338/411 or ENGL 345	Major Authors - Major African American Writers	3 cr. - 3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

ENGL 410	English Seminar	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

APBA.MS - MS in Applied Behavior Analysis

General

College/School
College of Arts & Sciences

Department(s) ~
Psychology

Program Title ~
MS in Applied Behavior Analysis

Program Code ~
APBA.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

Developed in response to the increasing demand for teachers and practitioners trained in best practices for the education and treatment of individuals with autism and related disabilities, the MS in Applied Behavior Analysis gives working professionals the skills to fill this void. Through a combination of coursework and supervised practical experiences, students completing this program will earn a master's degree in Applied Behavior Analysis and meet the Behavior Analysis Certification Board (BACB) requirements for taking the exam to become Board Certified Behavior Analysts.

Requirements

Free Form Requirements
MS in Applied Behavior Analysis

Developed in response to the increasing demand for teachers and practitioners trained in best practices for the education and treatment of individuals with autism and related disabilities, the MS in Applied Behavior Analysis gives working professionals the skills to fill this void. Through a combination of coursework and supervised practical experiences, students completing this program will earn a master's degree in Applied Behavior Analysis and meet the Behavior Analysis Certification Board (BACB) requirements for taking the exam to become Board Certified Behavior Analysts.

Program Structure

All students will be assigned doctoral-level, Board Certified Behavior Analysts as advisors upon admission to the program. Advisors and students will work collaboratively on the students' professional development. Students are expected to complete 37 total credit hours with 21 credit hours dedicated to core coursework designed to meet the BACB requirements, six credit hours of elective coursework, and 10 hours of practicum. Each student must complete and successfully defend a research thesis.

Students will be expected to enroll in four credit hours in each term to stay on pace to complete the master's program in three years.

Degree Requirements

Core courses (21 hours)

PSY 501	Principles of Behavior Analysis	3 cr.
PSY 503	Behavioral Interventions	3 cr.
PSY 505	Methods of Evaluation	3 cr.
PSY 506	Evidence-based Teaching	3 cr.
PSY 507	Theoretical Foundations	3 cr.
PSY 509	Ethics and Professional Issues	3 cr.
PSY 515	Personnel Management and Supervision	3 cr.

Subtotal: 21

Elective courses (Six hours)

PSY 502	Behavioral Assessment	3 cr.
PSY 504	Autism and Related Disabilities	3 cr.
PSY 508	Verbal Behavior	3 cr.
PSY 590	Special Topics in Applied Behavior Analysis	3 cr.

Subtotal: 6

Practica (10 hours)

PSY 519-528	Supervised Practicum in ABA	1 cr.

Subtotal: 10

Total Credit Hours: 37

Admissions

Candidates need to have earned a minimum of a bachelor's degree and must have earned at least a 3.000 cumulative grade point average in their bachelor's program.

BA.MS - MS in Business Analytics

General

College/School
College of Business

Department(s) ~
Business Information Systems

Program Title ~
MS in Business Analytics

Program Code ~
BA.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

The MS in Business Analytics program addresses the growing need of organizations for data driven decision making and to answer the industry's demand for skilled professionals who can apply data analytics to solve business challenges. The curriculum focuses on the use of advanced quantitative and analytical tools that can be applied in human resources, management, marketing, strategic management, operations, financial services, and other areas. Students will be provided with the fundamental approaches, methods, and analytical toolkits of data analytics, decision sciences, applied operational research, and statistics needed to effectively leverage data to solve business challenges.

Requirements

Free Form Requirements
MS in Business Analytics

General Information

The MS in Business Analytics (known as the MSBA program) is designed to address the growing need of organizations for data driven decision making and to answer the industry's demand for skilled professionals who can apply data analytics to solve business challenges. The curriculum focuses on the use of advanced quantitative and analytical tools that can be applied in the specific areas of human resources, management, marketing, strategic management, operations, financial services, and other areas. Students will be provided with the fundamental approaches, methods, and analytical toolkits of data analytics, decision sciences, applied operational research, and statistics needed to effectively leverage data to solve business challenges.

The MSBA program curriculum is designed to help students develop expertise in the collection, analysis, interpretation, and visualization of big data in a business context and acquire managerial problem-solving skills using state-of-the-art data analytics tools to prepare them for careers in business analytics across a variety of industries and managerial settings. Students will be provided with rigorous analytics training and creative problem-solving abilities that will help them navigate complex business problems and create solutions using data analytics.

The degree is a 36-credit program and is open to students regardless of their undergraduate major.

Career Opportunities

In the employment market, there is a demand for professionals who know how to analyze data, develop insights from data and information, and employ findings in solving business problems. The program is geared toward equipping students with a powerful blend of analytical skills and business knowledge to help them make data driven decisions, allowing them to deliver better business results by gaining the ability to transform data into a powerful asset.

Graduates of this program can work in various industries including transportation, energy, finance, manufacturing, healthcare, public administration, and professional, technical, and scientific services. Some of the job titles that may be assumed by graduates of this program include business analyst, consultant, management analyst, and program analyst.

According to the U.S. Bureau of Labor Statistics (BLS), demand for management analysts is projected to grow 14 percent from 2020 to 2030, faster than the average for all occupations. About 99,400 openings for management analysts are projected each year, on average, over the decade.

Program Learning Goals

Upon completing the MSBA program, students will be able to:

1. Demonstrate knowledge of quantitative and analytical tools for decision making
2. Develop and apply descriptive, predictive, and prescriptive data analytics methods to address the current needs of businesses
3. Evaluate business analytics solution alternatives and identify appropriate courses of action for a given business problem.
4. Synthesize and communicate relevant business analytics information.

Required Courses 36 credit hours

Fall

BAIM 601	Foundations of Business Analytics	3 cr.
BAIM 625	Fundamentals of Database Technologies	3 cr.
BAIM 645	Business Analytics with Python	3 cr.

Subtotal: 9

Spring

BAIM 615	Statistical Foundations of Business Analytics	3 cr.
BAIM620	Decision Modeling for Analytics	3 cr.
BAIM 650	Pattern Discovery and Visual Analytics	3 cr.

Subtotal: 9

Fall

BAIM 635	Enterprise Analytics with SAP	3 cr.
BAIM 660	Predictive and Text Analytics	3 cr.
BAIM 665	Management Science for Prescriptive Analytics	3 cr.

Subtotal: 9

Spring

BAIM 640	Business Analytics with R	3 cr.
BAIM 670	AI and Machine Learning for Business Applications	3 cr.
BAIM 680	Business Analytics Capstone Project	3 cr.

Subtotal: 9

Total Credit Hours: 36

BAIM.BSBA - BSBA in Business Analytics & Info Man

General

College/School
College of Business

Department(s) ~
Business Information Systems

Program Title ~
BSBA in Business Analytics & Info Man

Program Code ~
BAIM.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This major prepares students for careers in Business Analytics and related fields. Business Analytics skills are applicable to all industries including finance, retail, healthcare, sports and entertainment, to name a few. All functions in an organization such as accounting, finance, management, marketing, and sales need Business Analytics skills.

Requirements

Free Form Requirements
Business Analytics and Information Management

General Information

The Business Analytics and Information Management (BAIM) major prepares students for careers in Business Analytics and related fields. Business decisions these days are data driven and this program teaches the tools and techniques used by professionals in the field. All business decision makers are consumers of analytics. Business Analytics skills are applicable to all industries such as finance, retail, healthcare, sports, and entertainment, to name a few. All functions in an organization such as accounting, finance, management, marketing, and sales need analytics, hence Business Analytics skills. Business Intelligence (BI), Data Mining (DM), Python, Predictive Analytics (PA), and Data Visualization software are some of the focus areas in the BAIM major.

The BAIM courses include topics in Business Intelligence, Data Management, and Analytics as recommended by the SAS Academic Programs. SAS is a provider of industry standard Analytics software. Specifically, the program's courses use SAS Enterprise Miner extensively. Upon successful completion of the BAIM program, students are automatically awarded a SAS certification sanctioned by the SAS Institute academic programs.

In addition, BAIM students can earn the Certificate of SAP Student Recognition Award by completing three designated courses which provide substantial hands-on instruction using SAP, a widely used ERP software. These designated courses are SAP versions of the required core courses, thus require no additional coursework.

Career Preparation

To emphasize the career options best suited for BAIM majors, faculty in the BAIM department provide in-class activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career exploration in the freshman year is accomplished in Introduction to Business Seminar (BUS 110) and Problem Solving with Business Tools (BAIM 102) courses where students are introduced to business analytics career opportunities;
2. Career investigation in the sophomore year courses includes assignments to investigate business analytics jobs in Introduction to Business Information Systems (BAIM 202) and Statistics for Business Analytics and guest speakers (BAIM 221);
3. Career determination in the junior year engages students in a mentor plan and interaction with local technology experts; and
4. Career implementation in the senior year includes internships. Students are exposed to tasks, tools, and technology in professional job settings with internships.

Career Opportunities

As an emerging field, there is a high demand for business professionals with Business Analytics skills. While Department of Labor forecasts a "bright outlook" for the jobs in business analytics, McKinsey Global Institute estimates "a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts to analyze big data and make decisions" in the United States alone. Data Visualization skills are nearly a job requirement for all Business School graduates.

Banking, retail, insurance, manufacturing, healthcare, and telecommunications are sample list of industries utilizing Business Analytics solutions to streamline operations. Understanding, planning, managing, and predicting financial and operational performance are common processes in many industries. Almost all businesses today employ professionals with Business Analytics skills.

Program Learning Goals

The Business Analytics and Information Management major has four goals. Graduates from BAIM will be able to do the following tasks to support decision making and problem solving in businesses:

1. Identify, collect, and analyze data. Make business decisions based on Data Analysis (DA).
2. Develop, deploy, and improve decision-making and problem solving processes with models.
3. Utilize relevant techniques to address Business Analytics needs of organizations.
4. Use tools and technology to support decision-making and problem solving.

Practicum

BAIM majors are strongly advised to take advantage of Internship opportunities available to them. The practical experience gained via internships supplements the classroom learning and leads to expanded full time employment opportunities, after graduation. To this end, BAIM 480 is the designated course.

Degree Requirements

Required Business Analytics courses (21 credit hours)

BAIM 230	Business Analytics Theory & Practice	3 cr.
BAIM 315	Data Science with Python	3 cr.
BAIM 321 / IT 300	Database Management Systems	3 cr.
BAIM 325	Data Analysis with R	3 cr.
BAIM 330	Applied Data Mining	3 cr.
BAIM 412	Business Analytics with SAP	3 cr.
BAIM 445	Business Analytics Project	3 cr.
BAIM 450	Multivariate & Big Data Analysis	3 cr.

Subtotal: 24

Electives (21 credit hours)

BAIM 480	Internship in Business Information Systems	3 cr.
	Or	
GEN 3XX	Upper level General Elective	3 cr.
-	And	
GEN XXX	General Electives	15 cr.

Subtotal: 18

Total Credit Hours: 42

Business Analytics and Information Management Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
Or		
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101	Introduction to Sociology	3 cr.
OR		
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 101/HONB 203	Financial Reporting I	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
PH 211/MAN 240/ HONB 240	Business Ethics	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BAIM 230	Business Analytics Theory & Practice	3 cr.
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
BAIM 321/IT 300	Database Management Systems	3 cr.
LAB XXX	Laboratory Science	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

BAIM 330	Applied Data Mining	3 cr.
BAIM 312	Quality and Operations Management with SAP	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
BAIM 3XX/4XX	Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BAIM 412	Business Analytics with SAP	3 cr.
BAIM 445	Business Analytics Project	3 cr.
GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

BUS 450/HONB 450	Business Strategy	3 cr.
BAIM 450	Multivariate & Big Data Analysis	3 cr.
BAIM 480	Internship in Business Information Systems	3 cr.
	or	
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: BAIM 230, BAIM 315, BAIM 321, BAIM 325, BAIM 330, BAIM 412, BAIM 445, BAIM 450.

BDIVM.CERT - Certificate in Diversity Management

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Certificate in Diversity Management

Program Code ~
BDIVM.CERT

Degree Designation ~
CERT - Certificate, BDIVM - Cert Diversity Management

Academic Level ~
UG - Undergraduate

Program Short Description

This undergraduate certificate helps students develop skills to navigate multiple contemporary issues, better understand societal norms and their origins, and confidently manage change required to better their workplaces via combined coursework in managing a diverse workforce, humanistic leadership, and managing change. This certificate helps non-business and non-management majors as well as augment those focused on leadership, HR, general business, or other disciplines.

Requirements

Free Form Requirements
Diversity Management Certificate

Degree seeking students can earn a Diversity Management certificate by completing three courses with a grade of "C" or higher. These three courses may also meet College of Business elective or major requirement.

Certificate must be declared prior to graduation and appears on official transcript.

Requirements

MAN 322	Managing a Diverse Workforce	3 cr.
MAN 331	A Humanistic Approach to Leadership and Management	3 cr.
MAN 341 MAN 422	Leadership and Change or Conflict Resolution	3 cr.

Total Credit Hours: 9

BEHAN.PHD - PhD in Behavior Analysis

General

College/School
College of Arts & Sciences

Department(s) ~
Psychology

Program Title ~
PhD in Behavior Analysis

Program Code ~
BEHAN.PHD

Degree Designation ~
PHD - Doctor of Philosophy

Academic Level ~
GR - Graduate

Program Short Description

Developed in response to the increasing demand for scientists and practitioners of evidence-based methods for the education and treatment of individuals with autism and related disabilities, the PhD program in Behavior Analysis will give you the skills to fill this void and become a leader in the field. Through a combination of coursework and supervised practical and research experiences, this program trains researchers and scientist-practitioners in the discovery, translation, and application of knowledge toward solving human behavior problems of societal importance (e.g., autism and related disabilities). All classroom course work is done at the New England Center for Children in Southborough, MA.

Requirements

Free Form Requirements
PhD in Behavior Analysis

General Information

Developed in response to the increasing demand for scientists and practitioners of evidence-based methods for the education and treatment of individuals with autism and related disabilities, the PhD program in Behavior Analysis at Western New England University gives students the skills to fill this void and become a leader in the field. Through a combination of coursework and supervised practical and research experiences, the aim of the program is to train researchers and scientist-practitioners in the discovery, translation, and application of knowledge toward solving human behavior problems of societal importance (e.g., autism and related disabilities). All classroom course work is done at the New England Center for Children.

Program Goals and Objectives

The program allows students to successfully embark on academic and research careers, as well as careers in the delivery of behavior analysis services. Thus, the primary objectives of the program, which elucidate the core knowledge areas and skills all students are expected to know or be able to do prior to graduating, are:

1. To understand the assumptions, goals, and characteristics of behavior analysis.
2. To understand the history of the field of behavior analysis and its relation to psychology and science in general.
3. To understand the basic principles of learning and the past and current theoretical models which describe and attempt to explain behavior-environment relations.
4. To be able to describe and apply effective behavior-analytic procedures for promoting behavior change.
5. To be able to describe and apply single-subject and more traditional group designs.

6. To be able to determine the influence of relevant independent variables or interventions.
7. To be able to describe, depict, and analyze behavioral data and understand the current quantitative models which describe and attempt to explain behavior-environment relations.
8. To be able to describe, distinguish, and apply evidence-based practices for a social problem (e.g., problems associated with autism and related developmental disabilities).
9. To understand a professional culture outside of behavior analysis that is united to better understand and improve conditions relevant to a particular social problem.
10. To be able to identify, review, critically analyze, and contribute to the behavioral science and psychological literature.
11. To be able to articulate and work within the ethical standards of the Behavior Analysis Certification Board and the American Psychological Association.
12. To be able to effectively participate in professional behavioral science activities such as presenting, publishing, and reviewing original research.
13. To be able to design and implement effective instruction at the college level.

Program Structure

All students are assigned an advisor upon admission to the program. The student and advisor work together to plan for the student's academic success. Advisors assist students as they select required and elective courses, develop their research projects, and prepare for PhD requirements (e.g., assist in selecting a review paper topic). Advisors and students also work collaboratively on the students' professional development. Specifically, advisors assist students in clarifying their goals and attaining substantive experience in teaching (e.g., identifying opportunities and mentoring), research (e.g., ensuring that the student is presenting posters, oral presentations, and is publishing their data where appropriate), and service (e.g., committee work at the local or national level, serving as a reviewer for a journal).

Students are expected to complete 54 credit hours with at least 27 of those hours being seminars. The remaining 27 may be dissertation credit, behavior analysis practica, and additional elective seminars. Courses will be offered in fall, winter, and spring 11-week terms.

Students are expected to enroll in seven total credits in three of the four terms in each of the initial two years of the program. Students are expected to enroll in a total of four credits in three of the four terms in the third year of the program. Students not finished with the program by the end of the third year register for one credit of dissertation continuance in up to three terms of their fourth year and all subsequent years until the completion of all degree requirements. The program must be completed within seven years.

DEGREE REQUIREMENTS

CORE COURSES (15 HOURS)

PSY 610	Professional Issues, Ethics, and Research Design	3 cr.
PSY 620	Experimental Analysis of Behavior	3 cr.
PSY 630	Descriptive and Inferential Statistics	3 cr.
PSY 640	Quantitative Analysis of Behavior	3 cr.
PSY 650	The Philosophy of Behaviorism	3 cr.
Total Credit Hours:		**15**

CONCENTRATION COURSES (12-21 HOURS)

PSY 705	Early Intensive Behavioral Intervention	3 cr.
PSY 720	Assessment of Severe Behavior Disorders	3 cr.
PSY 735	Organizational Behavior Management	3 cr.
PSY 740	Developmental Psychology	3 cr.
PSY 750	Advanced Verbal Behavior	3 cr.
PSY 770	Teaching in the College Environment	3 cr.
PSY 780	Brain and Behavior	3 cr.
PSY 790	Special Topics in Behavior Analysis	3 cr.
Total Credit Hours:		**12-21**

BEHAVIOR ANALYSIS PRACTICA (9 HOURS)

PSY 801-809	Behavior Analysis Practica	1 cr.
Total Credit Hours:		**9**

DISSERTATION RESEARCH (9-18 HOURS)

PSY 851-856	Dissertation Research	3 cr.
PSY 857 - 880	Dissertation Research Continuance	1 cr.
Total Credit Hours:		**9-18**

EXAMPLE PROGRAM OF STUDY

The following table provides the anticipated schedule with which courses and program requirements may be completed.

YEAR 1 - FALL

PSY 610	Professional Issues, Ethics, and Research Design	3 cr.
PSY 620	Experimental Analysis of Behavior	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

YEAR 1 - WINTER

PSY 630	Descriptive and Inferential Statistics	3 cr.
PSY 650	The Philosophy of Behaviorism	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

YEAR 1 - SPRING

PSY 640	Quantitative Analysis of Behavior	3 cr.
PSY 705	Early Intensive Behavioral Intervention	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

YEAR 2 - FALL

PSY 740	Developmental Psychology	3 cr.
PSY 851-856	Dissertation Research	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

*Dissertation Proposal may be submitted**

YEAR 2 - WINTER

PSY 770	Teaching in the College Environment	3 cr.
PSY 851-856	Dissertation Research	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

YEAR 2 - SPRING

PSY 750	Advanced Verbal Behavior	3 cr.
PSY 851-856	Dissertation Research	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

Comprehensive Program of Study or Review Paper may be submitted and defended

YEAR 3 - FALL

PSY 851-856	Dissertation Research	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

YEAR 3 - WINTER

PSY 851-856	Dissertation Research	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

YEAR 3 - SPRING

PSY 851-856	Dissertation Research	3 cr.
PSY 801-809	Behavior Analysis Practica	1 cr.

Dissertation may be defended

Admissions

Candidates interested in this program need to have earned a master's degree in behavior analysis or related discipline or be certified as a master's-level behavior analyst by the Behavior Analysis Certification Board. Candidates must also have earned a minimum of a 3.600 grade point average (GPA) in their master's degree program and a combined verbal and quantitative score of 300 on the Graduate Record Exam (GRE) with neither score being below 150 for full admission. The program accepts students who have met these requirements and who show strong potential as scholars and future leaders in the field of behavior analysis.

BHRM.CERT - Certificate in Human Resource Management Fundamentals

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Certificate in Human Resource Management Fundamentals

Program Code ~
BHRM.CERT

Degree Designation ~
CERT - Certificate

Academic Level ~
UG - Undergraduate

Program Short Description

The Certificate in Human Resource Management Fundamentals helps students develop skills to better work within or to collaborate with others in the human resources industry. This certificate introduces students to HR, understand performance management, and compensation and benefits. This is meant to strengthen non-business and non-management majors as well as augment those focused on leadership, general business, or other business disciplines.

Requirements

Free Form Requirements
Human Resource Management Fundamental Certificate

Degree seeking students can earn a Human Resource Management Fundamentals certificate by completing three courses with a grade of "C" or higher. These courses may also meet College of Business elective or major requirement.

Certificate must be declared prior to graduation and appears on official transcript.

Requirements

HRM 323	Human Resource Management	3 cr.
HRM 324	Performance Management	3 cr.
HRM 436	Compensation and Benefits	3 cr.

Total Credit Hours: 9

BIO.BS - BS in Biology

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Biology

Program Code ~
BIO.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Our engaging biology curriculum focuses on the fundamental facts, theories, and principles of biology, and integrates the experimental design, instrumentation, and data analysis methods that biologists use in research and practice.

Requirements

Free Form Requirements
Biology Major

General Information

The Biology curriculum provides students with a strong foundation in the fundamental facts, theories, and principles of biology, experience with the experimental design, instrumentation, and data analysis methods that biologists use in research and practice using the critical reasoning and communication skills required for biologically-oriented graduate programs and professions.

Career Opportunities

Biology graduates are employed as laboratory technicians, product analysts, quality control technicians, and forensic scientists. Others are in research, teaching, or have gone on to graduate or medical schools.

Program Objectives:

1. To demonstrate knowledge of basic structure and functioning of cells.
2. To understand the basic features of the synthetic theory of evolution.
3. To understand basic ecological principles.
4. To understand the principles and mathematical analysis of Mendelian and non-Mendelian inheritance.
5. To understand the structure and function of nucleic acids and molecular controls.
6. To understand the structure and physiology of animals.
7. To understand the structure and physiology of plants.
8. To achieve additional understanding in population biology, organismic biology, or cellular and molecular biology.
9. To develop quantitative problem solving skills and data analysis.

Degree Requirements

Required biology courses (34 credit hours)

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 201	Plant Biology	4 cr.
BIO 213	Ecology	3 cr.
BIO 306	Genetics	4 cr.
BIO 310	Cell Biology	4 cr.
BIO 455	Evolution	3 cr.
BIO 470	Seminar in Biology	1 cr.
BIO 2xx-4xx	Seven additional semester hours of 2xx-4xx BIO courses	7 cr.

Subtotal: 34

Additional courses that fulfill the BIO 2xx-4xx requirement: HS 412, HS 315, and HS 320

Required chemistry courses (16 credit hours)

CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.

Subtotal: 16

Twelve to 14 additional credit hours in math, physics, and statistics courses

MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
	and	
PHYS 124	Physics of the Life Sciences II	4 cr.
	or	
PHYS 101	Elements of Physics	3 cr.
	and	
PHYS 15X	PHYS 15X Elective	3 cr.
	or	
PHYS 110	Physics of the Human Body	3 cr.
	and	
PHYS 15X	PHYS 15X Elective	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.

Subtotal: 12-14

The 2.000 required grade point average in this major is based upon all BIO courses (except for BIO 15x and BIO 19x), as well as CHEM 105/CHEM 106/CHEM 209/CHEM 210/CHEM 219/CHEM 220 and HS 315/HS 320/HS 412 pursued as part of the student's degree program.

Note that no transfer credit is accepted for major-level science lab courses taught online.

Total Credit Hours: 62-64

Biology Suggested Sequence of Courses

Notes: The suggested sequence of courses in years two, three, and four is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
LA 100	First Year Seminar	2 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.

Subtotal: 14

Sophomore Year - Fall

BIO 213	Ecology	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GUR xxx	General University Requirement	3 cr

Subtotal: 13

Sophomore Year - Spring

BIO 201	Plant Biology	4 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
GUR xxx	General University Requirement	3 cr
GEN XXX	General Elective	3 cr.

Subtotal: 14

Junior Year - Fall

BIO 2XX/4XX	BIO Elective	3 cr.
GUR xxx	General University Requirement	3 cr
GEN 3XX	General Elective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
PHYS 101	Elements of Physics	3 cr.
	or	
PHYS 110	Physics of the Human Body	3 cr.
	or	
PHYS 123	Physics of the Life Sciences I	4 cr.

Subtotal: 15-16

*If student takes PHYS 123, CS xxx requirement is replaced with GEN xxx.

Junior Year - Spring

PHYS 15X	PHYS 15X Elective	3 cr.
	or	
PHYS 124	Physics of the Life Sciences II	4 cr.
GUR xxx	General University Requirement	3 cr
GUR xxx	General University Requirement	3 cr
GEN 3XX	General Elective	3 cr.
BIO 310	Cell Biology	4 cr.

Subtotal: 16-17

Senior Year - Fall

BIO 306	Genetics	4 cr.
GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GUR xxx	General University Requirement	3 cr

Subtotal: 16

Senior Year - Spring

BIO 455	Evolution	3 cr.
BIO 2XX/4XX	BIO Elective	4 cr.
BIO 470	Seminar in Biology	1 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	4 cr.
GEN XXX	General Elective	1 cr.

Subtotal: 16

Total Minimum Credit Hours: 120

Premedical Students:

Biology majors intending to apply to medical school should contact the Chair of the Department of Physical and Biological Sciences or the pre-med advisor for additional information concerning sequence of courses.

BLEAD.CERT - Certificate in Leadership

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Certificate in Leadership

Program Code ~
BLEAD.CERT

Degree Designation ~
CERT - Certificate, BLEAD - Certificate in Leadership

Academic Level ~
UG - Undergraduate

Program Short Description

The Certificate in Leadership helps students across all disciplines develop leadership skills to better understand themselves and others while achieving mutual objectives. This certificate helps students combine skills in interpersonal relationships, leading teams, and leadership and change, all of which aid student career advancement for non-business and non-management majors outside the College of Business as well as for general business or other business disciplines.

Requirements

Free Form Requirements
Leadership Certificate

Degree-seeking students can earn a Leadership certificate by completing three courses with a grade of "C" or higher. These courses may also meet College of Business elective or major requirement.

Requirements

MAN 303	Interpersonal Skills for Leading	3 cr.
MAN 341	Leadership and Change	3 cr.
MAN 353	Leadership and Team Skills	3 cr.

Total Credit Hours: 9

This certificate is not available to Management and Leadership Majors or Management minor candidates.

Certificate must be declared prior to graduation and appears on official transcript.

BME.BSE - BSE in Biomedical Engineering

General

College/School
College of Engineering

Department(s) ~
Biomedical Engineering

Program Title ~
BSE in Biomedical Engineering

Program Code ~
BME.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

You will learn the foundations of both engineering and health concepts in order to innovate new ideas and practices that will improve treatment the quality of life for patients.

Requirements

Free Form Requirements
Biomedical Engineering Major

General Information

Biomedical engineers have the unique ability to serve as a bridge between engineering and medicine. The rapid advancement of high technology into all medical specialties has increased the demand for engineers who have a depth of knowledge in both engineering and physiology. Biomedical engineers make significant contributions to society by improving patient care and ultimately improving the quality of life for others.

Western New England University provides Biomedical Engineering students with a solid engineering background and an in-depth understanding of human physiology, anatomy, and biology necessary to be a successful biomedical engineer. The curriculum is designed for maximum flexibility, allowing students to choose elective courses that are of most interest. In the junior and senior year, students choose four "sequence electives," two technical electives, as well as a series of four general education courses that fulfill the University's requirement for a perspective on ethics, history, aesthetics, cultural studies, and social and behavioral issues. Students are exposed to the major physiological systems during each of the final four semesters through laboratory work, courses, and through the capstone Senior Design Project.

The BSE in Biomedical Engineering program is accredited by the Engineering Accreditation Commission(s) of ABET, https://www.abet.org, under the General Criteria and the Program Criteria for Bioengineering and Biomedical and Similarly Named Engineering Programs.

Career Opportunities

The Biomedical Engineering program is designed to prepare students for immediate employment or admission to graduate or medical school. Demand for biomedical engineers is growing as technology is increasingly finding its way into all branches of medicine. Since the field of biomedical engineering is broad, many graduates choose to specialize in graduate or professional school by pursuing an MS, PhD, or MD degrees. WNE graduates are working in the medical instrumentation and device industry, pharmaceutical companies, biotechnology companies, research facilities, and hospitals.

Mission

The mission of the Biomedical Engineering program is to provide students with a supportive environment that facilitates learning to solve engineering problems related to medicine and biology in an ethically responsible manner.

The Biomedical Engineering program is committed to excellence in student learning. Graduates of the program are problem solvers, able to apply engineering principles to the interface between living and non-living systems. The faculty and staff of the BME program use their diverse background in teaching, research, and industry to prepare students to be successful leaders in biomedical engineering as they move into the workforce, graduate school, or professional school.

Defining Characteristics

The Biomedical Engineering program:

- Provides students opportunities to learn and apply core engineering principles to solve problems related to medicine or biology, emphasizing the need for interdisciplinary approaches;
- Gives students opportunities to apply theory with practice-oriented laboratory, industrial or clinical experiences;
- Produces engineers who can communicate well at all levels within an organization;
- Delivers a dynamic curriculum that is continuously updated with input from practitioners and researchers in the field of biomedical engineering;
- Promotes biomedical engineering as a career choice; and
- Serves both the biomedical engineering community and society.

Educational Objectives

Graduates of the Western New England University Biomedical Engineering Program will, in their professional endeavors,

- Function as productive team members and leaders in a variety of environments including industrial, hospital/clinical, governmental, solving engineering problems, including those at the interface of medicine and engineering while continuing to uphold safety, sustainability or ethical concerns.
- Be actively engaged in life-long learning such as participating or leading relevant professional societies, continuing their education, or attending relevant workshops, meetings, or seminars.

Student Outcomes

Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

First year - Fall

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 133 - MATH 127	Calculus I or Calculus I w/Pre Calculus	4 cr. - 5 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

First Year - Spring

ENGL 133	English Composition II	3 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall

BME 201	Foundations of Biomedical Engineering	3 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
EE 205/HONE 205	Electrical Engineering I	4 cr.
MATH 236	Differential Equations	3 cr.

Subtotal: 18

Sophomore Year - Spring

BME 202	Biomedical Systems	3 cr.
BME 206	Biomedical Sophomore Laboratory	1 cr.
BME 240	Biomaterials	3 cr.
CHEM 106	General Chemistry II	4 cr.
IE 212	Probability and Statistics	3 cr.
MATH 235	Calculus III	3 cr.

Subtotal: 17

Junior Year - Fall

BME 301	Engineering Physiology I	3 cr.
BME 305	Biomedical Engineering Laboratory I	1 cr.
BME 331	Bioinstrumentation	3 cr.
MATH 350	Vector Calculus and Fourier Series	3 cr.
XXX XXX	Sequence Elective	3 cr.
SBP XXX	Social/Behavioral Perspective	3 cr.

Subtotal: 16

Junior Year - Spring

BME 302	Engineering Physiology II	3 cr.
BME 306	Biomedical Engineering Laboratory II	1 cr.
BME 351	Biomechanics I	3 cr.
XXX XXX	Sequence Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 13

Senior Year - Fall

BME 405	Biomedical Engineering Senior Laboratory	1 cr.
BME 437	Senior Design Projects I	3 cr.
BME 451	Biomechanics II	3 cr.
XXX XXX	Sequence Elective	3 cr.
BME xxx	Technical Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 16

Senior Year - Spring

BME 440	Senior Design Projects II	3 cr.
BME 450	Biotransport Processes	3 cr.
XXX	Technical Elective	3 cr.
XXX XXX	Sequence Elective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.

Subtotal: 15

General Education courses must be selected in such a way to insure that all "perspective of understanding" requirements have been satisfied.

Total Credit Hours: 127

The 2.000 required minimum grade point average in the major is based upon all BME courses pursued as a part of the student's degree program.

Biomedical Engineering Technical Elective

Any course labeled BME xxx that is not part of the required curriculum may be used to fulfill the BME technical elective.

Technical Elective

Any 200-level or above math or science course or any 300-level or above engineering course may be used to fulfill the technical elective.

Biomedical Engineering Sequence Electives

In the junior and senior years, there are a series of "sequence elective" courses totaling a minimum of 12 academic credits. Students may choose one of the following curated sequences of courses or develop their own custom sequence. Courses in custom sequences must be from any of the curated sequences below or qualify as a technical elective (any 200-level or above math or science course or any 300-level or above engineering course). Additional sequence courses are possible but must be approved by the Department Chair.

Bioinstrumentation Sequence

BME 332	Biomedical Imaging	3 cr.
CPE 271	Digital System Design	4 cr.
BME 431	Advanced Bioinstrumentation	3 cr.
BME 434	Biosensors, BioMEMS, and Nanomedicine	3 cr.

Biomaterials Sequence

CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
CHEM 317	Physical Chemistry I	3 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.

Plus two of the following courses:

BME 434	Biosensors, BioMEMS, and Nanomedicine	3 cr.
BME 443	Advanced Biomedical Materials and Medical Devices	3 cr.
ME 322	Manufacturing Processes	3 cr.

Biomedical Micro and Nanodevices Sequence

CHEM 211	Analytical Methods	3 cr.
BIO 203	Microbiology	4 cr.
BME 342	Drug Delivery	3 cr.
BME 433	Biomedical Microsystems	3 cr.

Business Sequence

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.

Plus two of the following courses:

ENTR 251	Entrepreneurship and Innovation	3 cr.
MAN 303	Interpersonal Skills for Leading	3 cr.
MAN 370	Project Management	3 cr.
BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.

Cell and Tissue Engineering Sequence

BME 460	Cell and Tissue Engineering	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
	And	
BIO 320	Principles of Biochemistry	3 cr.
	or	
CHEM 314	Biochemistry	3 cr.

Manufacturing Sequence

IE 326	Production Planning and Control	3 cr.
IE 312	Engineering Economic Analysis	3 cr.
ME 322	Manufacturing Processes	3 cr.
IE 315	Quality Control and Engineering Statistics	3 cr.

Medical Imaging Sequence

EE 314	Electromagnetic Fields and Waves	3 cr.
EE 302	Introduction to Digital Signal Processing	3 cr.
PHYS 301	Optics	3cr.
BME 332	Biomedical Imaging	3 cr.

Premedical Sequence

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 314	Biochemistry	3 cr.

Premedical Students:

Biomedical Engineering students intending to apply to medical school are advised to select the premedical elective sequence and seek the advice of their BME advisor and the campus premedical advisor as soon as practical.

Prosthetics and Orthotics Sequence

BME 425	Prosthetic and Orthotic Devices	3 cr.

Plus three of the following courses:

PSY 201	Developmental Psychology	3 cr.
PSY 326	Abnormal Psychology	3 cr.
BME 443	Advanced Biomedical Materials and Medical Devices	3 cr.
CPE 271	Digital System Design	4 cr.
CPE 310	Microprocessors I	3 cr.
EE 302	Introduction to Digital Signal Processing	3 cr.
EE 338	Electric Drives	3 cr.
EE 422	Control Systems	3 cr.
EE 445/EE 545	Neural Networks - Deep Learning	3 cr.
ME 449	Computer-Aided Engineering	3 cr.

Software Engineering Sequence

CS 111	Accelerated Python	1 cr.
CS 210	Software Design	4 cr.
CS 220	Software Development	4 cr.
CS/IT 200 or CS 490	Data Structures Software Engineering	4 cr. 3 cr.

*Note: Students interested in pursuing a Certification in Prosthetics and Orthotics after graduation should take both Psychology courses.

University-Wide Requirements: A total of four University-wide requirement courses are listed in the Biomedical Engineering curriculum. These courses will be used to satisfy the requirement that all Western New England University students attain a perspective on: Ethics, History, Aesthetics, Cultural Studies, and Social and Behavioral issues.

BPMN.CERT - Certificate in Project Management

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Certificate in Project Management

Program Code ~
BPMN.CERT

Degree Designation ~
CERT - Certificate

Academic Level ~
UG - Undergraduate

Program Short Description

This certificate helps students across all disciplines develop project management skills to navigate projects and the people involved in them to "get the job done" on time, under budget, and according to desired specifications with coursework in project management, leadership in teams, and change management, all of which aid student career advancement for non-business and non-management majors outside the College of Business as well as for management, HR, general business or other business disciplines.

Requirements

Free Form Requirements
Project Management Certificate

Degree-seeking students can earn a Project Management certificate by completing three courses with a grade of "C" or higher. These courses may also meet College of Business elective or major requirement.

Requirements

MAN 353	Leadership and Team Skills	3 cr.
MAN 370	Project Management	3 cr.
MAN 422	Conflict Resolution	3 cr.

Total Credit Hours: 9

Certificate must be declared prior to graduation and appears on official transcript.

BSCMN.CERT - Certificate in Socially-Conscious Management

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Certificate in Socially-Conscious Management

Program Code ~
BSCMN.CERT

Degree Designation ~
CERT - Certificate

Academic Level ~
UG - Undergraduate

Program Short Description

This certificate helps students develop skills to navigate multiple contemporary issues in the responsible running of socially-conscious organizations by better understanding societal organizational norms, sustainability topics, and a range of organizational ethical concerns. This is meant to strengthen non-business and non-management majors as well as augment those focused on leadership, HR, general business, or other disciplines.

Requirements

Free Form Requirements
Socially-Conscious Management Certificate

Degree-seeking students can earn a Socially-Conscious Management certificate by completing three courses with a grade of "C" or higher. These three courses may also meet College of Business elective or major requirement.

Requirements

MAN 240/HONB 240	Business and Society	3 cr.
MAN 305	Managing for Sustainability	3 cr.
MAN 315/SO 315	Organizational Theory	3 cr.

Total Credit Hours: 9

Certificate must be declared prior to graduation and appears on official transcript.

CEE.BSE - BSE in Civil Engineering

General

College/School
College of Engineering

Department(s) ~
Civil & Environmental Engr

Program Title ~
BSE in Civil Engineering

Program Code ~
CEE.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

This major will provide you with the building blocks to envision and design of critical infrastructure through classroom activities, lab experimentation, and practical experience.

Requirements

Free Form Requirements
Civil Engineering Major

General information

Our nation's success has been built on the foundation of our solid infrastructure. Today, thousands of public works projects in the United States are in desperate need of repair and many more new infrastructure developments are necessary to keep our country competitive in the global community. There has never been a greater need for talented civil and environmental engineers to plan, execute, and lead these important projects.

The Civil Engineering major educates students to become leaders in this important and in-demand profession. The Civil Engineering major provides students with a broad and well-integrated background in the concepts, theories, and methodologies needed to plan, design, analyze, develop, organize, and manage civil and environmental engineering projects. Students work with state-of-the-art equipment in our new concrete/structures, transportation, environmental/water resources, and soil mechanics laboratories.

The Civil Engineering major focuses on the latest advances in the design, construction, and maintenance of society's infrastructure including roads, railroads, buildings, airports, seaports, tunnels, dams, bridges, pipelines, water treatment and supply networks, and environmental systems. Students study major areas of civil engineering: structural engineering, transportation engineering, geotechnical engineering, environmental engineering, water resources engineering, and construction engineering. Students also study alternative/renewable energy, sustainable materials, and green building laws.

Civil Engineering students select one of four concentrations at the start of the junior year. Students can select the Civil Engineering concentration, the Environmental Engineering concentration, or the Railway Engineering concentration. The first two years of the curriculum are the same for all Civil Engineering students. The selection of courses for the last two years is moderately different depending on the concentration. Note that any concentration leads to a successful career in civil engineering and selection of concentration should be based on personal preference and in consultation of career goals with an academic advisor.

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Career Opportunities

The Civil Engineering program provides a solid foundation in major sub-disciplines of civil engineering that leads to employment in both private and public sectors of industry or military. Examples of career opportunities include city/county/state organizations, federal agencies, and small to large private engineering firms. The career outlook for civil engineers is bright as the Bureau of Labor Statistics projects an employment growth rate of 11% over the decade of 2016-2026.

The Environmental Engineering concentration provides a solid foundation in major sub-disciplines of civil engineering with an emphasis on environmental and water resources engineering. This concentration leads to employment in both private and public sectors of industry or military. Examples of career opportunities include state and federal agencies, water or wastewater treatment plants, environmental laboratories, and small to large private engineering firms. The career outlook for environmental engineers is bright as the Bureau of Labor Statistics projects an employment growth rate of 8% over the decade of 2016-2026.

The Railway Engineering concentration provides a solid foundation in major sub-disciplines of civil engineering with an emphases on railway engineering. This concentration leads to employment in both private and public sectors of industry. Examples of career opportunities include state and federal agencies, and small to large private engineering firms.

Electives

Electives supplement the engineering student's technical program. These electives must be selected in such a way that all General Education "perspective of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. An assigned departmental faculty advisor must approve selection of electives from engineering, mathematics, science, or business.

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Program Educational Objectives

Within a few years after graduation, Bachelor of Science in Engineering in Civil Engineering (BSECE) program graduates will have:

- Led, planned, designed, and managed civil engineering projects (PEO 1).
- Demonstrated technical expertise by obtaining professional licensure (PEO 2).
- Actively engaged in professional societies, community service, and continuous education (PEO 3).

Student Outcomes

The program has documented student outcomes that support the program's educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

Student Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences .
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5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

CEE 251	Surveying	3 cr.
CEE 253	Surveying Laboratory	1 cr.
ME 202/HONE 202	Statics	3 cr.
CHEM 105	General Chemistry I	4 cr.
MATH 236	Differential Equations	3 cr.
SBP XXX	Social/Behavioral Sciences Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

CEE 240	Strength of Civil Engineering Materials	3 cr.
CEE 242	Strength of Civil Engineering Laboratory	1 cr.
ME 203	Dynamics	3 cr.
CHEM 106	General Chemistry II	4 cr.
MATH 235	Calculus III	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Junior Year - Fall Semester

CEE 341	Structural Analysis	3 cr.
CEE 330	Soil Mechanics	3 cr.
CEE 332	Soil Mechanics Laboratory	1 cr.
CEE 361	Engineering Fluid Mechanics	3 cr.
xxx	Civil Engineering Science Elective	3 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 16

Junior Year - Spring Semester

CEE 351	Transportation Engineering	3 cr.
CEE 353	Transportation Engineering Laboratory	1 cr.
CEE 342	Steel & Reinforced Concrete	3 cr.
IE 212	Probability and Statistics	3 cr.
PH XXX	Ethical Perspective	3 cr.
xxx	Technical or Design or General Elective	3 cr.

Subtotal: 16

Senior Year - Fall Semester

CEE 400	Ethical and Professional Issues	1 cr.
CEE 430	Geotechnical Engineering	3 cr.
CEE 461	Water Resources Engineering	3 cr.
CEE 470	Construction Engineering	3 cr.
xxx	Technical or Design Elective	3 cr.
xxx	Technical or Design or General Elective	3 cr.

Subtotal: 16

Senior Year - Spring Semester

CEE 320	Environmental Engineering	3 cr.
CEE 322	Environmental Engineering Laboratory	1 cr.
CEE 402	Capstone Design	3 cr.
CEE 451	Construction Materials	3 cr.
xxx	Technical or Design Elective	3 cr.

Subtotal: 13

Total Credit Hours: 127

- Technical or design electives are engineering, math, science, or computer courses normally numbered 300 or above and approved by the advisor.
- General Education courses must be selected in such a way to insure all "perspectives of understanding" requirements have been satisfied.
- General elective. Selected on approval of the academic advisor.
- A student selects one course from the list to satisfy the Civil Engineering Science elective - GEOL 101, BIO 101, METR 101.

The 2.000 required minimum grade point average in the major is based upon all major courses pursued as a part of the student's major program.

CEE.MSE - MSE in Civil Engineering

General

College/School
College of Engineering

Department(s) ~
Civil & Environmental Engr

Program Title ~
MSE in Civil Engineering

Program Code ~
CEE.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

This program will provide you with advanced knowledge in the structures that help the modern world function. From bridges and roads to airports and dams, you'll be well-rounded in the most critical areas of infrastructure.

Requirements

Free Form Requirements
MSE in Civil Engineering

The Master of Science in Engineering in Civil Engineering is a program for students wishing to study advanced civil engineering topics beyond the bachelor's level. A student can select from three possible options including an all-coursework option, a project option, and a research-oriented thesis option.

Degree Requirements

Core course requirements

CEE 602	Finite Element and Numerical Analysis	3 cr.
CEE 606	Advanced Green and Sustainable Civil Engineering	3 cr.
	or	
CEE 640	Solid Mechanics	3 cr.
CEE 670	Construction Management	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 605	Engineering Management	3 cr.
	or	
EMGT 648	Project Management	3 cr.

Subtotal: 15

Electives - 15 credits with the following options:

All Course Option

Combination of 15 credits of following coursework:

CEE 5XX/6XX	500-level/600-level CEE elective course	15 cr. max.
6XX	EE course	3 cr.
	or	
6XX	EMGT course	3 cr.
	or	
6XX	ME course	3 cr.
	or	
6XX	CMGT course	3 cr.

Subtotal: 15

Project Option

CEE 680	Civil Engineering Project	3 cr.
CEE 5XX/6XX	500-level/600-level CEE elective course	12 cr. max.
6XX	EE course	3 cr.
	or	
6XX	EMGT course	3 cr.
	or	
6XX	ME course	3 cr.
	or	
6XX	CMGT course	3 cr.

Subtotal: 15

Thesis Option

Thesis with presentation (CEE 698/CEE 699, 6 credits total), plus combination of 9 credits of following coursework:

CEE 698	Thesis Research	3 cr.
CEE 699	Thesis Research	3 cr.
CEE 5XX/6XX	500-level/600-level CEE elective course	9 cr. max.
6XX	EE course	3 cr.
	or	
6XX	EMGT course	3 cr.
	or	
6XX	ME course	3 cr.
	or	
6XX	CMGT course	3 cr.

Subtotal: 15

Total Credit Hours: 30

Note: Up to 6 credit hours may be transferred from another school, subject to approval from the CEE Department.

Civil Engineering Elective Courses

CEE 620	Subsurface Contaminant Fate and Transport and Remediation	3 cr.
CEE 630	Advanced Geotechnical Engineering	3 cr.
CEE 642	Advanced Reinforced Concrete Design	3 cr.
CEE 644	Structural Dynamics and Earthquake Engineering	3 cr.
CEE 650	Advanced Railway Engineering and Planning	3 cr.
CEE 680	Civil Engineering Project	3 cr.
CEE 698	Thesis Research	3 cr.
CEE 699	Thesis Research	3 cr.

Approved Engineering Elective Courses

EE 601	Advanced Electrical Engineering Analysis	3 cr.
CEE 609/EMGT 609/IE 609	Engineering Cost Analysis	3 cr.
	or	
EMGT 609/CEE 609/IE 609	Strategic Engineering Economics	3 cr.
CEE 641 / EMGT 640	Energy Management	3 cr.
ME 610	Measurement Systems	3 cr.
ME 619	Experimental and Analytical Stress Analysis	3 cr.
ME 626	Advanced Fluid Mechanics I	3 cr.
ME 635	Design of Alternative Energy Systems	3 cr.
ME 651	Applied Computational Fluid Dynamics	3 cr.

CEENV.BSE - BSE in Civil Engineering/Environmental Engr Conc

General

College/School
College of Engineering

Department(s) ~
Civil & Environmental Engr

Program Title ~
BSE in Civil Engineering/Environmental Engr Conc

Program Code ~
CEENV.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

The Environmental Engineering concentration is well suited for students planning on a career in environmental engineering, water resources engineering, or geotechnical engineering.

Requirements

Free Form Requirements
Civil Engineering Major

General information

Our nation's success has been built on the foundation of our solid infrastructure. Today, thousands of public works projects in the United States are in desperate need of repair and many more new infrastructure developments are necessary to keep our country competitive in the global community. There has never been a greater need for talented civil and environmental engineers to plan, execute, and lead these important projects.

The Civil Engineering major educates students to become leaders in this important and in-demand profession. The Civil Engineering major provides students with a broad and well-integrated background in the concepts, theories, and methodologies needed to plan, design, analyze, develop, organize, and manage civil and environmental engineering projects. Students work with state-of-the-art equipment in our new concrete/structures, transportation, environmental/water resources, and soil mechanics laboratories.

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Program Educational Objectives

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The program has documented student outcomes that support the program's educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

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Degree Requirements

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

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ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

CEE 251	Surveying	3 cr.
CEE 253	Surveying Laboratory	1 cr.
ME 202/HONE 202	Statics	3 cr.
CHEM 105	General Chemistry I	4 cr.
MATH 236	Differential Equations	3 cr.
SBP XXX	Social/Behavioral Sciences Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

CEE 240	Strength of Civil Engineering Materials	3 cr.
CEE 242	Strength of Civil Engineering Laboratory	1 cr.
ME 203	Dynamics	3 cr.
CHEM 106	General Chemistry II	4 cr.
MATH 235	Calculus III	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Junior Year - Fall Semester

CEE 341	Structural Analysis	3 cr.
CEE 330	Soil Mechanics	3 cr.
CEE 332	Soil Mechanics Laboratory	1 cr.
CEE 361	Engineering Fluid Mechanics	3 cr.
xxx	Civil Engineering Science Elective	3 cr.
xxx	Environmental Elective	3 cr.

Subtotal: 16

Junior Year - Spring Semester

CEE 324	Groundwater Engineering	3 cr.
CEE 351	Transportation Engineering	3 cr.
CEE 353	Transportation Engineering Laboratory	1 cr.
CEE 342	Steel & Reinforced Concrete	3 cr.
IE 212	Probability and Statistics	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 16

Senior Year - Fall Semester

CEE 400	Ethical and Professional Issues	1 cr.
CEE 430	Geotechnical Engineering	3 cr.
CEE 461	Water Resources Engineering	3 cr.
CEE 470	Construction Engineering	3 cr.
xxx	Technical or Design Elective	3 cr.
xxx	Environmental Elective	3 cr.

Subtotal: 16

Senior Year - Spring Semester

CEE 320	Environmental Engineering	3 cr.
CEE 322	Environmental Engineering Laboratory	1 cr.
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Total Credit Hours: 127

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CEERW.BSE - BSE in Civil Engineering/Railway Engr Conc

General

College/School
College of Engineering

Department(s) ~
Civil & Environmental Engr

Program Title ~
BSE in Civil Engineering/Railway Engr Conc

Program Code ~
CEERW.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

The Railway Engineering concentration provides a solid foundation in major sub-disciplines of civil engineering with an emphases on railway engineering. This concentration leads to employment in both private and public sectors of industry. Examples of career opportunities include state and federal agencies and small to large private engineering firms.

Requirements

Free Form Requirements
Civil Engineering Major

General information

Our nation's success has been built on the foundation of our solid infrastructure. Today, thousands of public works projects in the United States are in desperate need of repair and many more new infrastructure developments are necessary to keep our country competitive in the global community. There has never been a greater need for talented civil and environmental engineers to plan, execute, and lead these important projects.

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Subtotal: 16

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ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

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CEE 251	Surveying	3 cr.
CEE 253	Surveying Laboratory	1 cr.
ME 202/HONE 202	Statics	3 cr.
CHEM 105	General Chemistry I	4 cr.
MATH 236	Differential Equations	3 cr.
SBP XXX	Social/Behavioral Sciences Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

CEE 240	Strength of Civil Engineering Materials	3 cr.
CEE 242	Strength of Civil Engineering Laboratory	1 cr.
ME 203	Dynamics	3 cr.
CHEM 106	General Chemistry II	4 cr.
MATH 235	Calculus III	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Junior Year - Fall Semester

CEE 341	Structural Analysis	3 cr.
CEE 330	Soil Mechanics	3 cr.
CEE 332	Soil Mechanics Laboratory	1 cr.
CEE 361	Engineering Fluid Mechanics	3 cr.
CEE 455	Railroad Transportation Engineering	3 cr.
xxx	Civil Engineering Science Elective	3 cr.

Subtotal: 16

Junior Year - Spring Semester

CEE 351	Transportation Engineering	3 cr.
CEE 353	Transportation Engineering Laboratory	1 cr.
CEE 342	Steel & Reinforced Concrete	3 cr.
CEE 456	Railroad Track Structure Engineering	3 cr.
IE 212	Probability and Statistics	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 16

Senior Year - Fall Semester

CEE 400	Ethical and Professional Issues	1 cr.
CEE 430	Geotechnical Engineering	3 cr.
CEE 461	Water Resources Engineering	3 cr.
CEE 470	Construction Engineering	3 cr.
xxx	Technical or Design Elective	3 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 16

Senior Year - Spring Semester

CEE 320	Environmental Engineering	3 cr.
CEE 322	Environmental Engineering Laboratory	1 cr.
CEE 402	Capstone Design	3 cr.
CEE 451	Construction Materials	3 cr.
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Subtotal: 13

Total Credit Hours: 127

- Technical or design electives are engineering, math, science, or computer courses normally numbered 300 or above and approved by the advisor.
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- General elective. Selected on approval of the academic advisor.
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The 2.000 required minimum grade point average in the major is based upon all major courses pursued as a part of the student's major program.

CHEM.BS - BS in Chemistry

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Chemistry

Program Code ~
CHEM.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The chemistry curriculum is designed to provide a sound theoretical background in the principles of chemistry complemented by hands-on laboratory experiences. The BS in Chemistry provides graduates with diverse career opportunities and prepares them for advanced studies in chemistry and related fields. WNE graduates are employed as chemical research associates in industrial, governmental, clinical, and environmental settings, while others pursue advanced degrees and careers in teaching chemistry or in chemical sales.

Requirements

Free Form Requirements
Chemistry Major

The Chemistry curriculum is designed to provide a sound theoretical background in the principles of chemistry complemented by hands-on laboratory experiences. Students have the opportunity to acquire the chemical knowledge and laboratory skills enabling them to perform synthesis as well as characterize organic and inorganic compounds utilizing chemical, spectrophotometric, chromatographic, and advanced instrumental methods of analysis.

Career Opportunities

A baccalaureate degree in chemistry provides graduates with diverse career opportunities and also prepares them for advanced studies in chemistry and related fields. WNE graduates are employed as chemical research associates in industrial, governmental, clinical, and environmental settings. Others pursue a career teaching chemistry or in chemical sales. Many graduates pursue advanced degrees in chemistry, biochemistry, medical sciences, and other related disciplines.

Chemistry Major Objectives

Upon completing this program, a Chemistry major will be able to:

1. Perform accurate stoichiometric and chemical equilibrium calculations.
2. Predict and explain the reactivity of an organic or inorganic compound from a knowledge of its structure.
3. Assess the thermodynamic and kinetic stability of a chemical system.
4. Propose a reasonable mechanism for an organic or inorganic reaction.
5. Apply basic quantum mechanical concepts to the study of chemical systems.
6. Synthesize and characterize inorganic and organic compounds.
7. Design and perform a qualitative and quantitative analysis of a sample of matter, using both wet and instrumental methods.
8. Plan and execute experiments through the proper use of library resources.
9. Analyze data statistically and assess reliability of results.
10. Communicate effectively through oral and written reports.

Degree Requirements

Required chemistry courses (41 credit hours)

CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 211	Analytical Methods	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
CHEM 312	Instrumental Analysis	3 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 317	Physical Chemistry I	3 cr.
CHEM 318	Physical Chemistry II	3 cr.
CHEM 322	Instrumental Analysis Laboratory	1 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.
CHEM 328	Physical Chemistry Laboratory II	1 cr.
CHEM 421	Inorganic Chemistry	3 cr.
CHEM 431	Inorganic Chemistry Laboratory	1 cr.
CHEM 470	Seminar in Chemistry	1 cr.

Subtotal: 41

Mathematics and physics courses (19 credit hours)

MATH 133 or MATH 127	Calculus I Calculus I w/Precalculus Review	4 cr. 5 cr.
MATH 134	Calculus II	4 cr.
MATH 235	Calculus III	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 19-20

Total Credit Hours: 60-61

The 2.000 required grade point average in the major is based upon all CHEM and PHYS courses pursued as a part of the student's degree program.

Note that no transfer credit is accepted for major-level science lab courses taught online.

Chemistry Suggested Sequence of Courses

Notes: The suggested sequence of courses in years two, three and four is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

First Year- Fall

CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 133 or MATH 127	Calculus I Calculus I w/Precalculus Review	4 cr. 5 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16-17

First Year - Spring

CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 134	Calculus II	4 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 17

Sophomore Year - Fall

CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
MATH 235	Calculus III	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 14

Sophomore Year - Spring

CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 14

Junior Year - Fall

CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
GUR xxx	General University Requirement	3 cr
GUR xxx	General University Requirement	3 cr
GEN XXX	General Elective	2 cr.
WIC 2XX	Writing Intensive Course	3 cr.

Subtotal: 15

Junior Year - Spring

CHEM 312	Instrumental Analysis	3 cr.
CHEM 322	Instrumental Analysis Laboratory	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 14

Senior Year - Fall

CHEM 317	Physical Chemistry I	3 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.
GUR xxx	General University Requirement	3 cr
GUR xxx	General University Requirement	3 cr
GUR xxx	General University Requirement	3 cr
GEN 3XX	General Elective	3 cr.

Subtotal: 16

Senior Year - Spring

CHEM 318	Physical Chemistry II	3 cr.
CHEM 328	Physical Chemistry Laboratory II	1 cr.
CHEM 421	Inorganic Chemistry	3 cr.
CHEM 431	Inorganic Chemistry Laboratory	1 cr.
CHEM 470	Seminar in Chemistry	1 cr.
GEN XXX	General Elective	2 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 14

Total Credit Hours: 120

CHEM.CERT - Certificate in Chemistry

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
Certificate in Chemistry

Program Code ~
CHEM.CERT

Degree Designation ~
CERT - Certificate, CHEMC - Certificate in Chemistry

Academic Level ~
UG - Undergraduate

Program Short Description

This certificate prepares students to fill positions in the chemical industry, and in other areas such as hospital and environmental laboratories highly dependent upon chemical technology.

Requirements

Free Form Requirements
Certificate Program in Chemistry

Recognizing the need for qualified workers trained in chemistry to fill positions in the chemical industry, and in other areas such as hospital and environmental laboratories highly dependent upon chemical technology, the University offers a Certificate in Chemistry. The certificate requires the completion of 20 credit hours in chemistry courses.

Certificate requirements are as follows:

CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
CHEM 312	Instrumental Analysis	3 cr.
CHEM 322	Instrumental Analysis Laboratory	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.

Total Credit Hours: 20

CJ.BS - BS in Criminal Justice

General

College/School
College of Arts & Sciences

Department(s) ~
Criminal Justice & Criminology

Program Title ~
BS in Criminal Justice

Program Code ~
CJ.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The BS in Criminal Justice program helps students acquire a higher level of knowledge, understanding, and competencies specific to criminal justice professions in order to prepare them for careers in law enforcement, corrections, probation and parole, court administration, the juvenile justice system, or victim services. The program also provides a solid foundation for students who wish to pursue graduate studies in a variety of disciplines.

Requirements

Free Form Requirements
Criminal Justice Major

General Information

The BS in Criminal Justice program is primarily designed for students who intend to pursue a career in such fields as law enforcement, corrections, probation and parole, court administration, the juvenile justice system, or victim services. The program also provides a solid foundation for students who wish to pursue graduate studies in a variety of disciplines.

Career Opportunities

Within the field of criminal justice, there are myriad professional career opportunities. Typical careers of graduates include law enforcement officer positions at the local, state, and federal levels; professional positions in the field of corrections, probation, and parole; positions in court administration and in the juvenile justice system; social work; victim services; and positions as industrial security specialists with major security companies and corporations.

Program Goals and Mission

The mission of the Bachelor of Science in Criminal Justice program is to help students acquire a higher level of knowledge, understanding, and competencies specific to criminal justice professions. The program specifically focuses on the following goals:

- Foundation of Knowledge: Students will develop an understanding of the major concepts, basic and advanced terms, major theories and perspectives, and empirical findings within the discipline.
- Applications of Knowledge: Students will develop an understanding of the theoretical perspectives, sociocultural factors, and empirical findings important to policing administering justice in a democratic society.

- Professional Ethics: Students will develop an understanding of personal and professional values to function ethically as individuals and professionals in their work environments, as well as their local and global communities.
- Science: Students will develop an understanding of important concepts and methodologies within criminal justice, in particular, and the social sciences, more broadly.

In the accomplishment of these goals, the program mission is for students to:

- Develop an expansive base of personal and professional knowledge;
- Be able to apply board criminal justice knowledge to solve an array of intractable problems encountered in professional settings;
- Translate knowledge into informed professional practices; and
- Convey knowledge through the delivery of high-quality services that are responsive to the needs of the community and the profession.

Degree Requirements

Required criminal justice courses (24 credit hours)

CJ 101	Introduction to Criminal Justice	3 cr.
CJ 210	Criminology	3 cr.
CJ 211	Corrections	3 cr.
CJ 218	Police and Society	3 cr.
CJ 234	The Judicial Process	3 cr.
CJ 315	Research Methods in Criminal Justice	3 cr.
CJ 340	Ethical Decision-Making	3 cr.
CJ 450	Senior Seminar	3 cr.
	or	
CJ 480	Internship in Criminal Justice	1-3 cr.

Subtotal: 24

An additional 24 credit hours in criminal justice courses is required.

Students may elect to pursue a criminal justice concentration.

Students who have chosen an area of concentration are required to complete 12 credit hours within that area and an additional 12 credit hours from upper level justice courses to satisfy their degree requirements.

Students who have chosen two areas of concentration are required to complete 12 credit hours within each selected area for a total of 24 credit hours.

Students who do not declare an area of concentration are required to complete 24 credit hours from upper level criminal justice courses and/or courses listed under the concentration area electives.

CJ 2XX or 3XX	Criminal Justice Elective	3 cr.
CJ 3XX or 4XX	Criminal Justice Elective **	21 cr.
	or	
CJ 2XX or 3XX	Criminal Justice Elective	3 cr.
CJ 3XX or 4XX	Criminal Justice Elective **	9 cr.
CJ 3XX or 4XX	CJ Concentration Area Electives **	12 cr.

Subtotal: 24

**Fulfills 30 upper-level credit hours required.

Criminal Justice Concentration Area Options

Criminal Investigation

Students who have chosen the criminal investigation concentration will complete 12 credits from among the following upper level courses offered within this concentration:

CJ 310	Criminal Law	3 cr.
CJ 311	Criminal Investigation	3 cr.
CJ 312	Criminal Procedure	3 cr.
CJ 322	Evidence	3 cr.
CJ 341	Constitutional Issues in Criminal Justice	3 cr.
CJ 415	Forensic Science	3 cr.
CJ 420	Criminal Justice Investigation & Exoneration	3 cr.

Subtotal: 12

Homeland Security and Terrorism

Students who have chosen the homeland security and terrorism concentration will complete 12 credits from among the following upper level courses offered within this concentration:

CJ 348	Introduction to Cyber Crimes	3 cr.
CJ 360	Introduction to Homeland Security and Terrorism	3 cr.
CJ 362	Counter-terrorism	3 cr.
CJ 363	Weapons of Mass Destruction	3 cr.
CJ 375	Emergency Response Management	3 cr.
CJ 430	Human Trafficking	3 cr.
CJ 440	Immigration and Crime	3 cr.

Subtotal: 12

Victim Studies

Students who have chosen the victim studies concentration will complete 12 credits from among the following upper level courses offered within this concentration:

CJ 303	Victimology	3 cr.
CJ 304	Child Abuse and Neglect	3 cr.
CJ 343	Domestic Violence	3 cr.
CJ 353	Violence Against Women	3 cr.
CJ 425	Problem Analysis in Victim Studies	3 cr.
CJ 430	Human Trafficking	3 cr.
CJ 445	Mental Health and the CJS	3 cr.

Subtotal: 12

Criminal Justice Suggested Sequence of Courses

First Year- Fall Semester

CJ 101	Introduction to Criminal Justice	3 cr.
GEN XXX	General Elective	3 cr.
ENGL 132	English Composition I	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
LA 110	First Year Seminar	3 cr.

Subtotal: 15

First Year - Spring Semester

HIST XXX	Historical Perspective	3 cr.
CJ 218	Police and Society	3 cr.
ENGL 133	English Composition II	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
PSY 101	Introduction to Psychology	3 cr.
	or	
CJ 2XX	Criminal Justice Elective	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

CJ 211	Corrections	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
CJ 210	Criminology	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

CUL XXX	Global Cultures Perspective	3 cr.
CJ 234	The Judicial Process	3 cr.
CJ 2XX or 3XX	Criminal Justice Elective	3 cr.
MATH XXX	Mathematical Analysis	3 cr.
NSP	Natural Science Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

CJ 3XX or 4XX	Criminal Justice Elective	3 cr.
CJ 315	Research Methods in Criminal Justice	3 cr.
GEN XXX	General Elective	3 cr.
CS 131	Computing for the Arts and Sciences	3 cr.
	or	
CS 133	Introduction to Informatics	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

GEN XXX	General Elective	3 cr.
CJ 340	Ethical Decision-Making	3 cr.
CJ 3XX or 4XX	Criminal Justice Elective	3 cr.
GEN XXX	General Elective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.

Subtotal: 15

Senior Year - Fall Semester

CJ 3XX or 4XX	Criminal Justice Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
CJ 3XX or 4XX	Criminal Justice Elective	3 cr.
	and	
CJ 480	Internship in Criminal Justice	1-3 cr.
	or	
CJ 450	Senior Seminar	3 cr.

Subtotal: 15

Senior Year - Spring Semester

CJ 3XX or 4XX	Criminal Justice Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
CJ 3XX	Criminal Justice Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Notes:

1. CJ 210 - Criminology will also satisfy the 200-level writing intensive course (WIC)

2. CJ 480 Internship in Criminal Justice will satisfy the CJ 450 Senior Seminar requirement.

CMGT.BS - BS in Construction Management

General

College/School
College of Engineering

Department(s) ~
Construction Management

Program Title ~
BS in Construction Management

Program Code ~
CMGT.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Construction Management is a professional service that uses specialized project management techniques to oversee the planning, design, and construction of projects from beginning to end. A Construction Manager provides effective management of project schedules, costs, quality, safety, scope, and function.

Requirements

Free Form Requirements
Construction Management Major

General information

Construction Management is defined as a professional service that uses specialized project management techniques to oversee the planning, design, and construction of a project from its beginning to its end. A Construction Manager provides a project's owner with effective management of the project's schedule, cost, quality, safety, scope, and function.

The College of Engineering's Construction Management major educates students to become leaders in this essential and in-demand profession. The Construction Management major provides students with a broad and well-integrated background in the concepts, theories, and methodologies needed to plan, design, analyze, develop, organize, and manage construction projects.

Career Opportunities

A Construction Management degree leads to employment in both private and public sectors of industry or military. Examples of career opportunities include city/county/state organizations, federal agencies, and small to large construction firms. The career outlook for construction managers is bright as the Bureau of Labor Statistics projects an employment growth rate of 10% over the decade of 2018-2028. Furthermore, *U.S. News & World Report* ranks construction managers as #1 in Best Construction Jobs with a low unemployment rate of 1.8%.

Electives

Electives supplement the student's technical program. These electives must be selected in such a way that all General Education "perspective of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. An assignment departmental faculty advisor must approve the selection of electives from engineering, mathematics, science, or business.

Vision

The vision of the Department of Construction Management is to be regionally, nationally, and internationally recognized in providing construction management education, leading to well-qualified managers who are innovative, immediate contributors to their profession, and successful in advanced studies.

Mission

The mission of the Construction Management program is to provide students with a supportive environment that facilitates learning to solve problems in construction management. The faculty and staff of the program use their background in teaching, research, and industry to prepare students to be successful as they move into the workforce or graduate school.

Educational Objectives

Our graduates will:
a. Demonstrate a strong fundamental scientific and technical knowledge base and critical thinking skills.
b. Actively engage in lifelong learning related to the construction management profession.
c. Plan, design, analyze, develop, organize, and manage construction management projects.

Student Outcomes

Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of construction management.

1. An ability to identify, formulate, and solve broadly defined technical or scientific problems by applying knowledge of mathematics and science and/or technical topics to areas relevant to construction management.
2. An ability to formulate or design a system, process, procedure, or program to meet desired needs.
3. An ability to develop and conduct experiments or test hypotheses, analyze and interpret data, and use scientific judgment to draw conclusions.
4. An ability to communicate effectively with a range of audiences.
5. An ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.
6. An ability to function effectively on teams that establish goals, plan tasks, meet deadlines, and analyze risk and uncertainty.

Degree Requirements

First Year - Fall

ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 109	Precalculus Mathematics	3 cr.
ENGL 132	English Composition I	3 cr.
CHEM 101	Modern Chemistry I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 17

First Year - Spring

ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
MATH 123 or MATH 127 or MATH 133	Calculus I for Management, Life, and Social Sciences or other Calc I	3 cr.
ENGL 133	English Composition II	3 cr.
AC 101/HONB 203	Financial Reporting I	3 cr.
HIST XXX	History Perspective	3 cr.

Subtotal: 14

Sophomore Year - Fall

CMGT 200	Construction CAD	3 cr.
CEE 251	Surveying	3 cr.
CEE 253	Surveying Laboratory	1 cr.
PH XXX	Ethical Perspective	3 cr.
PHYS 133 or PHYS 103	Mechanics or Elementary Physics	4 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 17

Sophomore Year - Spring

CMGT 201	Construction Machinery	3 cr.
CMGT 202/ME 202/HONE 202	Fundamentals of Statics	3 cr.
MATH 121	Intro Probability & Statistics	3 cr.
AC 202	Managerial Accounting	3 cr.
EC 112	Principles of Macroeconomics	3 cr.

Subtotal: 15

Junior Year - Fall

CMGT 300	Soil Behavior and Site Development	3 cr.
CMGT 302	Passive and Active Bldg Systems	3 cr.
CMGT 304	Construction Health and Safety, Risk Management	3 cr.
COMM 100	Principles of Communication	3 cr.
	or	
COMM 233	Business Writing and Communication	3 cr.
MAN 204/HONB 204	Management and Organizational Behavior	3 cr.

Subtotal: 15

junior Year - Spring

CMGT 301	Analysis of Concrete, Steel, & Wood Structure	3 cr.
CMGT 303	Leadership and Human Resources Skills	1 cr.
CMGT 305	Construction Project Bidding & Cost Management	3 cr.
CEE 240	Strength of Civil Engineering Materials	3 cr.
CEE 242	Strength of Civil Engineering Laboratory	1 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 14

Senior Year - Fall

CMGT 400	Material Quality Control	3 cr.
CMGT 402	Material Quality Control Laboratory	1 cr.
CMGT 404	Computer Applications in Construction	3 cr.
CEE 470	Construction Engineering	3 cr.
CMGT 439	Senior Design Projects I	3 cr.
CEE 400	Ethical and Professional Issues	1 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 17

Senior Year - Spring

CMGT 401	Capstone Design	3 cr.
CMGT 403	Construction Law, Contract, & Regulation	3 cr.
CEE 370	Architecture Engineering	3 cr.
IE 422	Industrial Safety and Hygiene	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total credits: 124

CMGT.MS - MS in Construction Management

General

College/School
College of Engineering

Department(s) ~
Construction Management

Program Title ~
MS in Construction Management

Program Code ~
CMGT.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

Construction Management utilizes specialized project management techniques to oversee the planning, design and construction of a project from its beginning to end.

Requirements

Free Form Requirements
MS in Construction Management

Overview

Construction Management is defined as a professional service that uses specialized project management techniques to oversee the planning, design, and construction of a project, from its beginning to its end. A Construction Manager provides a project's owner(s) with effective management of the project's schedule, cost, quality, safety, scope, and function.

MS in Construction Management Admissions Requirements

• Possession of an undergraduate degree in construction management, civil engineering, architecture, industrial engineering, mechanical engineering, or other related disciplines.
• A minimum GPA of 3.000, on a 4.000 scale, in the last 60 hours of undergraduate courses and in all graduate courses (students with a lower GPA may be considered only for probationary or non-degree admission).
• Programming competence .
• Students with an undergraduate degree from a program not accredited by ABET are encouraged to submit a GRE score.

Degree Requirements

MS in Construction Management Degree Requirements

A total of 30 credits is required for graduation.

Students must select an advisor and have a plan of study approved before completing 12 credits. At least six courses in a plan of study must be 600 or higher level.

Core course requirements (21 credits)

CEE 670	Construction Management	3 cr.
CEE 672	Material Selection, Cost Estimation, and Bidding	3 cr.
CEE 609/EMGT 609/IE 609	Engineering Cost Analysis	3 cr.
EMGT 627	Legal and Ethical Issues of Engineering	3 cr.
EMGT 522	Occupational Safety and Health	3 cr.
CEE 606	Advanced Green and Sustainable Civil Engineering	3 cr.
	or	
CEE 641	Energy Management	3 cr.
EMGT 648	Project Management	3 cr.
	or	
EMGT 602	Engineering Crisis, Disaster, and Risk Management	3 cr.

Subtotal: 21

Electives - 9 credits with the following options:

All Course Option

CEE 5XX/6XX or EMGT 5XX/6XX	CEE/EMGT elective courses or Technical elective course**	9 cr.

Subtotal: 9 (500 level = 9 credits max)

Project Option

CEE 680	Civil Engineering Project	3 cr.
CEE 5XX/6XX or EMGT 5XX/6XX	CEE/EMGT elective courses or Technical elective courses**	6 cr.

Subtotal: 9 (500 level = 6 credits max)

Thesis Option

CEE 698	Thesis Research	3 cr.
CEE 699	Thesis Research	3 cr.
CEE 5XX/6XX or EMGT 5XX/6XX	CEE/EMGT elective course or Technical elective course**	3 cr.

Subtotal: 9 (500 level = 3 credits max)

Total Credit Hours: 30

**Technical Electives: any departmental course with graduate credit and, with advisor's permission, from a discipline within or outside of the College of Engineering.

Up to six credit hours may be transferred from another school, subject to approval by the CEE Department.

Completion with at least 3.000 GPA, the minimum required graduate credit hours:

* Thesis Option with a minimum of 24 credit hours of coursework plus six hours of thesis

* Directed Project Option with a minimum of 27 credit hours of coursework plus three credit hours of directed project

COMM.BA - BA in Communication

General

College/School
College of Arts & Sciences

Department(s) ~
Comm, Media & Arts

Program Title ~
BA in Communication

Program Code ~
COMM.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Communication curriculum provides you with opportunities for personal empowerment as well as nearly limitless career options. With a foundation in interpersonal communication, public speaking, and media dynamics, students concentrate their studies in public relations, media production, journalism, health communication, or for- and non-profit corporate communication.

Requirements

Free Form Requirements
Communication Major

General Information

Students in the Communication major are exposed to the fundamental tenets of several aspects of the field, including interpersonal communication, oral communication, verbal and nonverbal communication, organizational communication, health communication, intercultural communication, and electronically mediated communication. They also learn about different approaches to research and practice within each field.

Students also choose one of three concentrations which will allow them to focus their studies in an area best reflecting their personal interests and professional needs:

1. Media and Journalism, which emphasizes the production, reception, and interpretation of messages via electronic media; the role of media institutions in society; and the development of journalistic ethics and reporting skills;
2. Public Relations, which emphasizes the construction of messages for public consumption across media and the development of skills to enhance the efficacy of conveying a message clearly and accurately via mass media institutions; or
3. Health Communication, which emphasizes the collection and dissemination of information about health issues on public, institutional, and interpersonal scales.

   Students may only major in one concentration; double majoring in two different concentration is prohibited.

Career Opportunities

The benefits of a Communication major are manifold. Some graduates of the Communication major continue their education in graduate school or law school. Others work for television or radio broadcast stations, newspapers, public service organizations, hospitals, insurance companies, public relations firms, political campaigns, and other businesses. WNE's unique partnership with WAMC Northeast Public Radio enables WNE's best students to write, produce, and broadcast news reports at a national level—an excellent springboard for careers in journalism and broadcasting. Students also have an opportunity to produce professional promotional videos for nonprofit organizations through the University's Institute for Media and Nonprofit Communication. Regardless of the concentration they choose, our graduates tell us that the communication curriculum has helped them not only to develop their writing and speaking skills, but also to handle specialized assignments such as creating questionnaires and conducting interviews that provide useful data for their organizations. In short, they know how to obtain, process, and disseminate information.

Program Objectives

Intellectual Range

1. To enlarge and deepen students' understanding of human nature as reflected in and affected by various forms of communication.
2. To enlarge and deepen students' understanding and appreciation of the role of communication in human society and individual life.
3. To deepen students' understanding of the various forms and media of communication.
4. To enhance students' understanding of the conditions for both success and failure in communication, as well as abuses of power through communication.
5. To encourage critical reflection on the information and values conveyed by electronic media, as well as their role in society.

6. To encourage critical reflection on the ethical issues that arise in the field of communication.

Important Communication Skills

The ability to convey information and to persuade others effectively and efficiently—whether in written, oral, or electronically mediated communication—is of great value in personal, family, professional, and political life. The communication curriculum is designed to achieve the following:

1. To improve students' ability to read, comprehend, and analyze written communication.
2. To improve students' ability to listen to, comprehend, and analyze oral communication.
3. To develop students' ability to design research strategies and to conduct research effectively.
4. To improve students' ability to write clear, grammatically correct, and rhetorically powerful prose.
5. To improve students' ability to communicate nonverbally and to understand the nonverbal communication of others in a variety of situations.
6. To enhance students' abilities to consume, use, and create electronic media technology and products.

Theoretical and Practical Communication Content

1. To increase students' knowledge of various theories of communication.
2. To heighten students' awareness of the power of communication.
3. To develop students' capacities as powerful communicators in global society.
4. To enable students to be engaged citizens in an increasingly mediated culture.

The Communication Major requires 39 credit hours in communication and/or journalism courses.

Degree Requirements

All communication majors are required to take the following courses (25 credit hours), in addition to the courses required by their respective concentrations:

COMM 100	Principles of Communication	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 300	Communication Theory	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	and	
COMM 348	Intercultural Communication	3 cr.
	or	
COMM 356	Global Communication	3 cr.

Subtotal: 25

In addition to these requirements, all students must complete all General University and College Requirements. Students must choose their concentration in order to complete their degree requirements for graduation:

Communication majors concentrating in media and journalism are also required to take the following courses (24 credit hours):

Plus one COMM or JRNL course at the 3xx/4xx level

COMM 251	Video Communication	3 cr.
COMM 352	Multimedia Communication	3 cr.
COMM 371/JRNL 370	Advanced Radio Reporting	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
JRNL 303	Contemporary Journalism	3 cr.
COMM 490	Seminar in Media and Journalism	3 cr.
	and	
COMM 324	Media Industries, Government, and Society	3 cr.
	or	
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.

Subtotal: 24

Communication majors concentrating in public relations are also required to take the following courses (24 credit hours):

Plus one COMM course at the 3xx/4xx level

COMM 280	Organizational Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
COMM 340	Business Communication	3 cr.
COMM 344	Event Planning	3 cr.
COMM 491	Seminar in PR and Health Communication	3 cr.

Subtotal: 24

Communication majors concentrating in health communication are also required to take the following courses (24 credit hours):

Plus one COMM course at the 3xx/4xx level

COMM 283	Health Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 321	Interpersonal Communication	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
COMM 344	Event Planning	3 cr.
COMM 491	Seminar in PR and Health Communication	3 cr.

Subtotal: 24

COMM.CERT - Certificate in Communication

General

College/School
College of Arts & Sciences

Department(s) ~
Comm, Media & Arts

Program Title ~
Certificate in Communication

Program Code ~
COMM.CERT

Degree Designation ~
CERT - Certificate, COMMC - Certificate in Communication

Academic Level ~
UG - Undergraduate

Program Short Description

Recognizing that communication is a skill much needed today across a wide variety of professions, the University offers a certificate program that strengthens understanding, writing, and speaking.

Requirements

Free Form Requirements
Certificate Program in Communication

Recognizing that communication is a skill much needed today, WNE offers a program that strengthens understanding, writing, and speaking.

Certificate Requirements

Completion of the program requires 18 credit hours (plus any prerequisites).

COMM 100	Principles of Communication	3 cr.
	or	
COMM 233	Business Writing and Communication	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 340	Business Communication	3 cr.
COMM 3XX	COMM Elective	3 cr.
COMM 3XX	COMM Elective	3 cr.

Total Credit Hours: 18

COMM2.BA - BA in Communication/Media & Journalism

General

College/School
College of Arts & Sciences

Department(s) ~
Comm, Media & Arts

Program Title ~
BA in Communication/Media & Journalism

Program Code ~
COMM2.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Media and Journalism concentration emphasizes the production, reception and intepretation of messages via electronic media. It also scrutinizes the role of media institutions in society and develops reporting skills.

Requirements

Free Form Requirements
Communication Major

General Information

Students in the Communication major are exposed to the fundamental tenets of several aspects of the field, including interpersonal communication, oral communication, verbal and nonverbal communication, organizational communication, health communication, intercultural communication, and electronically mediated communication. They also learn about different approaches to research and practice within each field.

Students also choose one of three concentrations which will allow them to focus their studies in an area best reflecting their personal interests and professional needs:

1. Media and Journalism, which emphasizes the production, reception, and interpretation of messages via electronic media; the role of media institutions in society; and the development of journalistic ethics and reporting skills;
2. Public Relations, which emphasizes the construction of messages for public consumption across media and the development of skills to enhance the efficacy of conveying a message clearly and accurately via mass media institutions; or

3. Health Communication, which emphasizes the collection and dissemination of information about health issues on public, institutional, and interpersonal scales.

   Students may only major in one concentration; double majoring in two different concentration is prohibited.

Career Opportunities

The benefits of a Communication major are manifold. Some graduates of the Communication major continue their education in graduate school or law school. Others work for television or radio broadcast stations, newspapers, public service organizations, hospitals, insurance companies, public relations firms, political campaigns, and other businesses. Our unique partnership with WAMC Northeast Public Radio enables our best students to write, produce, and broadcast news reports at a national level—an excellent springboard for careers in journalism and broadcasting. Students also have an opportunity to produce professional promotional videos for nonprofit organizations through the University's Institute for Media and Nonprofit Communication. Regardless of the concentration they choose, our graduates tell us that the communication curriculum has helped them not only to develop their writing and speaking skills, but also to handle specialized assignments such as creating questionnaires and conducting interviews that provide useful data for their organizations. In short, they know how to obtain, process, and disseminate information.

Program Objectives

Intellectual Range

1. To enlarge and deepen students' understanding of human nature as reflected in and affected by various forms of communication.
2. To enlarge and deepen students' understanding and appreciation of the role of communication in human society and individual life.
3. To deepen students' understanding of the various forms and media of communication.
4. To enhance students' understanding of the conditions for both success and failure in communication, as well as abuses of power through communication.
5. To encourage critical reflection on the information and values conveyed by electronic media, as well as their role in society.
6. To encourage critical reflection on the ethical issues that arise in the field of communication.

Important Communication Skills

The ability to convey information and to persuade others effectively and efficiently—whether in written, oral, or electronically mediated communication—is of great value in personal, family, professional, and political life. The communication curriculum is designed to achieve the following:

1. To improve students' ability to read, comprehend, and analyze written communication.
2. To improve students' ability to listen to, comprehend, and analyze oral communication.
3. To develop students' ability to design research strategies and to conduct research effectively.
4. To improve students' ability to write clear, grammatically correct, and rhetorically powerful prose.
5. To improve students' ability to communicate nonverbally and to understand the nonverbal communication of others in a variety of situations.
6. To enhance students' abilities to consume, use, and create electronic media technology and products.

Theoretical and Practical Communication Content

1. To increase students' knowledge of various theories of communication.
2. To heighten students' awareness of the power of communication.
3. To develop students' capacities as powerful communicators in global society.
4. To enable students to be engaged citizens in an increasingly mediated culture.

Degree Requirements

The Communication Major requires 39 credit hours in communication and/or journalism courses.

All communication majors are required to take the following courses (25 credit hours), in addition to the courses required by their respective concentrations:

COMM 100	Principles of Communication	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 300	Communication Theory	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
COMM 348 or COMM 356	Intercultural Communication or Global Communication	3 cr.

Subtotal: 25

Communication majors concentrating in media and journalism are also required to take the following courses (24 credit hours):

COMM 251	Video Communication	3 cr.
COMM 352	Multimedia Communication	3 cr.
COMM 371/JRNL 370	Advanced Radio Reporting	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
JRNL 303	Contemporary Journalism	3 cr.
COMM 490	Seminar in Media and Journalism	3 cr.
COMM 324 or COMM 326	Media Industries, Government, and Society or Race, Gender, and Ethnicity in the Media	3 cr.
COMM/JRNL 3XX/4XX	COMM or JRNL upper level elective	3 cr.

Subtotal: 24

Communication Concentration in Media and Journalism Suggested Sequence of Courses

Freshman Year - Fall Semester

COMM 100	Principles of Communication	3 cr.
CS 13X	Computer Competence	3 cr.
ENGL 132	English Composition I	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

COMM 102	Introduction to Public Speaking	3 cr.
ENGL 133	English Composition II	3 cr.
HIST XXX	Historical Perspective	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
COMM 245	Video Editing and Production	4 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
PSY/SO XXX	Social Behavioral Perspective	3 cr.

Subtotal: 16

Sophomore Year - Spring Semester

ART XXX	Aesthetic Perspective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
PH XXX	Ethical Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

COMM 300	Communication Theory	3 cr.
JRNL 303	Contemporary Journalism	3 cr.
GEN XXX	General Elective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
	And	
COMM 326	Race, Gender, and Ethnicity in the Media	3 cr.
	or	
COMM 348	Intercultural Communication	3 cr.

Subtotal: 15

Junior Year - Spring Semester

COMM 352	Multimedia Communication	3 cr.
COMM 371/JRNL 370	Advanced Radio Reporting	3 cr.
GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
	And	
COMM 324	Media Industries, Government, and Society	3 cr.
	or	
COMM 356	Global Communication	3 cr.

Subtotal: 15

Senior Year - Fall Semester

COMM 490	Seminar in Media and Journalism	3 cr.
COMM 3XX-4XX	COMM Elective	3 cr.
	or	
JRNL 3XX	JRNL Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.

Subtotal: 14

Total Credit Hours: 120

COMMH.BA - BA in Communication/Health Comm Conc

General

College/School
College of Arts & Sciences

Department(s) ~
Comm, Media & Arts

Program Title ~
BA in Communication/Health Comm Conc

Program Code ~
COMMH.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Health Communication concentration emphasizes the collection and dissemination of information about health issues on public, institutional, and interpersonal levels.

Requirements

Free Form Requirements
Communication Major

General Information

Students in the Communication major are exposed to the fundamental tenets of several aspects of the field, including interpersonal communication, oral communication, verbal and nonverbal communication, organizational communication, health communication, intercultural communication, and electronically mediated communication. They also learn about different approaches to research and practice within each field.

Students also choose one of three concentrations which will allow them to focus their studies in an area best reflecting their personal interests and professional needs:

1. Media and Journalism, which emphasizes the production, reception, and interpretation of messages via electronic media; the role of media institutions in society; and the development of journalistic ethics and reporting skills;
2. Public Relations, which emphasizes the construction of messages for public consumption across media and the development of skills to enhance the efficacy of conveying a message clearly and accurately via mass media institutions; or
3. Health Communication, which emphasizes the collection and dissemination of information about health issues on public, institutional, and interpersonal scales.

   Students may only major in one concentration; double majoring in two different concentration is prohibited.

Career Opportunities

The benefits of a Communication major are manifold. Some graduates of the Communication major continue their education in graduate school or law school. Others work for television or radio broadcast stations, newspapers, public service organizations, hospitals, insurance companies, public relations firms, political campaigns, and other businesses. Our unique partnership with WAMC Northeast Public Radio enables our best students to write, produce, and broadcast news reports at a national level—an excellent springboard for careers in journalism and broadcasting. Students also have an opportunity to produce professional promotional videos for nonprofit organizations through the University's Institute for Media and Nonprofit Communication. Regardless of the concentration they choose, our graduates tell us that the communication curriculum has helped them not only to develop their writing and speaking skills, but also to handle specialized assignments such as creating questionnaires and conducting interviews that provide useful data for their organizations. In short, they know how to obtain, process, and disseminate information.

Program Objectives

Intellectual Range

1. To enlarge and deepen students' understanding of human nature as reflected in and affected by various forms of communication.
2. To enlarge and deepen students' understanding and appreciation of the role of communication in human society and individual life.
3. To deepen students' understanding of the various forms and media of communication.
4. To enhance students' understanding of the conditions for both success and failure in communication, as well as abuses of power through communication.
5. To encourage critical reflection on the information and values conveyed by electronic media, as well as their role in society.
6. To encourage critical reflection on the ethical issues that arise in the field of communication.

Important Communication Skills

The ability to convey information and to persuade others effectively and efficiently—whether in written, oral, or electronically mediated communication—is of great value in personal, family, professional, and political life. The communication curriculum is designed to achieve the following:

1. To improve students' ability to read, comprehend, and analyze written communication.
2. To improve students' ability to listen to, comprehend, and analyze oral communication.
3. To develop students' ability to design research strategies and to conduct research effectively.
4. To improve students' ability to write clear, grammatically correct, and rhetorically powerful prose.
5. To improve students' ability to communicate nonverbally and to understand the nonverbal communication of others in a variety of situations.
6. To enhance students' abilities to consume, use, and create electronic media technology and products.

Theoretical and Practical Communication Content

1. To increase students' knowledge of various theories of communication.
2. To heighten students' awareness of the power of communication.
3. To develop students' capacities as powerful communicators in global society.
4. To enable students to be engaged citizens in an increasingly mediated culture.

Degree Requirements

The Communication Major requires 39 credit hours in communication and/or journalism courses.

All communication majors are required to take the following courses (25 credit hours), in addition to the courses required by their respective concentrations:

COMM 100	Principles of Communication	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 300	Communication Theory	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	and	
COMM 348	Intercultural Communication	3 cr.
	or	
COMM 356	Global Communication	3 cr.

Subtotal: 25

Communication majors concentrating in health communication are also required to take the following courses (24 credit hours):

Plus one COMM course at the 3xx/4xx level

COMM 283	Health Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 321	Interpersonal Communication	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
COMM 344	Event Planning	3 cr.
COMM 491	Seminar in PR and Health Communication	3 cr.

Subtotal: 24

Communication Concentration in Health Communication Suggest Sequence of Courses

Freshman Year- Fall Semester

COMM 100	Principles of Communication	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
ENGL 132	English Composition I	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

COMM 102	Introduction to Public Speaking	3 cr.
ENGL 133	English Composition II	3 cr.
CS XXX	Computer Competence Requirement	3 cr.
HIST XXX	Historical Perspective	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

PSY/SO XXX	Social Behavioral Perspective	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
COMM 283	Health Communication	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

ART XXX	Aesthetic Perspective	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 285	Introduction to Public Relations	3 cr.
PH XXX	Ethical Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.

Subtotal: 16

Junior Year - Fall Semester

COMM 300	Communication Theory	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
	and	
COMM 348	Intercultural Communication	3 cr.
	or	
COMM 3XX	COMM Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

COMM 320	Small Group Communication	3 cr.
COMM 344	Event Planning	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
GEN XXX	General Elective	3 cr.
	and	
COMM 3XX	COMM Elective	3 cr.
	or	
COMM 356	Global Communication	3 cr.

Subtotal: 15

Senior Year - Fall Semester

COMM 321	Interpersonal Communication	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

COMM 491	Seminar in PR and Health Communication	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.

Subtotal: 14

Total Credit Hours: 120

COMMP.BA - BA in Communication/Public Relations Conc

General

College/School
College of Arts & Sciences

Department(s) ~
Comm, Media & Arts

Program Title ~
BA in Communication/Public Relations Conc

Program Code ~
COMMP.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Public Relations concentration emphasizes the construction of messages for public consumption across media platforms. It also develops skills to enhance the efficacy of conveying a message clearly and accurately via mass media.

Requirements

Free Form Requirements
Communication Major

General Information

Students in the Communication major are exposed to the fundamental tenets of several aspects of the field, including interpersonal communication, oral communication, verbal and nonverbal communication, organizational communication, health communication, intercultural communication, and electronically mediated communication. They also learn about different approaches to research and practice within each field.

Students also choose one of three concentrations which will allow them to focus their studies in an area best reflecting their personal interests and professional needs:

1. Media and Journalism, which emphasizes the production, reception, and interpretation of messages via electronic media; the role of media institutions in society; and the development of journalistic ethics and reporting skills;
2. Public Relations, which emphasizes the construction of messages for public consumption across media and the development of skills to enhance the efficacy of conveying a message clearly and accurately via mass media institutions; or
3. Health Communication, which emphasizes the collection and dissemination of information about health issues on public, institutional, and interpersonal scales.

   Students may only major in one concentration; double majoring in two different concentration is prohibited.

Career Opportunities

The benefits of a Communication major are manifold. Some graduates of the Communication major continue their education in graduate school or law school. Others work for television or radio broadcast stations, newspapers, public service organizations, hospitals, insurance companies, public relations firms, political campaigns, and other businesses. Our unique partnership with WAMC Northeast Public Radio enables our best students to write, produce, and broadcast news reports at a national level—an excellent springboard for careers in journalism and broadcasting. Students also have an opportunity to produce professional promotional videos for nonprofit organizations through the University's Institute for Media and Nonprofit Communication. Regardless of the concentration they choose, our graduates tell us that the communication curriculum has helped them not only to develop their writing and speaking skills, but also to handle specialized assignments such as creating questionnaires and conducting interviews that provide useful data for their organizations. In short, they know how to obtain, process, and disseminate information.

Program Objectives

Intellectual Range

1. To enlarge and deepen students' understanding of human nature as reflected in and affected by various forms of communication.
2. To enlarge and deepen students' understanding and appreciation of the role of communication in human society and individual life.
3. To deepen students' understanding of the various forms and media of communication.
4. To enhance students' understanding of the conditions for both success and failure in communication, as well as abuses of power through communication.
5. To encourage critical reflection on the information and values conveyed by electronic media, as well as their role in society.
6. To encourage critical reflection on the ethical issues that arise in the field of communication.

Important Communication Skills

The ability to convey information and to persuade others effectively and efficiently—whether in written, oral, or electronically mediated communication—is of great value in personal, family, professional, and political life. The communication curriculum is designed to achieve the following:

1. To improve students' ability to read, comprehend, and analyze written communication.
2. To improve students' ability to listen to, comprehend, and analyze oral communication.
3. To develop students' ability to design research strategies and to conduct research effectively.
4. To improve students' ability to write clear, grammatically correct, and rhetorically powerful prose.
5. To improve students' ability to communicate nonverbally and to understand the nonverbal communication of others in a variety of situations.
6. To enhance students' abilities to consume, use, and create electronic media technology and products.

Theoretical and Practical Communication Content

1. To increase students' knowledge of various theories of communication.
2. To heighten students' awareness of the power of communication.
3. To develop students' capacities as powerful communicators in global society.
4. To enable students to be engaged citizens in an increasingly mediated culture.

The Communication Major requires 39 credit hours in communication and/or journalism courses.

Degree Requirements

All communication majors are required to take the following courses (25 credit hours), in addition to the courses required by their respective concentrations:

COMM 100	Principles of Communication	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.
COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 300	Communication Theory	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	And	
COMM 348	Intercultural Communication	3 cr.
	or	
COMM 356	Global Communication	3 cr.

Subtotal: 25

Communication majors concentrating in public relations are also required to take the following courses (24 credit hours):

Plus one COMM course at the 3xx/4xx level

COMM 280	Organizational Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
COMM 340	Business Communication	3 cr.
COMM 344	Event Planning	3 cr.
COMM 491	Seminar in PR and Health Communication	3 cr.

Subtotal: 24

Communication Concentration in Public Relations Suggested Sequence of Courses

Freshman Year- Fall Semester

COMM 100	Principles of Communication	3 cr.
JRNL 100	Journalism: Practices and Principles	3 cr.
ENGL 132	English Composition I	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

COMM 102	Introduction to Public Speaking	3 cr.
ENGL 133	English Composition II	3 cr.
CS XXX	Computer Competence Requirement	3 cr.
HIST XXX	Historical Perspective	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

COMM 205	Mass Communication	3 cr.
COMM 206	Introduction to Communication Research	3 cr.
COMM 280	Organizational Communication	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

ART XXX	Aesthetic Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
COMM 245	Video Editing and Production	4 cr.
PH XXX	Ethical Perspective	3 cr.
PSY/SO XXX	Social Behavioral Perspective	3 cr.

Subtotal: 16

Junior Year - Fall Semester

COMM 300	Communication Theory	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 328	Health Communication Campaigns	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
	and	
COMM 348	Intercultural Communication	3 cr.
	or	
COMM 3XX	COMM Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

COMM 340	Business Communication	3 cr.
COMM 344	Event Planning	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
	and	
COMM 3XX	COMM Elective	3 cr.
	or	
COMM 356	Global Communication	3 cr.

Subtotal: 15

Senior Year - Fall Semester

GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

COMM 491	Seminar in PR and Health Communication	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.

Subtotal: 14

Total Credit Hours: 120

CPE.BSE - BSE in Computer Engineering

General

College/School
College of Engineering

Department(s) ~
Electrical & Computer Engr

Program Title ~
BSE in Computer Engineering

Program Code ~
CPE.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

Through hands-on learning, you'll be prepared to program the future in the Computer Engineering major. From computers to smart phones, and robotics to avionics, the possibilities are endless.

Requirements

Free Form Requirements
Electrical and Computer Engineering Majors

General Information

Electrical and computer engineers are at the forefront of today's technological revolution, and they continue to be in demand in all types of public and private enterprises. The value added in today's products is primarily in digital and analog electronics and software. The internet has filled our lives with their influences. Electrical and computer engineering touch every aspect of today's modern world, using Artificial Intelligence (AI) to make our lives better by making homes, automobiles, phones, speakers, and miscellaneous everyday devices smarter and exploiting the Internet of Things (IoT) to make the world more connected. WNE graduates are uniquely qualified to become engineers, capable of designing hardware and software. Electrical and computer engineers work in the communications, controls, signal and image processing, biomedical, aerospace, electronics, computer hardware, optics, integrated photonics, embedded systems, materials, energy, defense, data gathering/analysis, and other diverse commercial sectors.

The Electrical and Computer Engineering programs provide students with a thorough background in electronic/hardware and systems design. Individual students can tailor their program to his or her specific interests by selecting appropriate technical or design electives. Elective areas include electronics, digital systems, IoT, VLSI, digital signal processing (DSP), controls, robotics, image optics, integrated photonics, and embedded systems. In all of our courses, we stress the balance of theory and practice. The theory, presented in class, is coupled with extensive, practical, hands-on laboratory projects and experiments.

WNE laboratories are well equipped and all facilities are available for undergraduate use, and laboratory equipment is updated on a rotating basis allowing for a continued renewal and state-of-the-art technology in a rapidly changing world.

Electrical and Computer Engineering Laboratories:

- Embedded Systems Laboratory
- Controls and Artificial Intelligence Laboratory
- Internet of Things (IoT) Laboratory
- Circuits Laboratory
- Electronics Laboratory
- RF/Wireless Laboratory
- LEAP@WNE Optics/Photonics Laboratory
- Computer Architecture & Security Laboratory

Access is also provided to the following laboratories in other engineering departments as needed:

- Bioinstrumentation Laboratory
- Biomedical Engineering Physiology Laboratory
- Industrial Engineering Laboratory
- Mechanical Engineering Laboratory

Additionally, a fully equipped Machine Shop is available to students as well as a Rapid Prototyping STL machine.

The BSE in Computer Engineering program is accredited by the Engineering Accreditation Commission(s) of ABET, https://www.abet.org, under the General Criteria and the Program Criteria for Electrical, Computer, Communications, Telecommunication(s) and Similarly Named Engineering Programs.

Design Experience

Students in the Electrical Engineering program and Computer Engineering program are introduced to engineering design in the freshman year in the Introduction to Engineering courses. Sophomore and junior courses and labs provide progressively more sophisticated design experiences within the electrical engineering program and computer engineering program respectively. Both programs culminate in a year-long capstone Senior Design Project course in which each student works on an independent project under the supervision of a faculty advisor. Most of the projects are sponsored by industry. Students involved in these projects have the opportunity to work with the industrial sponsor in an actual engineering environment.

Electives

Electives, in both programs, supplement the engineering student's technical program. These electives must be selected in such a way that all General Education "perspective of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. An assigned departmental faculty advisor must approve selection of electives from engineering, mathematics, science, or business.

Vision

The Electrical and Computer Engineering programs at Western New England University will become nationally and internationally recognized for graduating students who have experienced putting theory into practice and are also capable of succeeding in advanced studies.

Mission

The mission of the Electrical Engineering and Computer Engineering programs is to provide students with a supportive environment that facilitates learning to solve problems in electrical and computer engineering.

The Electrical and Computer Engineering programs are committed to excellence in student learning. Graduates of the programs will be problem solvers, able to apply engineering principles to electrical and computer systems. The faculty and staff of the programs use their background in teaching, research, and industry to prepare students to be successful as they move into the workforce or graduate school.

Program Educational Objectives

Within a few years after graduation, Bachelor of Science in Engineering in Computer Engineering (BSCPE) program graduates will:

1. Have successfully designed, built, tested complex systems.
2. Have a proven track record of being productive team members / leaders.
3. Have assumed leadership roles in their career.
4. Have contributed in professional and civic service.
5. Have pursued advanced learning through professional education, training, advanced degrees and used their knowledge to solve problems with global impact.

Student Outcomes

Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

1. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
2. An ability to communicate effectively with a range of audiences.
3. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
4. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
5. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
6. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Career Opportunities

The application areas for electrical and computer engineering are fairly ubiquitous and our Electrical and Computer Engineering programs provide a broad based education that leads to employment in a diverse spectrum of industries in both private and public sectors, for example, aerospace, defense, telecommunications, automotive, medical electronics, multimedia and consumer electronic industries, energy, and power. In particular we offer courses in electronic communications, robotics, artificial intelligence, controls, digital signal/image processing, digital design, computer architecture, software and hardware design, embedded systems, optics, and integrated photonics.

To provide additional depth in some of these areas the department offers Program Sequence Options as listed below.

- Robotics/Mechatronics Sequence
- RF/Microwave Engineering Sequence
- Controls/Artificial Intelligence Sequence
- Optics and Integrated Photonics Sequence

These Sequence Options have been described in detail following the Electrical Engineering program and Computer Engineering program degree requirements.

Degree Requirements

First Year- Fall

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

First Year - Spring

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

CHEM 105	General Chemistry I	4 cr.
EE 205/HONE 205	Electrical Engineering I	4 cr.
ME 202/HONE 202	Statics	3 cr.
MATH 236	Differential Equations	3 cr.
SBP XXX	Social/Behavioral Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring

CPE 271	Digital System Design	4 cr.
EE 206	Electrical Engineering II	4 cr.
EE 285	Computational Techniques in C	3 cr.
MATH 235	Calculus III	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 17

Junior Year - Fall

IE 212	Probability and Statistics	3 cr.
CPE 310	Microprocessors I	3 cr.
EE 301	Signals and Systems	3 cr.
EE 303	Electronic Circuits	3 cr.
CPE 305	Data Structures for Embedded Firmware Design	3 cr.
EE 319	Electrical Engineering Laboratory I	2 cr.

Subtotal: 17

Junior Year - Spring

CPE 323	Embedded Systems Laboratory	1 cr.
CPE 355	Real Time Embedded Kernels	3 cr.
CPE 360	Microprocessors II	4 cr.
EE 302	Introduction to Digital Signal Processing	3 cr.
CPE 462/CPE 562	VHDL: Simulation and Synthesis	3 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 17

Senior Year - Fall

CPE 420/CPE 520	Computer Architecture	3 cr.
CPE 422/CPE 522	Internet of Things (IoT)	3 cr.
CPE 427	Computer Engineering Laboratory	2 cr.
CPE 436	Project Research, Innovation and Development	2 cr.
CPE 439	Professional Awareness	1 cr.
xxx	CPE Design Elective	3 cr.

Subtotal: 14

Senior Year - Spring

CPE 470	Real-time Embedded Controls	3 cr.
CPE 440	Senior Design Projects	3 cr.
GEN XXX	General Elective	3 cr.
xxx	CPE Technical Elective	3 cr.
HIST XXX	History Perspective	3 cr.

Subtotal: 15

Total Credit Hours: 129

General Education courses must be selected in such a way to insure that all requirements have been satisfied.

CPE Technical electives are CPE courses numbered 300 or above and approved by the advisor.

General elective must be selected with approval of the academic advisor.

The 2.000 required minimum grade point average in the major is based upon all CPE and EE major courses pursued as a part of the student's degree program.

Program Sequence Options

There are several program sequence options within the Electrical Engineering and Computer Engineering programs as listed below.

- Robotics/Mechatronics Sequence
- Modern Controls/Artificial Intelligence Sequence

- RF/Microwave Engineering Sequence
- Optics and Integrated Photonics Sequence

The student can select a sequence option by appropriately tailoring their choice of electives during their junior and senior years. Each sequence option has been described below, along with a list of typical courses used to provide the required depth in the area. These lists are by no means exhaustive; the student makes his or her selection of sequence electives in consultation with their faculty advisor.

Robotics/Mechatronics Sequence

Robotics/Mechatronics represents an integrated technology approach for the design of intelligent systems and products. Intelligent systems driven primarily by human operator inputs are considered mechatronic systems; smart washing machines would be a good example. Intelligent systems driven primarily by automatic/sensor and adaptive inputs are robotic systems; the Google Driverless car would be a good example. The Robotics/Mechatronics sequence is intended for students who want to focus in this area while working on their Bachelor of Science in Engineering (BSE) in Electrical Engineering degree. Students in the Electrical Engineering or Computer Engineering programs can elect to take this sequence by an appropriate selection of technical electives during their junior and senior years and completing their senior project in this area.

The sequence electives provide coverage of the following topics:

- Embedded programming and computing
- Sensors and actuators
- Adaptive control and environmental interactions
- Computer vision and navigation

Typical courses:
EE 302 Introduction to Digital Signal Processing

CPE 360 Microprocessors II

EE 422 Control Systems

CPE 470 Real-time Embedded Controls

CPE 462 VHDL—Simulation and Systems

RF/Microwave Engineering Sequence

RF/Microwave Engineering Sequence represents an integrated technology approach for the design of high frequency systems and products. The students in the RF/Microwave Engineering Sequence are exposed to different aspects of applied electromagnetics including antennas design, the design of high frequency passive and active circuits, the design high frequency systems, etc. This sequence is designed to meet the growing needs of companies for engineers skilled in high frequency circuit design. The RF/Microwave Engineering Sequence is intended for students who want to focus in this area while working on their BSE in Electrical Engineering degree. Students in the Electrical Engineering program can elect to take this sequence by an appropriate selection of technical electives during their junior and senior years and completing their senior project in this area.

The sequence electives provide coverage of the following topics:

- Fields and Waves
- Microwave Engineering
- RF & Microwave Wireless Systems
- RF & Microwave Active Circuit Design
- Wave Transmission and Reception
- Software Defined Radio

Typical courses:

EE 314 Fields and Waves

EE 414 Microwave Engineering

EE 416 Electromagnetic Compatibility

EE 455 RF and Microwave Wireless Systems

EE 456 RF and Microwave Active Circuit Design

EE 457 Wave Transmission and Reception

Modern Controls and Artificial intelligence Sequence

Modern Control Theory
Utilizing state-space analysis, where the dynamics of the processes are described by first-order differential equations in matrix form, has made an enormous impact on the analysis and design of controllers for complex systems. In recent years, modern control theory has advanced rapidly and is now recognized as an indispensable and practical technique for the design and analysis of feedback control systems in diverse areas such as aeronautics, robotics, autonomous vehicles, space craft systems design, etc.

Artificial Intelligence
The field of artificial intelligence or soft-computing utilizes Neural Networks, Deep Learning, Machine Learning, and Fuzzy Logic. In recent years, there has been an explosive growth in applications of neural networks and deep learning, in part due to the advances in computational power. Neural networks, neurocomputing, or 'brain-like' computing is based on the hope that we can reproduce at least some of the flexibility and power of the human brain by artificial means. Self-driving (Autonomous) vehicles are one example of applied neural networks. Similarly, Fuzzy Logic tries to mimic the human cognitive processes. Applications of these technologies abound in many consumer products such as camcorders, air conditioners, refrigerators, automobiles etc. These technologies are applied in a variety of fields such as; signal processing, speech recognition, visual perception, control, robotics/mechatronics, and many more. Smart phones, Alexa ©, Siri ©, driverless cars, smart homes, etc. are all examples of applied artificial intelligence.

Our Controls and Artificial Intelligence sequence will give students expertise in the areas of industrial automation, robotics, mechatronics, aerospace/aeronautics control systems, and artificial intelligence.

The sequence electives provide coverage of the following topics:
• Linear Systems Theory
• Fuzzy Logic
• Neural Networks, Deep Learning/Machine Learning
• Computer Controlled Systems
• embedded programming and computing
• sensors and actuators
• adaptive control and environmental interactions
• computer vision and navigation

Typical courses:

EE422 Control Systems
EE445 Neural Networks
EE470 Computer Controlled Systems
EE435 Fuzzy Logic
EE425 Linear Systems Theory
CPE320 Microprocessors I
CPE470 Real-time Embedded Controls
CPE462 VHDL—Simulation and Systems

Optics and Integrated Photonics Sequence

The Optics and Integrated Photonics Sequence enables students to pursue educational opportunities in the emerging technology areas of optics and integrated photonics. The students are exposed to different aspects applied optics and photonics including the design of free space optical systems, the design of integrated silicon photonics passive and active circuits, and the design of laser systems with applications in medical technology or light detection and ranging (LiDAR). Many of the courses offered in the sequence utilize the LEAP@WNE optics/photonics laboratory space, which is comprised of over $2.5M of equipment funded by the Massachusetts Manufacturing Innovation Initiative (M2I2) that adds WNE to the established national ecosystem dedicated to global manufacturing leadership in integrated optics/photonics. The sequence is designed to meet the growing needs of companies for engineering skilled in optics/photonics design. The Optics and Integrated Photonics Sequence is intended for students who want to focus in this area while working on their BSE in Electrical Engineering degree. Students in the Electrical Engineering program can elect to take this sequence by an appropriate selection of technical electives during their junior and senior years and completing their senior project in this area.

The sequence electives provide coverage of the following topics:

• Optics
• Integrated Photonics
• Electro-Optics
• Quantum Optics
• Fields and Waves

Typical courses:

EE 212 Fundamentals of Electro-Optics
EE 314 Fields and Waves
EE 448 Silicon Photonics
EE 449 Optical Engineering
EE 457 Wave Transmission and Reception

CS.BS - BS in Computer Science

General

College/School
College of Arts & Sciences

Department(s) ~
Computer Science & Info Tech

Program Title ~
BS in Computer Science

Program Code ~
CS.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Studying Computer Science provides a foundation in software design and development combined with an understanding of computing theory. You will study databases, design of algorithms, parallel programming and more. This background will prepare you to work in a wide variety of fields including games, artificial intelligence, cybersecurity, and software engineering.

Requirements

Free Form Requirements
Computer Science Major

General Information

The Computer Science major, which leads to a Bachelor of Science degree, is a versatile major that prepares professionals for careers that may require designing and developing software, finding effective solutions to computing problems, or using computers in innovative ways. The program is interdisciplinary in nature and involves coursework in computer science, computer engineering, and mathematics. The program provides a strong background in programming and software development including programming in Python, Java, C/C++, and more. The curriculum concentrates on the scientific, mathematical, and theoretical aspects of the design of computer systems while also developing communication skills through a strong liberal arts curriculum. The program prepares students to work as a software engineer, handling the design and development of user-oriented computer applications and systems. The substantial foundation in mathematics and computer hardware in this program offers students uniqueness and strength in today's job market. There is sufficient flexibility in the curriculum to allow students to pursue additional coursework in software and/or hardware development, mathematics, business, information processing, computer forensics, and information technology. The program has been structured to follow the current recommendations of the Computer Science Curriculum Committee of the Association for Computing Machinery.

Opportunities

Graduates of this program develop the creativity and patterns of thought required of computer scientists and are prepared to go on to advanced study or to enter various professional fields. Graduates are well equipped with the analytic training and the knowledge of software and hardware to enter careers in software design, software development, software management, systems programming, systems analysis, technical and software support, and computer consulting. Organizations in business, industry, and the private sector are eager for candidates with the knowledge and skills that the graduates of this program possess.

Computer Science and Information Technology Faculty

Educational Objectives

The Computer Science program will prepare students to be professionals capable of applying principles to practice, able to undertake lifelong learning, and aware of social, ethical, and environmental issues associated with their professional activities. The expected accomplishments of our graduates during the first several years following graduation from the program are to:

1. Successfully apply principles and practices of computing to develop and maintain software systems that meet customer need.
2. Function ethically and responsibly as a full participant in the computing discipline.
3. Remain current in the fast-changing world of technology today by pursuing lifelong learning.
4. Operate successfully as part of a team.
5. Apply knowledge and skills to the benefit of society.

Program Outcomes

Upon completion of the program, the student will have the following abilities:

- Communication: Ability to communicate ideas and concepts in written and oral forms clearly and in an organized manner.
- Mathematical Foundations: Ability to apply knowledge of computing and mathematical concepts and theory to develop and analyze computing systems.
- Teamwork: Ability to work in teams.
- Design: Ability to apply a design process and notation in order to design systems.
- Critical Thinking: Ability to evaluate and analyze a computer-based system, process, component, or program to meet desired needs.
- Ethics: Ability to identify the role computers play in society and identify and analyze ethical impacts of professional behavior and actions.
- Information Management: Ability to identify and utilize appropriate information sources in order to understand and/or solve problems.
- Programming Fundamentals: Ability to create solutions to problems using code and/or components including selection of programming fundamentals and appropriate comments.

Degree Requirements

Required computer science and engineering courses (45 credit hours)

CS 101/IT 101	Introduction to Computing	4 cr.
CS 102/IT 102	Introduction to Programming	4 cr.
CS 200/IT 200	Data Structures	4 cr.
CS 210	Software Design	4 cr.
CS 220	Software Development	4 cr.
CS 351	Programming Languages	3 cr.
CS 364	Design of Database Management Systems	3 cr.
CS 366	Design and Analysis of Algorithms	3 cr.
CS 413	Parallel Computing	3 cr.
CS 490	Software Engineering	3 cr.
CS 492	Computer Science Capstone	3 cr.
CPE 271	Digital System Design	4 cr.
CPE 310	Microprocessors I	3 cr.

Subtotal: 45

Required mathematics courses (12 -14 credit hours)

MATH 150	Applied Discrete Mathematics	3 cr.
MATH 251	Advanced Discrete Mathematics	3 cr.
MATH 363	Theory of Computation	3 cr.
	and one of:	
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 127	Calculus I with Pre-Calculus Review	5 cr.
MATH 133	Calculus I	4 cr.
MATH 245	Topics in Linear Algebra and Calculus	3 cr.
MATH 306	Linear Algebra	3 cr.
MATH 379	Graph Theory	3 cr.

Subtotal: 12-14

Required Philosophy Course (3 credits)

PH 225	Ethics of Digital Technologies	3 cr.

Subtotal: 3

Technical Elective (6 credit hours).

Subtotal: 6

Two additional computer science courses numbered 300 or above, or CPE courses numbered 311 or above, or any of the following IT courses: IT 320, IT 330, IT 350, IT 430, IT 435 and IT 450. Note that only one of the CS 300 or CS 310 may count towards the technical elective requirement.

Total Credit Hours: 66-68

The 2.000 required grade point average in the major is based on all computer science, mathematics, computer engineering, information technology and business information systems courses pursued as a part of the student's degree program.

Computer Science Suggested Sequence of Courses

First Year- Fall

CS 101/IT 101	Introduction to Computing	4 cr.
GEN XXX	General Elective	3 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
GUR xxx	General University Requirement	3 cr.

Subtotal: 15

First Year - Spring

CS 102/IT 102	Introduction to Programming	4 cr.
MATH 150	Applied Discrete Mathematics	3 cr.
ENGL 133	English Composition II	3 cr.
HIST XXX	History Perspective	3 cr.
GUR xxx	General University Requirement	3 cr.

Subtotal: 16

Sophomore Year - Fall

CS 200/IT 200	Data Structures	4 cr.
GUR xxx	General University Requirement	3 cr
MATH 251	Advanced Discrete Mathematics	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Sophomore Year - Spring

CS 210	Software Design	4 cr.
CS 220	Software Development	4 cr.
GEN XXX	General Elective	1 cr.
MATH 245	Topics in Linear Algebra and Calculus	3 cr.
GUR xxx	General University Requirement	3 cr

Subtotal: 15

Junior Year - Fall

CS 351	Programming Languages	3 cr.
CS/IT 3XX/4XX	CS Elective	3 cr.
GUR xxx	General University Requirement	3 cr
GEN XXX	General Elective	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.

Subtotal: 15

Junior Year - Spring

GUR xxx	General University Requirement	3 cr.
CS 364	Design of Database Management Systems	3 cr.
CPE 271	Digital System Design	4 cr.
CS/IT 3XX/4XX	CS Elective	3 cr.
PH 225	Ethics of Digital Technologies	3 cr.

Subtotal: 16

Senior Year - Fall

CS 366	Design and Analysis of Algorithms	3 cr.
CPE 310	Microprocessors I	3 cr.
CS 490	Software Engineering	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring

CS 413	Parallel Computing	3 cr.
GEN XXX	General Elective	3 cr.
MATH 363	Theory of Computation	3 cr.
CS 492	Computer Science Capstone	3 cr.

Subtotal: 12

Total Credit Hours: 120

Note: Order of General University Requirement courses can be altered (HIST, LAB, NSP, SBP, ART, CUL).

The Computer Competence GUR is met through CS 102/IT 102; the Ethical Perspective is met through PH 225.

CS.MS - MS in Computer Science

General

College/School
College of Arts & Sciences

Department(s) ~
Computer Science & Info Tech

Program Title ~
MS in Computer Science

Program Code ~
CS.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

Computer Science is a rapidly changing field, where professionals working in the computing disciplines must constantly keep abreast of emerging theory, technologies, and techniques in order to keep pace with industry practices. The MS in Computer Science program provides increased exposure to a breadth of computing content areas including machine learning, cybersecurity, and software development. Graduates will be positioned to improve their professional credentials, take on roles in more specialized areas, and take on leadership roles as project managers.

Requirements

Free Form Requirements
MS in Computer Science

Purpose

Computer Science is a rapidly changing field, where professionals working in the computing disciplines must constantly keep abreast of emerging theory, technologies, and techniques in order to keep pace with industry practices. The MS in Computer Science program is intended to provide increased exposure to a breadth of content areas in computing, including machine learning, cybersecurity, and software development. Graduates of this program will be positioned to improve their professional credentials, take on roles in more specialized areas, and take on leadership roles as project managers.

Structure

The program is a full-time on-ground graduate program with courses offered during the fall and spring 15-week semesters. The program can be completed in two years. Students complete 21 credits in specific Computer Science courses. The remaining nine credits of the program may be fulfilled using CS electives, or approved electives from CPE or BAIM, or other courses designated by the department.

Students entering the program should have completed coursework or experience equivalent to CS 102/IT 102 Introduction to Programming, CS 200/IT 200 Data Structures, and MATH 150 Applied Discrete Mathematics. Students lacking some or all of these prerequisites may need to complete additional coursework beyond the 30 credits of the degree program.

Requirements

The program requires 10 courses (30 credit hours), seven of which are specifically required. The remaining three can be selected from electives in CS and approved electives from BAIM and CPE.

Degree Requirements

Seven required courses:

CS 610	Advanced Software Engineering	3 cr.
CS 615	Software Security	3 cr.
CS 630	Operating Systems & Networking	3 cr.
CS 640	Non-Relational Databases	3 cr.
CS 660	Algorithms & Computing Theory	3 cr.
CS 670	Artificial Intelligence & Machine Learning	3 cr.
CS 685	Computer Science Graduate Capstone	3 cr.

Subtotal: 21

Elective Courses

Three elective courses:

CS 5xx/6xx or CPE 5xx/6xx or BAIM 5xx/6xx	Elective*	3 cr.
CS 5xx/6xx or CPE 5xx/6xx or BAIM 5xx/6xx	Elective*	3 cr.
CS 5xx/6xx or CPE 5xx/6xx or BAIM 5xx/6xx	Elective*	3 cr.

Subtotal: 9

* CS 501 is a prerequisite course and cannot be used to satisfy elective requirements.

Total Credit Hours: 30

CW.BA - BA in Creative Writing

General

College/School
College of Arts & Sciences

Department(s) ~
English & Cultural Studies

Program Title ~
BA in Creative Writing

Program Code ~
CW.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

As a Creative Writing major, you will learn the craft of writing in various genres through workshops; reading classic literature; and writing your own poetry, stories, and essays. Whether you aspire to be an award-winning novelist, poet, or business leader, you will graduate with a portfolio and accomplished writing skills.

Requirements

Free Form Requirements
Creative Writing Major

General Information

The Creative Writing major is intended for students who wish to combine the study of creative writing with the study of literature. Students will gain training in the art of writing within the context of aesthetics, the literary tradition, and a broad liberal arts education. The major offers students a rigorous “apprenticeship” in creative writing, developing students’ understanding of literary forms and tropes, and providing the appropriate background in literary and intellectual history.

Career Opportunities

The Creative Writing major will provide an excellent foundation from which students can continue to grow as writers. Because the combination of writing and literature will deal with everything from form and structure to editing to rewriting to critical thinking, Creative Writing graduates will be well-suited for careers in all fields of writing, publishing, editing, advertising, technical writing, and public relations, as well as graduate study.

Program Objectives

· To allow students to participate in a great tradition and learn the difference between imitation and innovation by studying the works of diverse writers and literary techniques.

· To increase the student’s ability to read, think, and write critically.

· To help students develop a portfolio of writing that reflects their artistic voice.

· To gain a familiarity with the aspects of publishing most relevant to their work.

Degree Requirements

The following courses are required for all Creative Writing majors:

ENGL 237	Creative Writing	3 cr.
ENGL 2xx/3xx	Three Literary Period courses, one before 1900	9 cr.
ENGL 351	Fiction Workshop	3 cr.
ENGL 352	Poetry Workshop	3 cr.
ENGL 354	Creative Non-Fiction Workshop	3 cr.
ENGL 314	Shakespeare: Plays and Poems	3 cr.
	or	
ENGL 315	Shakespeare: The Tragedies	3 cr.
	or	
ENGL 316	Shakespeare: The Comedies and Histories	3 cr.
	or	
ENGL 338/411	Major Authors	3 cr.
	or	
ENGL 345	Major African American Writers	3 cr.
ENGL XXX	Historically Underrepresented Literature	3 cr.
ENGL xxx	Writing for Web courses-ENGL 270-ENGL 370-ENGL 371	3 cr.
FILM XXX	Film Elective	3 cr.
	or	
ENGL 3XX/4XX	English Elective	3 cr.
ENGL 2xx/3xx/4xx	English-Elective	3 cr.
ENGL 3XX/4XX	English Elective	3 cr.
ENGL 410	English Seminar	3 cr.
ENGL 480	Internship in English	3 cr.

Total Credit Hours: 45

* Literary period courses: ENGL 231, ENGL 232, ENGL 251, ENGL 252, ENGL 322, ENGL 327, ENGL 328, ENGL 329, ENGL 353, and ENGL 357. Pre-1900 courses: ENGL 231, ENGL 251, ENGL 322, ENGL 327, and ENGL 328

** Historically underrepresented literature courses: ENGL 223, ENGL 224, ENGL 336, ENGL 341, ENGL 343, and ENGL 345

*** Writing for the Web courses: ENGL 270, ENGL 370 and ENGL 371.

ENGL 3XX/4XX: With approval of the Department Chair, courses in other departments may be substituted.

Creative Writing Suggested Sequence of Courses

Freshman Year- Fall Semester

ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
GEN XXX	General Elective	3 cr.
CS 13X	Computer Competence	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PH XXX	Ethical Perspective	3 cr.
GEN XXX	General Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

ENGL 237	Creative Writing	3 cr.
ENGL 2XX	Literary Period course	3 cr.
SBP XXX	Social/Behavioral Sciences Perspective	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

ENGL XXX	Two literary period courses	6 cr.
CUL XXX	Global Cultures Perspective	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
ENGL 3XX/4XX	English Elective (Shakespeare or Major Authors - ENGL 314, 315, 316, 338, 345, 411)	3 cr.

Subtotal: 15

Junior Year - Fall Semester

ENGL 351	Fiction Workshop	3 cr.
ENGL 3XX	English Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
GEN XXX	General Elective	3 cr.
ENGL or FILM XXX	English or Film Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

ENGL 352	Poetry Workshop	3 cr.
ENGL XXX	Historically Underrepresented Literature	3 cr.
ENGL 270	Writing for the Web	3 cr.
ENGL 480	Internship in English	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

ENGL 354	Creative Non-Fiction Workshop	3 cr.
ENGL 2xx/3xx	English-Elective	3 cr.
GEN 3XX	General Electives	9 cr.

Subtotal: 15

Senior Year - Spring Semester

ENGL 410	English Seminar	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Electives	9 crs

Subtotal: 15

Total Credit Hours: 120

Courses taken to complete the major fulfill the A & S Writing Intensive Requirement.

DATA.BS - BS in Data Science & Statistics

General

College/School
College of Arts & Sciences

Department(s) ~
Mathematical Sciences

Program Title ~
BS in Data Science & Statistics

Program Code ~
DATA.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Statistics is a branch of mathematics dealing with the collection, analysis, interpretation, and
presentation of data. Data science is an interdisciplinary field that uses methods, processes, algorithms and systems to extract or extrapolate knowledge from data and apply knowledge from data across a broad range of applications. Statisticians and
data scientists enjoy excellent job prospects and our program prepares students for successful careers and graduate study.

Requirements

Free Form Requirements
Data Science and Statistics

General Information

Statistics is a branch of mathematics dealing with the collection, analysis, interpretation, and presentation of data (whether numerical, categorical, textual, or visual).

Data science is an interdisciplinary field that uses methods, processes, algorithms and systems to extract or extrapolate knowledge from data and apply knowledge from data across a broad range of applications.

Data science is a field that sits at the intersection between statistics, data analysis, and informatics in order to derive knowledge from data. It uses techniques and theories from many fields within the context of mathematics, statistics, computer science, information science, and domain knowledge. However, data science is different from computer science and information science.

Statistics emphasizes quantitative data and description. In contrast, data science deals with quantitative and qualitative data (from images, text, sensors, transactions or customer information) and emphasizes prediction and action.

Statistics and data science pair very well with any other disciplines in pursuit of creating and disseminating knowledge, and hence they involve very sought-after skills.

Career Opportunities

Statistics and data science-related occupations are likely to enjoy excellent job prospects. Many companies report difficulties finding highly skilled workers. For several years in a row, statistician and data scientist have been named the top jobs in the U.S. by Glassdoor. The U.S. Bureau of Labor Statistics reports that the demand for data science skills will drive a large percent rise in employment in the field for the next few years. Not only is there a huge demand, but there is also a noticeable shortage of qualified data scientists.

Statistics and data science benefits both companies and consumers. Data science enables retailers to influence our purchasing habits. Data science can improve public health through wearable trackers that motivate individuals to adopt healthier habits and can alert people to potentially critical health issues. Data science is used by farmers for efficient food growth and delivery, by food suppliers to cut down on food waste, and by nonprofit organizations to boost fundraising efforts and predict funding needs.

To break into these high-paying, in-demand roles, an advanced education is generally required. Data scientists are highly educated: about 88 percent have at least a master's degree and about 46 percent have PhDs. In general, a very strong educational background is usually required to develop the depth of knowledge necessary to be a data scientist. Our program is well-positioned to guide students to successfully transition into either a master's/Ph.D. program to seamlessly finding a job.

Pursuing a career in statistics or data science is a smart move, not just because it is trendy and pays well, but because data may be the pivot point on which the entire economy turns.

Program Objectives

Students who earn their B.S. degree in Data Science and Statistics should be able to do the following:

1. Demonstrate knowledge of concepts in statistics and probability.
2. Demonstrate relevant computer programming ability.
3. Demonstrate proficiency with relevant statistical software.
4. Apply knowledge and concepts to statistical and data science modeling.
5. Effectively communicate data analysis results in written form.
6. Effectively communicate data analysis results orally.

Degree Requirements

Required Data Science and Statistics courses (33 credit hours)

CS 102/IT 102	Introduction to Programming	4 cr.
MATH 121	Introductory Probability and Statistics I	3 cr.
MATH 133	Calculus I	4 cr.
MATH 134	Calculus II	4 cr.
MATH 221	Introductory Probability and Statistics II	3 cr.
MATH 306	Linear Algebra	3 cr.
MATH 331	Computation in Statistics	3 cr.
MATH 384	Applied Regression and Time Series	3 cr.
DATA 410	Statistical Learning	3 cr.
DATA 470	Data Science and Statistics Capstone	3 cr.

Subtotal: 33 cr.

In addition to the courses above, students will specialize in one of the following two tracks: Statistics track or Data Science track.

The following courses are required for the Statistics track:

MATH 235	Calculus III	3 cr.
MATH 372	Probability	3 cr.
MATH 383	Mathematical Statistics	3 cr.
MATH 420	Mathematical Modeling	3 cr.

Subtotal: 12 cr.

The following courses are required for the Data Science track:

CS 200	Data Structures	4 cr.
CS 364	Design of Database Management Systems	3 cr.
CS 370	Artificial Intelligence	3 cr.
MATH 441	Data and Visualization	3 cr.

Subtotal: 13 cr.

Total Required Credit Hours: 45-46

Other Recommended Courses

A student who wishes to use their general electives to obtain additional coursework that supports a career in Data Science or Statistics could take any of the following:

BIS 450	Multivariate and Big Data Analysis	3 cr.
EC 386	Econometrics	3 cr.
IE 429	Design and Analysis of Experiments	3 cr.
MATH 401|402	Actuarial Models I/II	3 cr.
MATH 405	Stochastic Processes	3 cr.

Data Science & Statistics Suggested Sequence of Courses, Statistics Track:

First Year- Fall

ENGL 132	English Composition I	3 cr.
MATH 133	Calculus I	4 cr.
LA 100	First Year Seminar	2 cr.
HIST XXX	Historical Perspective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

First Year - Spring

CS 102/IT 102	Introduction to Programming	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 134	Calculus II	4 cr.
MATH 121	Introductory Probability and Statistics I	3 cr.
LAB/NSP XXX	Laboratory Science or NSP	3 cr.

Subtotal: 17

Sophomore Year - Fall

MATH 235	Calculus III	3 cr.
MATH 221	Introductory Probability and Statistics II	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Sophomore Year - Spring

MATH 372	Probability	3 cr.
MATH 331	Computation in Statistics	3 cr.
MATH 306	Linear Algebra	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.

Subtotal: 15

Junior Year - Fall

PH XXX	Ethical Perspective	3 cr.
MATH 420	Mathematical Modeling	3 cr.
DATA 410	Introduction to Statistical Learning	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring

MATH 384	Applied Regression & Time Series	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall

MATH 383	Mathematical Sciences	3 cr.
SBP XXX	Social Behavioral Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring

DATA 470	Data Science and Statistics Capstone	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	1 cr.

Subtotal: 13

Total Credit Hours: 120

Note: PH-225 Ethics in Digital Technologies is encouraged to satisfy the Ethical Perspective.

Data Science & Statistics Suggested Sequence of Courses, Data Science Track:

First Year- Fall

ENGL 132	English Composition I	3 cr.
MATH 133	Calculus I	4 cr.
LA 100	First Year Seminar	2 cr.
HIST XXX	Historical Perspective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

First Year - Spring

CS 102/IT 102	Introduction to Programming	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 134	Calculus II	4 cr.
MATH 121	Introductory Probability and Statistics I	3 cr.
LAB/NSP XXX	Laboratory Science or NSP	3 cr.

Subtotal: 17

Sophomore Year - Fall

CS 200	Data Structures	4 cr.
MATH 221	Introductory Probability and Statistics II	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Sophomore Year - Spring

MATH 331	Computation in Statistics	3 cr.
MATH 306	Linear Algebra	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Fall

PH XXX	Ethical Perspective	3 cr.
DATA 410	Introduction to Statistical Learning	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring

MATH 384	Applied Regression & Time Series	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
CS 364	Design of Database Management Systems	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall

MATH 441	Data Visualization & Data Techniques	3 cr.
CS 370	Artificial Intelligence	3 cr.
SBP XXX	Social Behavioral Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring

DATA 470	Data Science and Statistics Capstone	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 12

Total Credit Hours: 120

Note: PH-225 Ethics in Digital Technologies is encouraged to satisfy the Ethical Perspective.

EC.BA - BA in Economics

General

Department(s) ~
Hstry, Phlsphy, Pol Sci & Econ

Program Title ~
BA in Economics

Program Code ~
EC.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Studying economics will help you understand how the economy works. It will give you the tools to analyze how economic policies and world issues impact the economy and make economic forecasts. Your knowledge will be valuable in a variety of settings, including the private, public, and nonprofit sectors.

Requirements

Free Form Requirements
Economics Major

General Information

The objective of the Economics major is to provide students with the analytical tools that enable them to think for themselves, not only about economics, but also about the world around them. Courses range from traditional, such as Money and Banking or International Trade, to the analytical such as Microeconomics or Macroeconomics. Some courses feature hands-on experience with econometric software packages. The senior seminar provides experience in supervised research and delivery of an oral presentation.

Career Opportunities

Employment opportunities are available in the private, public, and nonprofit sectors. Typical employment might be in banking, consulting, private sector management, or government.

Graduates are well positioned for graduate work in economics, law, business, and public administration. Those pursuing graduate in economics work can expect to find advanced position in industry and government as well teaching positions at colleges and universities.

Program Objectives

1. To provide a thorough understanding of economic theory.
2. To apply economic theory to the analysis of a variety of social, political, and business issues.
3. To develop students' ability to think creatively and independently about a variety of social, political, and business issues.

4. To apply critical thinking and problem solving skills to developing solutions to problems at the level of an individual decision making unit like a business firm or a nonprofit organization.
5. To apply critical thinking and problem solving skills to developing solutions to problems at the level of the nation or the world.

Degree Requirements

Required economics and mathematics courses (21 credit hours):

EC 111	Principles of Microeconomics	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
EC 215	Intermediate Macroeconomics	3 cr.
EC 216	Intermediate Microeconomics	3 cr.
EC 490	Seminar: Issues in Contemporary Economics	3 cr.
	And	
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 21

Fifteen additional credit hours:

with at least 12 selected from 300 level economics courses.

Subtotal: 15

Three credit hours of political science.

POSC XXX	Political Science	3 cr.

Subtotal: 3

(Also satisfies the Social and Behavioral Science Perspective.)

Subtotal: 39

Total Credit Hours: 39

The 2.000 required grade point average in the major is based upon all EC courses pursued as a part of the student's degree program.

Economics Suggested Sequence of Courses

Please note: Students who join the Department of Economics at the beginning of their sophomore year can begin taking their major requirement then and complete the program without academic sacrifice.

Freshman Year- Fall Semester

EC 111	Principles of Microeconomics	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
LA 110	First Year Seminar	3 cr.
CS 13X	Computer Competence	3 cr.
ENGL 132	English Composition I	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
PH XXX	Ethical Perspective	3 cr.
HIST XXX	Historical Perspective	3 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

EC 215	Intermediate Macroeconomics	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
CUL XXX	Cultural/Aesthetic Perspective	3 cr.
POSC XXX	Social Science Requirement	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

EC 216	Intermediate Microeconomics	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
PSY XXX	Behavioral Science Requirement	3 cr.
EC 2XX/3XX	Economics Elective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

EC 3XX/4XX	Economic Elective	3 cr.
EC 3XX/4XX	Economic Elective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

EC 3XX/4XX	Economic Elective	3 cr.
GEN XXX	General Elective	3 cr.
SBP XXX	Social/Behavioral Sciences Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

EC 3XX/4XX	Economic Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
SBP XXX	Behavioral Science Requirement	3 cr.

Subtotal: 15

Senior Year - Spring Semester

EC 490	Seminar: Issues in Contemporary Economics	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

EE.BSE - BSE in Electrical Engineering

General

College/School
College of Engineering

Department(s) ~
Electrical & Computer Engr

Program Title ~
BSE in Electrical Engineering

Program Code ~
EE.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

Our society today is powered by electronics. You'll work with modern technology to gain an understanding of the devices and machines that keep us connected and running at high speed.

Requirements

Free Form Requirements
Electrical and Computer Engineering Majors

General Information

Electrical and computer engineers are at the forefront of today's technological revolution, and they continue to be in demand in all types of public and private enterprises. The value added in today's products is primarily in digital and analog electronics and software. The internet has filled our lives with their influences. Electrical and computer engineering touch every aspect of today's modern world, using Artificial Intelligence (AI) to make our lives better by making homes, automobiles, phones, speakers, and miscellaneous everyday devices smarter and exploiting the Internet of Things (IoT) to make the world more connected. Our graduates are uniquely qualified to become engineers, capable of designing hardware and software. Electrical and computer engineers work in the communications, controls, signal and image processing, biomedical, aerospace, electronics, computer hardware, optics, integrated photonics, embedded systems, materials, energy, defense, data gathering/analysis, and other diverse commercial sectors.

The Electrical and Computer Engineering programs provide the student with a thorough background in electronic/hardware and systems design. Individual students can tailor their program to his or her specific interests by selecting appropriate technical or design electives. Elective areas include electronics, digital systems, IoT, VLSI, digital signal processing (DSP), controls, robotics, image optics, integrated photonics, and embedded systems. In all of our courses, we stress the balance of theory and practice. The theory, presented in class, is coupled with extensive, practical, hands-on laboratory projects and experiments.

Our laboratories are well equipped and all facilities are available for undergraduate use. Our laboratory equipment is updated on a rotating basis, allowing for a continued renewal and state-of-the-art technology in a rapidly changing world.

Electrical and Computer Engineering Laboratories:

- Embedded Systems Laboratory
- Controls and Artificial Intelligence Laboratory
- Internet of Things (IoT) Laboratory
- Circuits Laboratory
- Electronics Laboratory
- RF/Wireless Laboratory
- LEAP@WNE Optics/Photonics Laboratory

- Computer Architecture & Security Laboratory

Access is also provided to the following laboratories in other engineering departments as needed:

- Bioinstrumentation Laboratory
- Biomedical Engineering Physiology Laboratory
- Industrial Engineering Laboratory
- Mechanical Engineering Laboratory

Additionally, a fully equipped Machine Shop is available to students as well as a Rapid Prototyping STL machine.

The BSE in Electrical Engineering program is accredited by the Engineering Accreditation Commission(s) of ABET, https://www.abet.org, under the General Criteria and the Program Criteria for Electrical, Computer, Communications, Telecommunication(s) and Similarly Named Engineering Programs.

Design Experience

Students in the Electrical Engineering program and Computer Engineering program are introduced to engineering design in the freshman year in the Introduction to Engineering courses. Sophomore and junior courses and labs provide progressively more sophisticated design experiences within the electrical engineering program and computer engineering program respectively. Both programs culminate in a year-long capstone Senior Design Project course in which each student works on an independent project under the supervision of a faculty advisor. Most of the projects are sponsored by industry. Students involved in these projects have the opportunity to work with the industrial sponsor in an actual engineering environment.

Electives

Electives, in both programs, supplement the engineering student's technical program. These electives must be selected in such a way that all General Education "perspective of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. An assigned departmental faculty advisor must approve selection of electives from engineering, mathematics, science, or business.

Electrical and Computer Engineering Vision and Mission

Vision

The Electrical and Computer Engineering programs at Western New England University will become nationally and internationally recognized for graduating students who have experienced putting theory into practice and are also capable of succeeding in advanced studies.

Mission

The mission of the Electrical Engineering and Computer Engineering programs is to provide students with a supportive environment that facilitates learning to solve problems in electrical and computer engineering.

The Electrical and Computer Engineering programs are committed to excellence in student learning. Graduates of the programs will be problem solvers, able to apply engineering principles to electrical and computer systems. The faculty and staff of the programs use their background in teaching, research, and industry to prepare students to be successful as they move into the workforce or graduate school.

Program Educational Objectives

Within a few years after graduation, Bachelor of Science in Engineering in Computer Engineering (BSCPE) program graduates will:

1. Have successfully designed, built, tested complex systems.
2. Have a proven track record of being productive team members / leaders.
3. Have assumed leadership roles in their career.
4. Have contributed in professional and civic service.
5. Have pursued advanced learning through professional education, training, advanced degrees and used their knowledge to solve problems with global impact.

Student Outcomes

Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

3. An ability to communicate effectively with a range of audiences

4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Career Opportunities

The application areas for electrical and computer engineering are fairly ubiquitous and our Electrical and Computer Engineering programs provide a broad based education that leads to employment in a diverse spectrum of industries in both private and public sectors, for example, aerospace, defense, telecommunications, automotive, medical electronics, multimedia and consumer electronic industries, energy, and power. In particular we offer courses in electronic communications, robotics, artificial intelligence, controls, digital signal/image processing, digital design, computer architecture, software and hardware design, embedded systems, optics, and integrated photonics.

To provide additional depth in some of these areas the department offers Program Sequence Options as listed below.

- Robotics/Mechatronics Sequence
- RF/Microwave Engineering Sequence
- Controls/Artificial Intelligence Sequence
- Optics and Integrated Photonics Sequence

These Sequence Options have been described in detail following the Electrical Engineering program and Computer Engineering program degree requirements.

Graduates of the Electrical Engineering program have the ability to apply their knowledge and skills in a variety of professional electrical engineering positions dealing with research, design, manufacturing, and operation of equipment and services including power, control, communication, computer, optical and electro-optical systems, consumer electronics, household appliances, and electrical and electronic devices and materials. They can also apply for advanced graduate studies.

Degree Requirements

First Year- Fall

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

Freshman Year - Spring

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall

CHEM 105	General Chemistry I	4 cr.
EE 205/HONE 205	Electrical Engineering I	4 cr.
ME 202/HONE 202	Statics	3 cr.
MATH 236	Differential Equations	3 cr.
SBP XXX	Social/Behavioral Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring

CPE 271	Digital System Design	4 cr.
EE 206	Electrical Engineering II	4 cr.
EE 212	Fundamentals of Electro-Optics	3 cr.
EE 285	Computational Techniques in C	3 cr.
MATH 235	Calculus III	3 cr.

Subtotal: 17

Junior Year - Fall

IE 212	Probability and Statistics	3 cr.
EE 301	Signals and Systems	3 cr.
EE 303	Electronic Circuits	3 cr.
EE 314	Electromagnetic Fields and Waves	3 cr.
EE 319	Electrical Engineering Laboratory I	2 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 17

Junior Year - Spring

EE 302	Introduction to Digital Signal Processing	3 cr.
xxx	Design Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.
EE 322	Electrical Engineering Laboratory II	2 cr.
xxx	Design Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Senior Year - Fall

EE 422	Control Systems	3 cr.
EE 427	Electrical Engineering Laboratory III	2 cr.
EE 436	Project Research, Innovation and Development	2 cr.
EE 439	Professional Awareness	1 cr.
xxx	Design Elective	3 cr.
xxx	Technical Elective	3 cr.

Subtotal: 14

Senior Year - Spring

EE 440	Senior Design Projects	3 cr.
GEN XXX	General Elective	3 cr.
xxx	Technical Elective	3 cr.
xxx	Design Elective	3 cr.
xxx	Technical Elective	3 cr.

Subtotal: 15

Total Credit Hours: 129

1. Technical electives are engineering, math, science, or computer courses normally numbered 300 or above and approved by the advisor.

2. General Education courses must be selected in such a way to insure that all "perspective of understanding" requirements have been satisfied.

3. Design electives are EE or CPE courses numbered 300 or above and approved by the advisor.

4. General elective: Selected on approval of the academic advisor.

EE.MSE - MSE in Electrical Engineering

General

College/School
College of Engineering

Department(s) ~
Electrical & Computer Engr

Program Title ~
MSE in Electrical Engineering

Program Code ~
EE.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

This program will teach you the advanced techniques and skills of high-technology industries and how to apply them in research and project management. Concentrations in mechatronics, electrical, and computer engineering will allow you to specialize in an area of industry that suits your interests.

Requirements

Free Form Requirements
Master of Science in Engineering in Electrical Engineering

Degree Requirements

Core course requirements

EMGT 605	Engineering Management	3 cr.
	or	
EMGT 648	Project Management	3 cr.
EE 601	Advanced Electrical Engineering Analysis	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 650/IE 650	Systems Integration	3 cr.

Subtotal: 12

Non-Thesis Option—Minimum Curriculum Requirements

5XX	EE or CPE course	9 cr. max
6XX	EE or CPE course	6 cr.

Subtotal: 18

Thesis Option—Minimum Curriculum Requirements

6XX	EE or CPE course	6 cr.
5XX	EE or CPE course	9 cr. max
XXX	Thesis	6 cr.

Subtotal: 18

Project Option—Minimum Curriculum Requirements

6XX	EE or CPE course	6 cr.
5XX	EE or CPE course	9 cr. max
EE 685	Electrical Engineering Project	3 cr.

Subtotal: 18

*Courses numbered at the "6xx" level are for graduate students only.

Courses numbered at the "5xx" level are provided for entry level graduate students who may require a stronger foundation in a subject area before proceeding to 600 level courses. Course registration in 500 level courses must be approved by the master candidate's advisor.

Students may tailor their curriculum to meet their career goals. Students are required to meet with their advisor to develop an academic plan of study.

Master of Science in Engineering in Electrical Engineering-Mechatronics Concentration

The Mechatronics concentration in EE is directed toward both full-time and part-time students with a special emphasis on providing advanced training, experience in performing independent research on topics with theoretical as well as applied interest, and managing projects. A combination of courses from Electrical Engineering, Mechanical Engineering, and Engineering Management, is offered to provide the graduates with a systems perspective.

Degree Requirements

Core Course Requirements (for a total of 24 credits)

EMGT 605	Engineering Management	3 cr.
	or	
EMGT 648	Project Management	3 cr.
EMGT 607	Quality Engineering	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 650/IE 650	Systems Integration	3 cr.
EE 675	Advanced Motion Controls	3 cr.
EE 676	AI: Applied Fuzzy Logic	3 cr.
ME 655	Design of Mechatronic Systems	3 cr.
ME 656/ME 455	Advanced Mechatronics	3 cr.

Select two of the following EE courses (6 cr.)

EE 675	Advanced Motion Controls	3 cr.
	or	
EE 676	AI: Applied Fuzzy Logic	3 cr.
	or	
EE 677	Advanced Continuous and Discrete Systems Analysis and Controls	3 cr.
	or	
EE 678	Linear and NonLinear Systems Modeling and Simulation	3 cr.
ME 655	Design of Mechatronic Systems	3 cr.
ME 656/ME 455	Advanced Mechatronics	3 cr.

Subtotal: 24

Electrical Engineering Elective Courses

EE 601	Advanced Electrical Engineering Analysis	3 cr.
EE 614	Advanced Electromagnetics	3 cr.
EE 615	Antenna Theory and Design	3 cr.
EE 616	Introduction to Numerical Electromagnetics	3 cr.
EE 621	Coherent Optics	3 cr.
EE 625	Stochastic Processes - Kalman Filters	3 cr.
EE 650	Advanced Digital Signal Processing	3 cr.
EE 667	Advanced Electrical Materials	3 cr.
EE 670	AI: Applied Neural Networks and Machine Learning	3 cr.
EE 685	Electrical Engineering Project	3 cr.
EE 690	Special Topics in Electrical Engineering	3 cr.
EE 698-699	Thesis Research	6 cr.

Computer Engineering Elective Courses

CPE 620	Advanced Computer Architecture	3 cr.
CPE 625	Advanced Software Engineering	3 cr.
CPE 635	Advanced Requirements Analysis	3 cr.
CPE 645	Embedded Software Systems	3 cr.
CPE 648	Software Project Management	3 cr.
CPE 650	Software Architecture	3 cr.
CPE 652	Software Generation and Maintenance	3 cr.
CPE 655	Computer Network Architecture	3 cr.
CPE 690	Special Topics in Computer Engineering	3 cr.

Core Requirements

The following three options are available for the remaining six credits

- All Course Option:
- EE 601 Advanced Electrical Engineering and one EE 500/600 level course from an approved list of courses
- Project Option:
- EE 685 Project with presentation (3 credits) and EE 601
- Thesis Option:
- EE 698-EE 699 six credits of thesis with presentation

Note: For students who wish to select a project/thesis topic sponsored by their employer, the topic must be approved by the student's supervisor as well as their faculty advisor.

EEM.MSE - MSE in Electrical Engr/Mechatronics Conc

General

College/School
College of Engineering

Department(s) ~
Electrical & Computer Engr

Program Title ~
MSE in Electrical Engr/Mechatronics Conc

Program Code ~
EEM.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

This concentration is directed toward both full-time and part-time students with a special emphasis on providing advanced training, experience in performing independent research on topics with theoretical as well as applied interest, and managing projects. A combination of courses from Electrical Engineering, Mechanical Engineering and Engineering Management is offered to provide the students with a systems perspective.

Requirements

Free Form Requirements

Master of Science in Engineering in Electrical Engineering-Mechatronics Concentration

The Mechatronics concentration in EE is directed toward both full-time and part-time students with a special emphasis on providing advanced training, experience in performing independent research on topics with theoretical as well as applied interest, and managing projects. A combination of courses from Electrical Engineering, Mechanical Engineering, and Engineering Management, is offered to provide the graduates with a systems perspective.

Degree Requirements

Core Course Requirements:

EMGT 605 or EMGT 648	Engineering Management Project Management	3 cr. 3 cr.
EMGT 607	Quality Engineering	3 cr.
EMGT 643 / IE 643	Design of Experiments	3 cr.
EMGT 650 / IE 650	Systems Integration	3 cr.
ME 655	Design of Mechatronic Systems	3 cr.
ME 656	Advanced Mechatronics	3 cr.

Subtotal: 18 cr.

Select two of the following EE courses:

EE 675	Advanced Motion Controls	3 cr.
EE 676	AI: Applied Fuzzy Logic	3 cr.
EE 677	EE 677 Advanced Continuous and Discrete Systems Analysis and Controls	3 cr.
EE 678	EE 678 Linear and NonLinear Systems Modeling and Simulation	3 cr.
ME 655	ME 655 Design of Mechatronic Systems	3 cr.
ME 656/ME 455	ME 656/ME 455 Advanced Mechatronics	3 cr.

Subtotal: 6 cr.

The following three options are available for the remaining six credits

• All Course Option: EE 601 Advanced Electrical Engineering and one EE 500/600 level course from an approved list of courses (below)

• Project Option: EE 685 Project with presentation (3 credits) and EE 601

• Thesis Option: EE 698-EE 699 six credits of thesis with presentation

Subtotal: 6 cr.

Total: 30 credits

Electrical Engineering Elective Courses:

EE 601 Advanced Electrical Engineering Analysis 3 cr.

EE 614 Advanced Electromagnetics 3 cr.

EE 615 Antenna Theory and Design 3 cr.

EE 616 Introduction to Numerical Electromagnetics 3 cr.

EE 621 Coherent Optics 3 cr.

EE 625 Stochastic Processes - Kalman Filters 3 cr.

EE 650 Advanced Digital Signal Processing 3 cr.

EE 667 Advanced Electrical Materials 3 cr.

EE 670 AI: Applied Neural Networks and Machine Learning 3 cr.

EE 685 Electrical Engineering Project 3 cr.

EE 690 Special Topics in Electrical Engineering 3 cr.

EE 698-699 Thesis Research 6 cr.

Computer Engineering Elective Courses:

CPE 620 Advanced Computer Architecture 3 cr.

CPE 625 Advanced Software Engineering 3 cr.

CPE 635 Advanced Requirements Analysis 3 cr.

CPE 645 Embedded Software Systems 3 cr.

CPE 648 Software Project Management 3 cr.

CPE 650 Software Architecture 3 cr.

CPE 652 Software Generation and Maintenance 3 cr.

CPE 655 Computer Network Architecture 3 cr.

CPE 690 Special Topics in Computer Engineering 3 cr.

Note: For students who wish to select a project/thesis topic sponsored by their employer, the topic must be approved by the student's supervisor as well as their faculty advisor.

ELEDE.BA - BA in Elementary Education/English

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BA in Elementary Education/English

Program Code ~
ELEDE.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Elementary Education coursework will immerse you in the theories, skills and professional standards you need to become a successful elementary classroom teacher. You will complete a double major ensuring both depth of content knowledge for classroom teaching, and opportunity to develop other career opportunities upon graduation. Education majors complete several experiences in local elementary classrooms to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Elementary Education Majors

General Information
The Education major offers students the professional preparation essential for becoming an effective teacher in the 21st century. Coursework and field-based experiences are designed to meet the regulations and guidelines mandated by the Massachusetts Department of Elementary and Secondary Education (DESE). Through active participation in classes on campus and numerous assignments completed in area schools (K-12), future teachers learn how to plan curriculum to meet needs of all learners, effectively build and manage a classroom community, and implement and analyze assessments to foster learning for all students. Campus and field-based assignments are designed to support students in acquiring skills and knowledge needed to demonstrate professional skills outlined in the Professional Standards for Teaching (PSTs). Students also learn how to use the MA Curriculum Frameworks as a key reference for lesson planning.

In order to participate in and complete an Education major leading to endorsement for an initial license in Massachusetts, students must successfully complete all of the following criteria:

Declare a Major for registration eligibility in ED coursework, program tracking in Self-Service, access to ED courses and monitored advising throughout an ED curriculum leading to licensure. Declaring an ED major is not a guarantee of acceptance; full acceptance to an ED major occurs in spring junior year if all departmental criteria are met.

Elementary: Double major in Elementary Education and one of the following content majors: English, History, Math, or Psychology.

Secondary content majors: Biology, Chemistry, English, History, or Math. Follow specified ED curriculum for your major/double major as outlined in University catalog and

advising sheets. Any substitutions to outlined curriculum must be approved via ED Department waiver.

Apply to the Education Department for admission to continue in coursework and field-based experiences required for licensure; applications available in Emerson (G100C) and ED Department Kodiak class.

Meet with ED faculty each semester for progress monitoring and advising in addition to receiving feedback through ED coursework and field placements.

Complete prepracticum (field-based) experiences and gateway assessment assignments to specified standards demonstrating content knowledge, teaching skills (implementation of WNE lesson template), and professional dispositions. Field experiences take place in local schools, you will experience different settings (urban and suburban) and different grade levels within the license area you seek.

Preprac 1: LA 110**/ ED 120 10 hours
*if Elementary Education section of LA 110 is not taken, student must take ED 120

Preprac 2: ED 351 (elementary)/ ED 202 (secondary): 25 hours
Gateway #1—peer microteaching

Preprac 3 ED 376 (elementary)/ED 366 (secondary) 25 hours

Gateway #2 —K-12 microteaching

Earn a minimum cumulative GPA of at least 2.800 overall, 2.800 in your content major, and 2.800 in preliminary education courses; earn a minimum 'C' in all ED classes.

Take and pass the Massachusetts Tests for Educator Licensure (MTEL) required for licensure area before Spring Break in junior year.

Students successfully completing all criteria listed above will be eligible to complete the student teaching block in Fall of senior year; be fully admitted to the Education department.

Students unable to meet all criteria will be counseled out of an ED major and may complete the ED minor, graduating in their content major.

* Any requested changes to above requirements must be addressed through an ED Department waiver.

Due the demands of completing an Education major, students who transfer into the University, or change majors while on campus, may not be able to graduate in four years.

The Massachusetts Department of Elementary and Secondary Education (DESE) has accredited all of the University's teacher preparation programs through a formal review process grounded in the Massachusetts Professional Standards for Teaching and Subject Matter Knowledge guidelines. Upon graduation students are eligible to be endorsed by the University for an Initial Teaching License in Massachusetts. Students apply directly to DESE for their teaching license.

Students planning to teach in other states should meet with a member of the Education Department, or look at the Department of Education website for the state in question, to learn about specific requirements. Massachusetts participates with every state and the District of Columbia through the National Association of State Directors of Teacher Education and Certification (NASDTEC) Interstate Agreement to accept a candidates' state approved educator preparation program. The interstate agreement does not exempt candidates from degree, testing, and/or prerequisite requirements, this information is available on state department of education websites.

Education handbooks are available online on the Education Department website:
http://www1.wne.edu/arts-and-sciences/departments/education/index.cfm

Education handbooks, prepracticum assignments, MTEL resources, lesson planning resources are available in the Education Department Kodiak class.

Elementary Teacher Education

Students preparing for an Elementary Teaching license must select a major in one of the prescribed liberal arts and sciences disciplines (English, History, Math, Psychology) and complete the Elementary Education major; they are completing a double major. Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the elementary education major in four years with the following majors: English, History, Mathematics, and Psychology. Elementary majors begin their educator preparation in LA 100 (students must take ED 120 if the Education section of LA 110 is not completed).

A student should file an application with the Education Department by the end of their first year (application available in EG 100C), or immediately upon transfer to an ED major. A student will be fully accepted, and eligible for the student teaching block by Spring Break of junior year, if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing the Elementary Education major.

Minimum eligibility requirements for completing the Elementary Education major are listed in advising handouts available from ED faculty.

Students are required to meet individually at least once a semester with an Education faculty member to review prepracticum feedback and participation, progress in meeting gateway assessments, major coursework assignments, and confirm passed MTEL status before a student teaching placement will be assigned. Students may be counseled out of an ED major for not meeting all criteria, academic performance, or demonstrated lack of professional dispositions. All ED majors complete a minimum of eighty-five hours of prepracticum experiences, and a minimum of three hundred hours as a student teacher in local elementary schools.

Students meeting all stated criteria are automatically eligible for the practicum semester (Fall of senior year). The practicum semester includes an integrated methods course, elementary classroom participation (grades 1-6), and a student teaching seminar. The Candidate Assessment of Performance (CAP) system is used throughout the practicum semester. CAP is designed around the PSTs as outlined by DESE. Working collaboratively, the student teacher (candidate), the supervising practitioner

(cooperating teacher) and University supervisor (WNE ED faculty) gather data, and analyze evidence of ability and effectiveness implementing the PSTs.

Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involving completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in the Elementary Education major: LA 110 (with ED faculty or ED 120), ED 201, ED 252, ED 275, ED 350, ED 351, ED 365, ED 375, ED 376 ED 425, ED 479, and ED 480.

Students should plan on taking only ED 425, ED 479, and ED 480 in Fall of senior year (total of 15 credits). ED 479 requires full-time student teaching off campus.

Elementary Education Major - English Suggested Sequence of Courses

(Major XXX - See catalogue for course requirements of second major)

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.
HIST 111	United States History to 1877	3 cr.
PSY 101	Introduction to Psychology	3 cr.
PEHR 163	Games Children Play	1 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 16

*IF LA 110 not taken with ED department, must take ED 120

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 108	Mathematics for Elementary Education II	3 cr.
HIST XXX	Choose from: HIST 133, 170, 171, 204, 251, 256, 259, 277, 310, 345, 351	3 cr.
POSC 102	American National Government	3 cr.
MAJOR XXX		3 cr.

Subtotal: 15

10 hours Pre-Practicum

Communication and Literary Skills MTEL recommended in Spring semester.

Sophomore Year - Fall Semester

ED 350	Reading and Language Arts: Theory and Methods	3 cr.
ED 351	Elementary Prepracticum I	1 cr.
HIST 105 - HIST 106	World Civilization I or World Civilization II	3 cr. - 3 cr.
LAB XXX	Laboratory Science	3 cr.
ENGL xxx	Choose from: ENGL-237, 240, 249, 336, 370, 371	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 16

Sophomore Year - Spring Semester

ED 375	Humanities, Science and Mathematics Methods	3 cr.
ED 252	Survey of Geography	1 cr.
ED 376	Elementary Prepracticum II	1 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
ED 365	Special Education: Principles & Practices	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 14

Foundations of Reading and/ General Curriculum MTEL encouraged in this year.

Junior Year - Fall Semester

CS 132	Principles of Computing	3 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
EC 111	Principles of Microeconomics	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 18

Junior Year - Spring Semester

PH XXX	Ethical Perspective	3 cr.
ED 201	Principles and Problems of Education	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
ED 275	Teaching English Language Learners	3 cr.

Subtotal: 15

All MTEL tests must be passed by Spring Break.

Senior Year - Fall Semester

ED 425	Infusing Curriculum with Arts, Health, and Technology	3 cr.
ED 479	Elementary Teaching Practicum	9 cr.
ED 480	Elementary Practicum Seminar	3 cr.

Subtotal: 15

Senior Year - Spring Semester

CUL XXX	Global Cultures Perspective	3 cr.
XXX	Aesthetics Perspective, choose one: ART 101, 201, 202, 205, 225, THTR 110, MUS 101, 120, 230, 240, FILM 102, 103, 201, 210	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 15

Total Credit Hours: 124

Major XXX slots identify where courses required by content major are taken.

*Two courses in the curriculum must be designated “Writing Intensive.”

ELEDH.BA - BA in Elementary Education/History

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BA in Elementary Education/History

Program Code ~
ELEDH.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Elementary Education coursework will immerse you in the theories, skills and professional standards you need to become a successful elementary classroom teacher. You will complete a double major ensuring both depth of content knowledge for classroom teaching, and opportunity to develop other career opportunities upon graduation. Education majors complete several experiences in local elementary classrooms to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Elementary Education Majors

General Information
The Education major offers students the professional preparation essential for becoming an effective teacher in the 21st century. Coursework and field-based experiences are designed to meet the regulations and guidelines mandated by the Massachusetts Department of Elementary and Secondary Education (DESE). Through active participation in classes on campus and numerous assignments completed in area schools (K-12), future teachers learn how to plan curriculum to meet needs of all learners, effectively build and manage a classroom community, and implement and analyze assessments to foster learning for all students. Campus and field-based assignments are designed to support students in acquiring skills and knowledge needed to demonstrate professional skills outlined in the Professional Standards for Teaching (PSTs). Students also learn how to use the MA Curriculum Frameworks as a key reference for lesson planning.

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Preprac 1: LA 110**/ ED 120 10 hours
*if Elementary Education section of LA 110 is not taken, student must take ED 120

Preprac 2: ED 351 (elementary)/ ED 202 (secondary): 25 hours
Gateway #1—peer microteaching

Preprac 3 ED 376 (elementary)/ED 366 (secondary) 25 hours

Gateway #2 —K-12 microteaching

Earn a minimum cumulative GPA of at least 2.800 overall, 2.800 in your content major, and 2.800 in preliminary education courses; earn a minimum ‘C’ in all ED classes.

Take and pass the Massachusetts Tests for Educator Licensure (MTEL) required for licensure area before Spring Break in junior year.

Students successfully completing all criteria listed above will be eligible to complete the student teaching block in Fall of senior year; be fully admitted to the Education department.

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Elementary Teacher Education

Students preparing for an Elementary Teaching license must select a major in one of the prescribed liberal arts and sciences disciplines (English, History, Math, or Psychology) and complete the Elementary Education major; they are completing a double major. Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the elementary education major in four years with the following majors: English, History, Mathematics, and Psychology. Elementary majors begin their educator preparation in LA 100 (students must take ED 120 if the Education section of LA 110 is not completed).

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Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involving completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in the Elementary Education major: LA 110 (with ED faculty or ED 120), ED 201, ED 252, ED 275, ED 350, ED 351, ED 365, ED 375, ED 376 ED 425, ED 479, and ED 480.

Students should plan on taking only ED 425, ED 479, and ED 480 in Fall of senior year (total of 15 credits). ED 479 requires full-time student teaching off campus.

Elementary Education History Major Suggested Sequence of Courses

(Major XXX - See catalogue for course requirements of second major)

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.
HIST 111	United States History to 1877	3 cr.
PSY 101	Introduction to Psychology	3 cr.
PEHR 163	Games Children Play	1 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 16

*IF LA 110 not taken with ED department, must take ED 120

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 108	Mathematics for Elementary Education II	3 cr.
HIST 112	United States History, 1878 to the Present	3 cr.
POSC 102	American National Government	3 cr.
MAJOR XXX	(Psychology majors take PSY 207)	3 cr.

Subtotal: 15

10 hours Pre-Practicum

Communication and Literary Skills MTEL recommended in Spring semester.

Sophomore Year - Fall Semester

ED 350	Reading and Language Arts: Theory and Methods	3 cr.
ED 351	Elementary Prepracticum I	1 cr.
HIST 105	World History, Prehistory-1500CE	3 cr.
LAB XXX	Laboratory Science	3 cr.
ENGL xxx	ENGL-course-from-among-ENGL-237-240-249-336-370-371	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 16

Sophomore Year - Spring Semester

ED 375	Humanities, Science and Mathematics Methods	3 cr.
ED 252	Survey of Geography	1 cr.
ED 376	Elementary Prepracticum II	1 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
HIST 106	World History, 1500CE-Present	3 cr.
ED 365	Special Education: Principles & Practices	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 17

Foundations of Reading and/ General Curriculum MTEL encouraged in this year.

Junior Year - Fall Semester

CS 132	Principles of Computing	3 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
EC 111	Principles of Microeconomics	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 15

Junior Year - Spring Semester

PH XXX	Ethical Perspective	3 cr.
ED 201	Principles and Problems of Education	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
ED 275	Teaching English Language Learners	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 18

All MTEL tests must be passed by Spring Break.

Senior Year - Fall Semester

ED 425	Infusing Curriculum with Arts, Health, and Technology	3 cr.
ED 479	Elementary Teaching Practicum	9 cr.
ED 480	Elementary Practicum Seminar	3 cr.

Subtotal: 15

Senior Year - Spring Semester

CUL XXX	Global Cultures Perspective	3 cr.
XXX	Aesthetics Perspective, choose one: ART 101, 201, 202, 205, 225, THTR 110, MUS 101, 120, 230, 240, FILM 102, 103, 201, 210	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.
MAJOR XXX	See catalogue for courses in major	3 cr.

Subtotal: 15

Total Credit Hours: 130

Major xxx slots identify where courses required by content major are taken.

ELEDM.BA - BA in Elementary Ed/Math Sci Teacher Prep

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BA in Elementary Ed/Math Sci Teacher Prep

Program Code ~
ELEDM.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Elementary Education coursework will immerse you in the theories, skills and professional standards you need to become a successful elementary classroom teacher. You will complete a double major ensuring both depth of content knowledge for classroom teaching, and opportunity to develop other career opportunities upon graduation. Education majors complete several experiences in local elementary classrooms to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Elementary Education Majors

General Information
The Education major offers students the professional preparation essential for becoming an effective teacher in the 21st century. Coursework and field-based experiences are designed to meet the regulations and guidelines mandated by the Massachusetts Department of Elementary and Secondary Education (DESE). Through active participation in classes on campus and numerous assignments completed in area schools (K-12), future teachers learn how to plan curriculum to meet needs of all learners, effectively build and manage a classroom community, and implement and analyze assessments to foster learning for all students. Campus and field-based assignments are

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Apply to the Education Department for admission to continue in coursework and field-based experiences required for licensure; applications available in Emerson (G100C) and ED Department Kodiak class.

Meet with ED faculty each semester for progress monitoring and advising.

Complete prepracticum (field-based) experiences and gateway assessment assignments to specified standards demonstrating content knowledge, teaching skills (implementation of WNE lesson template), and professional dispositions. Field experiences take place in local schools, you will experience different settings (urban and suburban) and different grade levels within the license area you seek.

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Take and pass the Massachusetts Tests for Educator Licensure (MTEL) required for licensure area before Spring Break in junior year.

Students successfully completing all criteria listed above will be eligible to complete the student teaching block in Fall of senior year; be fully admitted to the Education department.

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Education handbooks, prepracticum assignments, MTEL resources, lesson planning resources are available in the Education Department Kodiak class.
Students who completed a licensure major in the academic year 2020-2021, had a 100% pass rate on all Massachusetts Tests for Educator Licensure (MTEL).

Elementary Teacher Education

Students preparing for an Elementary Teaching license must select a major in one of the prescribed liberal arts and sciences disciplines (English, History, Math, or Psychology) and complete the Elementary Education major; they are completing a double major. Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the elementary education major in four years with the following majors: English, History, Mathematics, and Psychology. Elementary majors begin their educator preparation in LA 100 (students must take ED 120 if the Education section of LA 110 is not completed).

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Required courses for students enrolled in the Elementary Education major: LA 110 (with ED faculty or ED 120), ED 201, ED 252, ED 275, ED 350, ED 351, ED 365, ED 375, ED 376 ED 425, ED 479, and ED 480.

Students should plan on taking only ED 425, ED 479, and ED 480 in Fall of senior year (total of 15 credits). ED 479 requires full-time student teaching off campus.

Mathematical Sciences Teacher Preparation - Elementary School Degree Requirements

CS 170	Technology in Mathematics	3 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.
MATH 108	Mathematics for Elementary Education II	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
MATH 127 or MATH 133	Calculus I with Pre-Calculus Review Calculus I	5 cr. 4 cr.
MATH 134	Calculus II	4 cr.
MATH 235	Calculus III	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.
MATH 371	Modern Aspects of Geometry	3 cr.
MATH 375	Creative Problem Solving	3 cr.
MATH 377	Elementary Number Theory	3 cr.
MATH 451	Senior Project I	1 cr.
MATH 452	Senior Project II	2 cr.

Subtotal: 38-39

The typical course schedule for the Bachelor of Arts degree in the Mathematical Sciences, teacher preparation-elementary education, would be constructed as indicated below.

Elementary Education BA in the Mathematical Sciences, Teacher Preparation-Elementary School Suggested Sequence of Courses

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
MATH 127 or MATH 133	Calculus I with Pre-Calculus Review Calculus I	5 cr. 4 cr.
HIST 111	United States History to 1877	3 cr.
PSY 101	Introduction to Psychology	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
PEHR 163	Games Children Play	1 cr.

Subtotal: 17-18

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 134	Calculus II	4 cr.
HIST XXX	Choose from HIST 133, 170, 171, 204. 251, 256, 259, 277, 310, 345, 351	3 cr.
POSC 102	American National Government	3 cr.
CS 170	Technology in Mathematics	3 cr.

Subtotal: 16

First attempt on Communication and Literacy Skills MTEL is encouraged in Spring Semester.

Sophomore Year - Fall Semester

ED 350	Reading and Language Arts: Theory and Methods	3 cr.
LAB XXX	Laboratory Science	3 cr.
MATH 235	Calculus III	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
ED 351	Elementary Prepracticum I	1 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.

Subtotal: 16

Sophomore Year - Spring Semester

ED 275	Teaching English Language Learners	3 cr.
ED 375	Humanities, Science and Mathematics Methods	3 cr.
ED 376	Elementary Prepracticum II	1 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
ENGL xxx	ENGL-course-from-among-ENGL-237-240-249-336-370-371	3 cr.
MATH 108	Mathematics for Elementary Education II	3 cr.

Subtotal: 16

First attempts on Foundations of Reading and/or Elementary Subject Matter MTEL are encouraged in this year.

Junior Year - Fall Semester

ED 365	Special Education: Principles & Practices	3 cr.
EC 111	Principles of Microeconomics	3 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.

Subtotal: 15

Junior Year - Spring Semester

PH XXX	Ethical Perspective	3 cr.
ED 201	Principles and Problems of Education	3 cr.
MATH 371	Modern Aspects of Geometry	3 cr.
	or	
MATH 377 - MATH 375	Elementary Number Theory and Creative Problem Solving	3 cr. + 3 cr.
HIST 105 - HIST 106	World Civilization I or World Civilization II	3 cr. - 3 cr.
ED 252	Survey of Geography	1 cr.

Subtotal: 13-16

All MTEL tests must be passed at this point.

Senior Year - Fall Semester

ED 425	Infusing Curriculum with Arts, Health, and Technology	3 cr.
ED 479	Elementary Teaching Practicum	9 cr.
ED 480	Elementary Practicum Seminar	3 cr.
MATH 451	Senior Project I	1 cr.

Subtotal: 16

Senior Year - Spring Semester

CUL XXX	Global Cultures Perspective	3 cr.
XXX	Aesthetics Perspective, choose one: ART 101, 201, 202, 205, 225, THTR 110, MUS 101, 120, 230, 240, FILM 102, 103, 201, 210	3 cr.
MATH 371	Modern Aspects of Geometry	3 cr.
	or	
MATH 377 - MATH 375	Elementary Number Theory and Creative Problem Solving	3 cr. + 3 cr.
MATH 452	Senior Project II	2 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 14-17

Total Credit Hours: 126

MATH 371 and MATH 377 are offered in alternate spring semesters, so either MATH 371 or MATH 377 will be taken in the spring semester of the junior year and the other will be taken in the spring of the senior year.

ELEDP.BA - BA in Elementary Education/Psychology

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BA in Elementary Education/Psychology

Program Code ~
ELEDP.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Elementary Education coursework will immerse you in the theories, skills and professional standards you need to become a successful elementary classroom teacher. You will complete a double major ensuring both depth of content knowledge for classroom teaching, and opportunity to develop other career opportunities upon graduation. Education majors complete several experiences in local elementary classrooms to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Elementary Education Majors

General Information
The Education major offers students the professional preparation essential for becoming an effective teacher in the 21st century. Coursework and field-based experiences are designed to meet the regulations and guidelines mandated by the Massachusetts Department of Elementary and Secondary Education (DESE). Through active participation in classes on campus and numerous assignments completed in area schools (K-12), future teachers learn how to plan curriculum to meet needs of all learners, effectively build and manage a classroom community, and implement and analyze assessments to foster learning for all students. Campus and field-based assignments are designed to support students in acquiring skills and knowledge needed to demonstrate professional skills outlined in the Professional Standards for Teaching (PSTs). Students also learn how to use the MA Curriculum Frameworks as a key reference for lesson planning.

In order to participate in and complete an Education major leading to endorsement for an initial license in Massachusetts, students must successfully complete all of the following criteria:

Declare a Major for registration eligibility in ED coursework, program tracking in Self-Service, access to ED courses and monitored advising throughout an ED curriculum leading to licensure. Declaring an ED major is not a guarantee of acceptance; full acceptance to an ED major occurs in spring junior year if all departmental criteria are met.

Elementary: Double major in Elementary Education and one of the following content majors: English, History, Math, or Psychology.

Secondary content majors: Biology, Chemistry, English, History, or Math. Follow specified ED curriculum for your major/double major as outlined in University catalog and advising sheets. Any substitutions to outlined curriculum must be approved via ED Department waiver.

Apply to the Education Department for admission to continue in coursework and field-based experiences required for licensure; applications available in Emerson (G100C) and ED Department Kodiak class.

Meet with ED faculty each semester for progress monitoring and advising in addition to receiving feedback through ED coursework and field placements.

Complete prepracticum (field-based) experiences and gateway assessment assignments to specified standards demonstrating content knowledge, teaching skills (implementation of WNE lesson template), and professional dispositions. Field experiences take place in local schools, you will experience different settings (urban and suburban) and different grade levels within the license area you seek.

Preprac 1: LA 110**/ ED 120 10 hours
*if Elementary Education section of LA 110 is not taken, student must take ED 120

Preprac 2: ED 351 (elementary)/ ED 202 (secondary): 25 hours
Gateway #1—peer microteaching

Preprac 3 ED 376 (elementary)/ED 366 (secondary) 25 hours

Gateway #2 —K-12 microteaching

Earn a minimum cumulative GPA of at least 2.800 overall, 2.800 in your content major, and 2.800 in preliminary education courses; earn a minimum ‘C’ in all ED classes.

Take and pass the Massachusetts Tests for Educator Licensure (MTEL) required for licensure area before Spring Break in junior year.

Students successfully completing all criteria listed above will be eligible to complete the student teaching block in Fall of senior year; be fully admitted to the Education department.

Students unable to meet all criteria will be counseled out of an ED major and may complete the ED minor, graduating in their content major.

* Any requested changes to above requirements must be addressed through an ED Department waiver.

Due the demands of completing an Education major, students who transfer into the University, or change majors while on campus, may not be able to graduate in four years.

The Massachusetts Department of Elementary and Secondary Education (DESE) has accredited all of the University's teacher preparation programs through a formal review process grounded in the Massachusetts Professional Standards for Teaching and Subject Matter Knowledge guidelines. Upon graduation students are eligible to be endorsed by the University for an Initial Teaching License in Massachusetts. Students apply directly to DESE for their teaching license.

Students planning to teach in other states should meet with a member of the Education Department, or look at the Department of Education website for the state in question, to learn about specific requirements. Massachusetts participates with every state and the District of Columbia through the National Association of State Directors of Teacher Education and Certification (NASDTEC) Interstate Agreement to accept a candidates' state approved educator preparation program. The interstate agreement does not exempt candidates from degree, testing, and/or prerequisite requirements, this information is available on state department of education websites.

Education handbooks are available online on the Education Department website:
http://www1.wne.edu/arts-and-sciences/departments/education/index.cfm

Education handbooks, prepracticum assignments, MTEL resources, lesson planning resources are available in the Education Department Kodiak class.

Elementary Teacher Education

Students preparing for an Elementary Teaching license must select a major in one of the prescribed liberal arts and sciences disciplines (English, History, Math, or Psychology) and complete the Elementary Education major; they are completing a double major. Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the elementary education major in four years with the following majors: English, History, Mathematics, and Psychology. Elementary majors begin their educator preparation in LA 100 (students must take ED 120 if the Education section of LA 110 is not completed).

A student should file an application with the Education Department by the end of their first year (application available in EG 100C), or immediately upon transfer to an ED major. A student will be fully accepted, and eligible for the student teaching block by Spring Break of junior year, if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing the Elementary Education major.

Minimum eligibility requirements for completing the Elementary Education major are listed in advising handouts available from ED faculty.

Students are required to meet individually at least once a semester with an Education faculty member to review prepracticum feedback and participation, progress in meeting gateway assessments, major coursework assignments, and confirm passed MTEL status before a student teaching placement will be assigned. Students may be counseled out of an ED major for not meeting all criteria, academic performance, or demonstrated lack of professional dispositions. All ED majors complete a minimum of eighty-five hours of prepracticum experiences, and a minimum of three hundred hours as a student teacher in local elementary schools.

Students meeting all stated criteria are automatically eligible for the practicum semester (Fall of senior year). The practicum semester includes an integrated methods course, elementary classroom participation (grades 1-6), and a student teaching seminar. The Candidate Assessment of Performance (CAP) system is used throughout the practicum semester. CAP is designed around the PSTs as outlined by DESE. Working collaboratively, the student teacher (candidate), the supervising practitioner (cooperating teacher) and University supervisor (WNE ED faculty) gather data, and analyze evidence of ability and effectiveness implementing the PSTs.

Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involving completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in the Elementary Education major: LA 110 (with ED faculty or ED 120), ED 201, ED 252, ED 275, ED 350, ED 351, ED 365, ED 375, ED 376 ED 425, ED 479, and ED 480.

Students should plan on taking only ED 425, ED 479, and ED 480 in Fall of senior year (total of 15 credits). ED 479 requires full-time student teaching off campus.

Elementary Education Psychology Major Suggested Sequence of Courses

(Major XXX - See catalog for course requirements of second major)

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.
HIST 111	United States History to 1877	3 cr.
PSY 101	Introduction to Psychology	3 cr.
PEHR 163	Games Children Play	1 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 16

*IF LA 110 not taken with ED department, must take ED 120

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 108	Mathematics for Elementary Education II	3 cr.
HIST XXX	Choose one: HIST 133, 170, 171, 204, 251, 256, 259, 277, 310, 345, 351	3 cr.
POSC 102	American National Government	3 cr.
MAJOR XXX	(Psychology majors take PSY 207)	3 cr.

Subtotal: 15

10 hours Pre-Practicum

Communication and Literary Skills MTEL recommended in Spring semester.

Sophomore Year - Fall Semester

ED 350	Reading and Language Arts: Theory and Methods	3 cr.
ED 351	Elementary Prepracticum I	1 cr.
HIST 105 - HIST 106	World History, Prehistory-1500CE or World History, 1500CE-Present	3 cr. - 3 cr.
LAB XXX	Laboratory Science	3 cr.
ENGL xxx	ENGL-course-from-among-ENGL-237-240-249-336-370-371	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.

Subtotal: 16

Sophomore Year - Spring Semester

ED 375	Humanities, Science and Mathematics Methods	3 cr.		
ED 252	Survey of Geography	1 cr.		
ED 376	Elementary Prepracticum II	1 cr.		
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.		
ED 365		3 cr.		
MAJOR XXX	See catalog for courses in major	3 cr.		
MAJOR XXX	See catalog for courses in major	3 cr.		

Subtotal: 17

Foundations of Reading and/ General Curriculum MTEL encouraged in this year.

Junior Year - Fall Semester

CS 132	Principles of Computing	3 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
EC 111	Principles of Microeconomics	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.

Subtotal: 15

Junior Year - Spring Semester

PH XXX	Ethical Perspective	3 cr.
ED 201	Principles and Problems of Education	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.
ED 275	Teaching English Language Learners	3 cr.

Subtotal: 15

All MTEL tests must be passed by Spring Break.

Senior Year - Fall Semester

ED 425	Infusing Curriculum with Arts, Health, and Technology	3 cr.
ED 479	Elementary Teaching Practicum	9 cr.
ED 480	Elementary Practicum Seminar	3 cr.

Subtotal: 15

Senior Year - Spring Semester

CUL XXX	Global Cultures Perspective	3 cr.
XXX	Aesthetics Perspective, choose one: ART 101, 201, 202, 205, 225, THTR 110, MUS 101, 120, 230, 240, FILM 102, 103, 201, 210	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.
MAJOR XXX	See catalog for courses in major	3 cr.

Subtotal: 15

Total Credit Hours: 127

Major xxx slots identify where courses required by content major are taken.

EMGT.MS - MS in Engineering Management

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
MS in Engineering Management

Program Code ~
EMGT.MS

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

The MS in Engineering Management allows you to tailor your education and expertise through a variety of electives. You'll learn best business practices and strategies to most effectively use company resources while better serving customers.

Requirements

Free Form Requirements
Master of Science in Engineering Management

Nearly half of the engineers working in industry serve in management capacities, yet many undergraduate engineering curricula do not include information on the development of management problem-solving skills. The Master of Science in Engineering Management program addresses this need by including core courses in project management; supply chain management; and logistics, quality engineering, and statistical methods for quality assurance.

Program Objectives

Graduates of the program will:

- Be able to plan, design, and manage technological projects.

- Have increased career advancement opportunities given their coursework and experience in the program.
- Be better prepared to manage and implement change within their organization.

Degree Requirements

Core Courses

EMGT 607	Quality Engineering	3 cr.
EMGT 615	Statistical Quality Control	3 cr.
EMGT 619/IE 619	Engineering Supply Chain	3 cr.
EMGT 648	Project Management	3 cr.
	or	
EMGT 605	Engineering Management	3 cr.

Subtotal: 12 cr.

In addition to the required four core courses (12 credit hours) above, students can expand their technical knowledge in keeping with their interest and professional needs by selecting any 18 cr. of graduate level courses in engineering management. A student may also select a maximum of three graduate courses from the Master of Business Administration (MBA) program.

Production and Manufacturing Systems courses

EMGT 609/CEE 609/IE 609	Strategic Engineering Economics	3 cr.
EMGT 622/IE 622	Lean Production Systems	3 cr.
EMGT 629/IE 629	Advanced Manufacturing Engineering Systems	3 cr.
EMGT 631/IE 631	Production and Inventory Modeling	3 cr.
EMGT 637	Ergonomics and Occupational Safety	3 cr.
EMGT 640/CEE 641	Energy Management	3 cr.
EMGT 642	Engineering Materials	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 645/IE 645	Quantitative Models of Supply Chain Management	3 cr.
EMGT 647	Facility Planning	3 cr.

Quality Engineering courses

EMGT 602	Engineering Crisis, Disaster, and Risk Management	3 cr.
EMGT 609/CEE 609/IE 609	Strategic Engineering Economics	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 644/IE 644	Quality Systems and Process Improvement	3 cr.

Business and Engineering Information Systems courses

BIS 610	Information Technology Management and Applications	3 cr.
BIS 6XX	Business Information System Elective	3 cr.
CPE 6XX	Computer Engineering Elective	3 cr.
EMGT 602	Engineering Crisis, Disaster, and Risk Management	3 cr.
EMGT 611	Strategic Direction of Technology and Innovation	3 cr.
EMGT 620/IE 620	Multi-Criteria Decision Analysis	3 cr.
EMGT 624	Engineering Management Information Systems	3 cr.
EMGT 626/IE 626	Discrete Event Simulation	3 cr.
EMGT 635/IE 635	Operations Research	3 cr.
EMGT 650/IE 650	Systems Integration	3 cr.

Engineering Management Electives—9 credit hours minimum*

Other Engineering Electives or Business MBA Electives—9 credit hours maximum

Subtotal: 18 cr.

Total: 30 credits

EMGT.PHD - PhD in Engineering Management

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
PhD in Engineering Management

Program Code ~
EMGT.PHD

Degree Designation ~
PHD - Doctor of Philosophy

Academic Level ~
GR - Graduate

Program Short Description

The PhD in Engineering Management will prepare you to be at the top of your field as a respected researcher, practitioner, or educator. Rigorous research in the improvement, design, and management of projects and programs will advance your knowledge and experience as an engineering management expert.

Requirements

Free Form Requirements
DOCTORAL PROGRAM IN ENGINEERING MANAGEMENT

General Information

The Doctor of Philosophy (PhD) focuses on developing skills needed to conduct rigorous research in areas related to the improvement, design, and management of projects and programs within complex human-technological systems. These systems include engineering systems, healthcare systems, service systems, and logistical/transportation systems. Through a combination of coursework and directed research, the Department of Industrial Engineering and Engineering Management will provide a solid foundation and depth of engineering management theory and practice, provide breadth and depth across multiple types of human technological systems, and contribute to the body and knowledge in engineering management.

Program Goals and Objectives

The goal of this program is to prepare graduates with appropriate technical depth and breadth of knowledge so that they may be successful educators, researchers, and practitioners in the management of engineering and technology. Graduates of this program will demonstrate:

A solid foundation and depth in engineering and management theory and practice;

A breadth across multiple types of human technological systems; and

An ability to contribute to the body of knowledge in engineering management.

These objectives will be assessed via coursework in related areas, class projects, dissertation completion, and publication of research work.

Program Structure

The following outlines the degree and curricular requirements for the program. In addition to the required coursework each student must complete a preliminary examination, a comprehensive examination, a proposal defense, and finally a dissertation defense in order to obtain the degree. Students must maintain a grade point average of 3.0 on a 4.0 scale. Students may also have no more than two course grades of 'C' or lower.

Credit Hour Requirements

Graduate Coursework : at least 57 credit hours beyond BS; at least 30 credit hours beyond MS; 60% of the PhD courses (incl. dissertation) must be at 700 or higher level and 70% of all graduate courses (incl. dissertation) must be at 600 or higher level.

Dissertation : at least 27 credit hours.

Preliminary Examination

Before completing five terms at Western New England University, a student (full-time) must pass the preliminary examination administered by the department. A student may attempt the examination no more than twice. The examination will be based on the subject material from EMGT 643, EMGT 635, EMGT 648, EMGT 701, and EMGT 704/EMGT 604.

Advisor, Advisory Committee, and Plan of study

Before completing six terms at Western New England University, a student (full-time) must select a major advisor and an advisory committee: With the assistance of the advisor, the student must prepare a plan of study that must be approved by the advisory committee and department chair before the comprehensive examination is attempted. Advisory committees will consist of at least three departmental members (one of which must be the major advisor) and at least one member from outside the department.

Dissertation Approval Examination (proposal defense)

Students must prepare a written dissertation research proposal and present it orally. A student must be continuously enrolled in EMGT 770-799 (Dissertation) after the dissertation approval examination.

Dissertation Defense

Students must successfully defend their dissertation through written and oral presentation. Students must complete this milestone within eight years of initial enrollment into the program.

Degree Requirements

CORE COURSES (15-21 HOURS)

EMGT 635	Operations Research	3 cr.
EMGT 643	Design of Experiments	3 cr.
EMGT 648	Project Management	3 cr.
EMGT 701	Seminar / Research Methods for Engineering Management	3 cr.
EMGT 704	Engineering Risk Analysis Methods	3 cr.

A student who enters the program and does not have a Master of Science Degree in Engineering Management or a closely related field also needs to complete the following:

EMGT 619	Engineering Supply Chain	3 cr.
EMGT 644	Quality Systems and Process Improvement	3 cr.

Subtotal: 21 cr.

ELECTIVE COURSES (9-15 HOURS)

EMGT 702	Risk Assessment	3 cr.
EMGT 706	Enterprise and Complex Systems for Engineers	3 cr.
EMGT 726	Advanced Modeling and Analysis of Systems	3 cr.
EMGT 735	Optimization Methods II	3 cr.
EMGT 740	Scheduling and Sequencing	3 cr.
EMGT 765	Special Topics in Engineering Management	1-3 cr.

Subtotal: 9-15 cr.

Students may also enroll in no more than two MBA courses to satisfy any remaining course requirements. These courses require the approval of the student's advisory committee.

DISSERTATION RESEARCH (27 cr. minimum)

EMGT 770-799	Dissertation Research	1-3 cr.

Subtotal: 27 cr.

Total Credit Hours: 57

ENGL.BA - BA in English

General

College/School
College of Arts & Sciences

Department(s) ~
English & Cultural Studies

Program Title ~
BA in English

Program Code ~
ENGL.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The career opportunities for English scholars are endless, as critical thinking, well-crafted writing in various genres, and a strong voice have applications in all fields. Through expository and creative writing and in-depth study of important texts, you will develop the skills to be an influencer in literature, publishing, journalism, and beyond.

Requirements

Free Form Requirements
English Major

General Information

English majors at Western New England University learn to write and speak effectively as they develop awareness of the ethical, moral, cultural, historical, and social issues that are embedded in both traditional and underrepresented literatures. They graduate prepared to enter a variety of academic, educational, corporate, or government settings. Furthermore, as they analyze texts and develop skills in reasoning, conducting research, and formulating clear arguments, they broaden their perspectives, increase their intellectual curiosity and aesthetic appreciation, and identify themselves as active, lifetime learners.

Career Opportunities

Because English majors graduate with writing, speaking, and analytical skills that have been developed through four years, they are highly desirable job applicants in a number of areas. Our graduates have been successfully employed in primary and secondary schools, in writing-centered professions, and in a variety of business settings. Some have continued their studies in English or communications, completing master's and doctoral degrees. Law schools look for English majors because they want students who have learned how to think critically, articulate their ideas clearly, and summarize complex issues succinctly. English is a perfect major for those hoping to complete the University's 3+3 Law program (which enables students to complete both undergraduate and law degrees in six years). A number of our majors have received law degrees and are now practicing that profession.

Writing skills can lead directly to employment in a number of other fields, including journalism, public relations, and technical writing. Many newspaper and magazine editors say they look for English majors because they have been taught how to write for various audiences. Many companies are hiring English majors for technical writing jobs because English majors are taught how to translate ideas and instructions into language that a general audience can understand. Grant writers are needed in all areas: for academic research, political foundations, and corporate development. The English degree can create significant opportunities in the world of professional writing when coupled with an internship or two.

Additionally, many businesses seek to hire English majors for entry-level positions because they are capable learners who have highly developed analytic skills, broad backgrounds, and excellent communication skills.

Program Objectives

The English faculty engage students in learning experiences structured to help them develop the following:

· Ability to demonstrate understanding of literary works representing a wide diversity of cultural and historical perspectives, including historically underrepresented populations.

· Ability to critically analyze and interpret a variety of cultural texts.

· Ability to produce clear, well-argued, nuanced academic writing.

· Ability to present research and interpretation in a variety of settings and forms, including written and or oral presentation.

Degree Requirements

The following classes are required for all English Majors:

ENGL 2xx/3xx	Three Literary Period courses, one before 1900	9 cr.
ENGL 302	Approaches to the Study of Literature	3 cr.
ENGL 314	Shakespeare: Plays and Poems	3 cr.
	or	
ENGL 315	Shakespeare: The Tragedies	3 cr.
	or	
ENGL 316	Shakespeare: The Comedies and Histories	3 cr.
	or	
ENGL 338/411	Major Authors	3 cr.
	or	
ENGL 345	Major African American Writers	3 cr.
ENGL XXX	Historically Underrepresented Literature	3 cr.
ENGL XXX	Any upper division writing course	3 cr.
FILM XXX	Film Elective	3 cr.
ENGL 2xx/3xx	English-Elective	3 cr.
ENGL 3XX	English Elective	3 cr.
ENGL 3XX	English Elective	3 cr.
ENGL 3XX	English Elective	3 cr.
ENGL 410	English Seminar	3 cr.
ENGL 480	Internship in English	3 cr.

Subtotal: 42

* Literary period courses: ENGL 231, ENGL 232, ENGL 251, ENGL 252, ENGL 322, ENGL 327, ENGL 328, ENGL 329, ENGL 353, and ENGL 357: Pre-1900 courses, ENGL 231, ENGL 251, ENGL 322, ENGL 327 and ENGL 328.

** Historically underrepresented literature courses: ENGL 223, ENGL 224, ENGL 336, ENGL 341, ENGL 343, and ENGL 345

*** Upper division writing courses: ENGL 270, ENGL 351, ENGL 352, ENGL 354, ENGL 370 and ENGL 371.

Total Credit Hours: 42

English Suggested Sequence of Courses

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
GEN XXX	General Elective	3 cr.
CS 13X	Computer Competence	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PH XXX	Ethical Perspective	3 cr.
GEN XXX	General Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

ENGL XXX	Two literary period courses	6 cr.
SBP XXX	Social Science Perspective	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
LAB XXX	Laboratory Science Requirement	3-4 cr.

Subtotal: 15-16

Sophomore Year - Spring Semester

ENGL XXX	Literary Period course	3 cr.
GEN XXX	General Elective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
FILM XXX	Film Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

ENGL 302	Approaches to the Study of Literature	3 cr.
ENGL XXX	Historically Underrepresented Literature	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
ENGL 2xx/3xx	English-Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

ENGL XXX	Any upper division writing course	3 cr.
ENGL 314	Shakespeare: Plays and Poems	3 cr.
	or	
ENGL 315	Shakespeare: The Tragedies	3 cr.
	or	
ENGL 316	Shakespeare: The Comedies and Histories	3 cr.
	or	
ENGL 338/411	Major Authors	3 cr.
	or	
ENGL 345	Major African American Writers	3 cr.
ENGL 3XX	English Elective	3 cr.
ENGL 480	Internship in English	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

ENGL 3XX	English Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

ENGL 410	English Seminar	3 cr.
ENGL 3XX	English Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120-121

Courses taken to complete the major fulfill the A & S Writing Intensive Requirement.

ENGLT.MA - MA in English for Teachers

General

College/School
College of Arts & Sciences

Department(s) ~
English & Cultural Studies

Program Title ~
MA in English for Teachers

Program Code ~
ENGLT.MA

Degree Designation ~
MA - Master of Arts

Academic Level ~
GR - Graduate

Program Short Description

The online Master of Arts in English for Teachers is an inspiring, engaging, and challenging program that emphasizes breadth and depth of subject matter, as it deepens passion for language arts and literature. Not only will you become more immersed and connected to your study, but you will also develop the teaching skills to help your passion and expertise translate in the classroom to inspire your students.

Requirements

Free Form Requirements
Master of Arts in English for Teachers

Purpose

The Master of Arts in English for Teachers program is designed primarily for middle school and secondary school teachers who have an initial license and need a master's degree for final professional licensure, who want Professional Development Points, or who are interested in continuing their study of English. English majors who have graduated from college but who have not completed the requirements necessary for initial licensure, current teachers who do not have an initial license, and professionals who have decided on a career change may also be interested in the program (in order to become qualified teachers, in addition to establishing English competencies, these students, on their own, must take certification tests, fulfill state requirements, and complete a practicum). The program is designed to be inspiring, engaging, and challenging. By emphasizing the breadth and depth of subject matter, it deepens passion for the language arts and literature.

Competency areas

The program stresses four competency areas: writing, speaking, reading/studying literature, and contemporary issues in the teaching of English.

Writing

- Becoming a more accomplished writer, including learning how to present a topic in a variety of forms, to specialized audiences
- Learning how to do intensive research, both online and in the library and demonstrating proficiency in the use of standard reference materials and journals
- Mastering the grammar, mechanics, and rhetoric of English

Speaking

- Advancing oral presentation skills

Reading/studying literature

- Understanding the hierarchy of skills involved in the reading process, with emphasis on critical analysis of literary works, emphasizing the assessing of needs, and the approaches for remedies
- Becoming conversant with literary figures/schools/eras in British and American literature within historical and cultural context
- Becoming conversant with literary terminology, including characteristics of genres
- Becoming aware of different schools of literary criticism

Contemporary Issues in English

- Knowing the socio-cultural issues related to the English language
- Developing awareness of contrastive rhetoric
- Using technology to teach English
- Establishing connections between English and other disciplines

Structure

The program is designed for part-time participation; all courses are offered online synchronously or asynchronously in the early evening. To complete the program, a student must take 10 courses (30 credit hours), at least seven of which must be English courses, and at most three of which can be education courses. The program uses the 15-week semester calendar to include two courses per semester, summers included, with courses sequenced to run every two years/every three summers.

Degree Requirements

The program requires 10 courses, at least five of which must be core English courses and at most five of which can be non-core English courses. Students are required to have an overall GPA of 3.000 or higher to become a degree candidate.

Array of Courses

Students choose 9 courses from among the courses below in addition to the ENGL 570 Capstone Seminar.

MAET 552	Advanced Grammar	3 cr.
MAET 553	Teaching Writing in the English Curriculum	3 cr.
MAET 554	Teaching English in the Multicultural Classroom	3 cr.
MAET 556	The Reading Process in the English Curriculum	3 cr.
MAET 560	Literary Studies- Shakespeare and The Elizabethan Age	3 cr.
MAET 561	Literary Studies- Poetry	3 cr.
MAET 563	Literary Studies- Genres	3 cr.
MAET 564	Literary Studies- Cultural-Literary Connections	3 cr.
MAET 565	Literary Studies- Great Works of American Literature	3 cr.
MAET 566	Literary Studies- Modern American Literature	3 cr.
MAET 570	Capstone Project	3 cr.
MAET 590-596	Special Topics in MAET	1-3 cr.

Total Credit Hours: 30

All courses have connection to the Frameworks and are determined by the backgrounds of the students enrolled in the program.

ENGR.GEAI.CERT - Grad Certificate in Engr Artificial Intelligence

General

College/School
College of Engineering

Department(s) ~
Electrical & Computer Engr

Program Title ~
Grad Certificate in Engr Artificial Intelligence

Program Code ~
ENGR.GEAI.CERT

Degree Designation ~
CERT - Certificate, GEAI - Cert Engr AI

Academic Level ~
GR - Graduate

Program Short Description

Artificial Intelligence (AI) has become one of the most disruptive technologies since the turn of the century. Its applications are ubiquitous in our lives, used in small devices like smart phones and speakers to large industrial applications, self-driving vehicles and a host of other applications. Given that AI can mean different things to different people with a diversity of application areas of interest, WNE has designed an AI certificate program that can be taken by students with diverse backgrounds to advance their expertise and career opportunities in this wide-ranging field.

Requirements

Free Form Requirements
Graduate Certificate in Engineering Artificial Intelligence (AI)

Artificial Intelligence (AI) has become one of the most disruptive technologies since the turn of the century. Its applications are now ubiquitous in our lives, used in small devices like smart phones and speakers to large industrial applications and self-driving vehicles and a host of other applications. AI can mean different things to different people and people with a diversity of application areas of interest are now interested in AI certification. The United States (US) Government established the National Security Commission on Artificial Intelligence as an independent Commission on August 13, 2018 (https://www.nscai.gov/home). Its primary intent was "to consider the methods and means necessary to advance the development of artificial intelligence, machine learning, and associated technologies to comprehensively address the national security and defense needs of the United States."

Top schools in the US (https://www.usnews.com/best-graduate-schools/top-science-schools/artificial-intelligence-rankings) are investing in the AI field and creating AI certificates and degree programs. The COE faculty embarked on designing a graduate certificate program in AI in the summer of 2020 and this proposal is the outcome of that effort. The team included faculty from all five of our COE departments.

Given that AI can mean different things to different people with a diversity of application areas of interest, COE has designed an AI certificate program that can be taken by people with diverse backgrounds. Certificate consists of one course, from each of the four AI categories, for a total of four (3 cr.) core courses listed below:

Graduate Certificate in Engineering Artificial Intelligence (AI) requirements:

AI: Applied Fuzzy Logic

CEE 676	AI: Applied Fuzzy Logic	3 cr.
CPE 674	AI: Applied Fuzzy Logic	3 cr.
EE 676	AI: Applied Fuzzy Logic	3 cr.
IE 676	AI: Applied Fuzzy Logic	3 cr.
ME 676	AI: Applied Fuzzy Logic	3 cr.

Subtotal: 3

AI: Applied Neural Networks and Machine Learning

CEE 673	AI: Applied Neural Networks and Machine Learning	3 cr.
CPE 673	AI: Applied Neural Networks and Machine Learning	3 cr.
EE 670	AI: Applied Neural Networks and Machine Learning	3 cr.
IE 670	AI: Applied Neural Networks and Machine Learning	3 cr.
ME 670	AI: Applied Neural Networks and Machine Learning	3 cr.

Subtotal: 3

AI: Machine Learning - Applications

CEE 674	AI: Machine Learning - Applications	3 cr.
CPE 672	AI: Machine Learning - Applications	3 cr.
EE 672	AI: Machine Learning - Applications	3 cr.
IE 672	AI: Machine Learning - Applications	3 cr.
ME 672	AI: Machine Learning - Applications	3 cr.

Subtotal: 3

AI: Machine Learning – Concepts

CEE 671	AI: Machine Learning - Concepts	3 cr.
CPE 671	AI: Machine Learning - Concepts	3 cr.
EE 671	AI: Machine Learning - Concepts	3 cr.
IE 671	AI: Machine Learning - Concepts	3 cr.
ME 671	AI: Machine Learning - Concepts	3 cr.

Subtotal: 3

Total Credit Hours: 12

ENGR.GEDAN.CERT - Grad Certificate in Engr Data Analytics

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
Grad Certificate in Engr Data Analytics

Program Code ~
ENGR.GEDAN.CERT

Degree Designation ~
CERT - Certificate, GEDAN - Cert Engr Data Analytics/Grad

Academic Level ~
GR - Graduate

Program Short Description

Data analytics is essential and ubiquitous in solving challenging engineering problems such as process quality control, improvement of advanced manufacturing, security of large quantities of internet data streams, efficiency improvement of health care systems, and profitability enhancement in finance and insurance industries. This graduate certificate was developed to cover the fundamental data analytical methods and skill set for engineers who expect to excel in data science and analytics professions.

Requirements

Free Form Requirements
Graduate Certificate in Engineering Data Analytics

Data analytics is essential and ubiquitous in solving challenging engineering problems such as process quality control, improvement of advanced manufacturing, security of large quantity of internet data streams, efficiency improvement of healthcare systems, and profitability enhancement in finance and insurance industries. This graduate certificate program was developed in partnership with the Center for Engineering Data Analytics at Western New England University to be sure that it covers the fundamental data analytical methods and skill set for engineers who expect to excel in data science and analytics professions.

The certificate consists of four 3-credit courses. Each course is in-class/online hybrid that enables students to participate either fully online, fully in-class, or any combination of the two. Course Credits earned are transferable to other graduate certificates as well as a future master's degree if: 1) transferred within 6 years, 2) grade is 'B' or greater.

Graduate Certificate in Engineering Data Analytics requirements:

IE 601	Advanced Engineering Statistics	3 cr.
EMGT 691	Special Topics in Engineering Management	3 cr.
EMGT 635/IE 635	Operations Research	3 cr.
	And	
BIS 635	Enterprise Analytics with SAP	3 cr.
	or	
EMGT 691	Special Topics in Engineering Management	3 cr.

Total Credit Hours: 12

ENGR.GEGRN.CERT - Grad Certificate in Engr Green Belt

General

College/School
College of Engineering

Department(s) ~
Engineering General

Program Title ~
Grad Certificate in Engr Green Belt

Program Code ~
ENGR.GEGRN.CERT

Degree Designation ~
CERT - Certificate, GEGRN - Cert Engr Grn Belt/Grad

Academic Level ~
GR - Graduate

Program Short Description

With a focus on efficiency, reducing waste and variability, and productive solutions, this certificate offers qualitative and quantitative tools to help you grow your organization to its optimal potential.

Requirements

Free Form Requirements
Graduate Green Belt Certificate

The Green Belt Certificate Program is focused on creating a high performance organization through a mindset with continuous improvement at its core. This certificate provides the theory and principles to eliminate waste, reduce variability, and continually search for productive solutions in organizations. An equal balance of quantitative and qualitative tools and practices are introduced which are commonly applied by todays successful organizations. After completing this sequence of courses, students should feel qualified to sit for their six sigma black belt examination. The certificate consists of four, 3-credit courses.

Green Belt Certificate requirements:

EMGT 607	Quality Engineering	3 cr.
EMGT 615	Statistical Quality Control	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 644/IE 644	Quality Systems and Process Improvement	3 cr.

Total Credit Hours: 12

ENGR.GEISP.CERT - Grad Certificate in Engr Ind Safety & Public Health

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
Grad Certificate in Engr Ind Safety & Public Health

Program Code ~
ENGR.GEISP.CERT

Degree Designation ~
CERT - Certificate, GEISP - Cert Engr Ind Saf & Pub H/Grad

Academic Level ~
GR - Graduate

Program Short Description

Modern industrial systems, including civic infrastructure and industrial processes that allow complex societies to exist, have the potential to negatively impact populations due to short and long term exposures to underlying hazards that are often unrecognized.

This certificate in Industrial Safety and Public Health surveys epidemiologic and industrial health and safety analysis methods applicable to, and transferable between, these traditionally isolated fields.

Requirements

Free Form Requirements
Graduate Certificate in Industrial Safety and Public Health

Operations management is the administration of engineering and business practices to create the highest level of efficiency possible within an organization by utilizing resources of staff, materials, equipment, and technology to add value and deliver goods and services in a format that best suites client needs. This is accomplished through the structured analysis of system properties and needs, including: plant sizing, inventory sizing and control through supply-chain management, quality control, materials handling, maintenance policies, and minimization of waste. These tasks are complex in any situation. Put into the context of global enterprise systems, and the complexities magnify, and required advanced knowledge, skill, and education to manage. This certificate is designed to be the management-oriented compliment to the Graduate Certificate in Operations Research (analytic-oriented).

The certificate consists of four 3-credit courses. Each course is in-class/online hybrid that enables students to participate either fully online, fully in-class, or any combination of the two. Course Credits earned are transferable to other graduate certificates as well as a future master's degree if: 1) transferred within 6 years, 2) grade is 'B' or greater.

Graduate Certificate in Industrial Safety and Public Health requirements:

IE 604	Human Factors	3 cr.
EMGT 602	Engineering Crisis, Disaster, and Risk Management	3 cr.
EMGT 690	Special Topics in Engineering Management	3 cr.
EMGT 691	Special Topics in Engineering Management	3 cr.

Total Credit Hours: 12

ENGR.GEOPM.CERT - Grad Certificate in Engr Operations Management

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
Grad Certificate in Engr Operations Management

Program Code ~
ENGR.GEOPM.CERT

Degree Designation ~
CERT - Certificate, GEOPM - Cert Engr Operations Man/Grad

Academic Level ~
GR - Graduate

Program Short Description

Operations management is the administration of engineering and business practices to create the highest level of efficiency possible within an organization by utilizing resources of staff, materials, equipment and technology to add value and deliver goods and services in a format that best suits client needs. This certificate is designed to be the management-oriented compliment to the Graduate Engineering Certificate in Operations Research.

Requirements

Free Form Requirements
Graduate Certificate in Engineering Operations Management

Operations management is the administration of engineering and business practices to create the highest level of efficiency possible within an organization by utilizing resources of staff, materials, equipment, and technology to add value and deliver goods and services in a format that best suites client needs. This is accomplished through the structured analysis of system properties and needs, including: plant sizing, inventory sizing and control through supply-chain management, quality control, materials handling, maintenance policies, and minimization of waste. These tasks are complex in any situation. Put into the context of global enterprise systems, and the complexities magnify, and required advanced knowledge, skill, and education to manage. This certificate is designed to be the management-oriented compliment to the Graduate Certificate in Operations Research (analytic-oriented).

The certificate consists of four 3-credit courses. Each course is in-class/online hybrid that enables students to participate either fully online, fully in-class, or any combination of the two. Course Credits earned are transferable to other graduate certificates as well as a future master's degree if: 1) transferred within 6 years, 2) grade is 'B' or greater.

Graduate Certificate in Engineering Operations Management requirements:

EMGT 631/IE 631	Production and Inventory Modeling	3 cr.
EMGT 619/IE 619	Engineering Supply Chain	3 cr.
BIS 633	Independent Study in Business Information Systems	3 cr.
	And	
EMGT 622/IE 622	Lean Production Systems	3 cr.
	or	
EMGT 607	Quality Engineering	3 cr.

Total Credit Hours: 12

ENGR.GEOPR.CERT - Grad Certificate in Engr Operations Research

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
Grad Certificate in Engr Operations Research

Program Code ~
ENGR.GEOPR.CERT

Degree Designation ~
CERT - Certificate, GEOPR - Cert Engr Ops Research/Grad

Academic Level ~
GR - Graduate

Program Short Description

Operations research is the application of advanced analytical methods to help make better decisions, by employing techniques that range from mathematical modeling, statitical analysis, and optimization. This certificate is designed to be the analytic-oriented compliment to the Graduate Engineering Certificate in Operations Management.

Requirements

Free Form Requirements
Graduate Certificate in Operations Research

Operations research is the application of advanced analytical methods to help make better decisions, by employing techniques that range from mathematical modeling, statistical analysis, and optimization. The goal is to identify optimal or near-optimal solutions to complex resource allocation and management problems. “OR” is the basis for solving many of the scheduling, distribution, staffing, and design problems in industry. This certificate is designed to be the analytic-oriented compliment to the Graduate Certificate in Operations Management (analytic-oriented).

The certificate consists of four 3-credit courses. Each course is in-class/online hybrid that enables students to participate either fully online, fully in-class, or any combination of the two. Course Credits earned are transferable to other graduate certificates as well as a future master’s degree if: 1) transferred within 6 years, 2) grade is 'B' or greater.

Graduate Certificate in Operations Research requirements:

EMGT 620/IE 620	Multi-Criteria Decision Analysis	3 cr.
EMGT 626/IE 626	Discrete Event Simulation	3 cr.
EMGT 635/IE 635	Operations Research	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.

Total Credit Hours: 12

ENGR.GEPMN.CERT - Grad Certificate in Engr Project Management

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
Grad Certificate in Engr Project Management

Program Code ~
ENGR.GEPMN.CERT

Degree Designation ~
CERT - Certificate, GEPMN - Cert Engr Project Man/Grad

Academic Level ~
GR - Graduate

Program Short Description

Project Management, as a skill set and career, is a critical element of every engineer and business leader's resume. This certificate positions students for partial completion of a Master's in Engineering Management as well as preparation for the PMI's PMP examination.

Requirements

Free Form Requirements
Graduate Certificate in Engineering Project Management

Project Management, as a skill-set and career, has been an ever increasing critical element of every engineer and business leader’s résumé. Partially this is because nearly half of the engineers working in industry serve in management capacities, and partially because as projects grow in scale and complexity, the specialized skill needed to management them begins to deviate from the skill required to design them. This Graduate Certificate addresses this need by packaging industry relevant course work such that the student receives a practical body of knowledge from across industry disciplines, while also recognizing the needs to satisfy the more dominate industry certification agencies (Project Management Institute—PMI). After earning this certificate, the student is well placed for industry with a stand-alone certificate, partial completion of the requirements of a Master’s degree in Engineering Management, as well as prepared for the PMI’s PMP examination.

The certificate consists of four 3-credit courses. Each course is in-class/online hybrid that enables students to participate either fully online, fully in-class, or any combination of the two. Course Credits earned are transferable to other graduate certificates as well as a future master’s degree if: 1) transferred within 6 years, 2) grade is 'B' or greater.

Graduate Certificate in Engineering Project Management requirements:

EMGT 605	Engineering Management	3 cr.
EMGT 609/CEE 609/IE 609	Strategic Engineering Economics	3 cr.
EMGT 619/IE 619	Engineering Supply Chain	3 cr.
EMGT 648	Project Management	3 cr.

Total Credit Hours: 12

ENGR.GEREM.CERT - Grad Certificate in Engr Risk & Emer Man

General

College/School
College of Engineering

Department(s) ~
Engineering General

Program Title ~
Grad Certificate in Engr Risk & Emer Man

Program Code ~
ENGR.GEREM.CERT

Degree Designation ~
CERT - Certificate, GEREM - Cert Engr Risk & Em Man/Grad

Academic Level ~
GR - Graduate

Program Short Description

This certificate is intended to enable the engineer and civic planner to take the lead in management through hazard identification, qualification, quantification and scenario development.

Requirements

Free Form Requirements
Graduate Certificate in Risk and Emergency Management

Risk analysis and management are essential evaluation and planning tools for any organization with exposure to organizational, employee safety, and technical and natural hazards. Analyzing existing data, and developing anticipator assessments enables the private and public entity to save time, money, and the health and safety of employees and population by identifying hazard exposures such that each can be managed relative to the degree of risk that it represents. This graduate certificate enables the engineer, business leader, and civic planner to take the lead in managing and mitigating these types of risk exposures through hazard identification, qualification & quantification, scenario development, and preparations, as well as understanding the fundamentals of Emergency Response Planning at the city, state, and federal levels. For this, the four courses required for to earn the graduate certificate range from qualitative assessment of system exposure to hazards, to the quantitative analytic methods, and into the policy level decisions required to mitigate environmental hazards and emergency response planning.

The certificate consists of four 3-credit courses. Each course is in-class/online hybrid that enables students to participate fully online, fully in-class, or combination of the two. Course Credits earned are transferable to other graduate certificates as well as a future master's degree if: 1) transferred within 6 years, 2) grade is 'B' or greater.

Graduate Certificate in Risk and Emergency Management requirements:

EMGT 602	Engineering Crisis, Disaster, and Risk Management	3 cr.
IE 614/EMGT 704	Engineering Risk Analysis Methods	3 cr.
EMGT 691	Special Topics in Engineering Management	3 cr.
EMGT 626/IE 626	Discrete Event Simulation	3 cr.

Total Credit Hours: 12

ENGR.GESUP.CERT - Grad Certificate in Engr Supply Chain

General

College/School
College of Engineering

Department(s) ~
Engineering General

Program Title ~
Grad Certificate in Engr Supply Chain

Program Code ~
ENGR.GESUP.CERT

Degree Designation ~
CERT - Certificate, GESUP - Cert Engr Supply Chain/Grad

Academic Level ~
GR - Graduate

Program Short Description

Companies are continuously working towards aligning their operations with supply chain management solutions. This certificate provides the theory, principles, and implications of supply chain management relevant for today's engineering. It is intended to provide students with an understanding of the strategic and tactical elements of supply chains. In particular this certificate is aimed for the engineering who is actively engaged in supply chain management and decision making.

Requirements

Free Form Requirements
Graduate Engineering Supply Chain Certificate

Companies are continuously working towards aligning their operations with supply chain management solutions. This certificate provides the theory, principles, and implications of supply chain management relevant for today's engineer. It is intended to provide students with an understanding of the strategic and tactical elements of supply chains. In particular this certificate is aimed for the engineer who is actively engaged in supply chain management and decision making. The certificate consists of four, 3-credit courses.

Engineering Supply Chain Certificate requirements:

EMGT 619/IE 619	Engineering Supply Chain	3 cr.
EMGT 645/IE 645	Quantitative Models of Supply Chain Management	3 cr.
EMGT 644/IE 644	Quality Systems and Process Improvement	3 cr.
EMGT 626/IE 626	Discrete Event Simulation	3 cr.

Total Credit Hours: 12

EXPL.EXPLA - Exploratory - Arts & Sciences

General

College/School
College of Arts & Sciences

Department(s) ~
Arts & Sciences General

Program Title ~
Exploratory - Arts & Sciences

Program Code ~
EXPL.EXPLA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Exploratory program of study is for students who want to explore their options before deciding on a particular major. It is the perfect option for students interested in multiple fields who are having a difficult time deciding on one area of study, or who feel that they would benefit from experiencing a year or more of classes before deciding on a particular area of study.

Requirements

Free Form Requirements
COLLEGE OF ARTS AND SCIENCES REQUIREMENTS

Students in the College of Arts and Sciences are required to satisfy the General University Requirements. All students majoring within the College of Arts and Sciences must also fulfill the following requirements:

1. Complete at least 120 credit hours of courses in order to graduate.
   Note: No more than 15 credit hours of ROTC courses may be counted within this 120;
2. Complete the requirements for a major;
3. Complete at least 7 Perspectives of Understanding courses, including two natural science courses and one course from each of the remaining five Perspectives of Understanding;
4. Writing Intensive Requirement (WIC)
   Complete at least six additional credit hours in courses designated as "Writing Intensive," one at the 200- or 300-level and one at the 300- or 400-level. Courses designated as Writing Intensive can also fulfill other requirements, including General University Requirements and requirements for specific majors. All Writing Intensive courses are approved by the Department of English; and
5. Complete at least 30 credit hours in advanced courses (numbered 300-400) that may include those in the major and other areas, or complete the requirements for a major and a minor.
   No ROTC courses may count as advanced courses.

Non-business majors can apply no more than 25% of business coursework to their graduation requirement.

Exploratory suggested sequence of courses

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
GEN XXX	General Elective	3 cr.
CS 13X	Computer Competence	3 cr.

Subtotal: 15 cr.

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PH XXX	Ethical Perspective	3 cr.
GEN XXX	General Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 15 cr.

Sophomore Year - Fall Semester

GEN XXX	General Elective	3 cr.
SBP XXX	Social Science Perspective	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15 cr.

Sophomore Year - Spring Semester

ENGL XXX	Literary Period course	3 cr.
GEN XXX	General Elective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
WIC 2XX-3XX	Writing Intensive Course	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15 cr.

Total Credit Hours: 60

Students must choose a major in order to complete degree requirements.

EXPL.EXPLE - Exploratory - Engineering

General

College/School
College of Engineering

Department(s) ~
Engineering General

Program Title ~
Exploratory - Engineering

Program Code ~
EXPL.EXPLE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

The Exploratory program of study is for students who want to explore their options before deciding on a particular major. It is the perfect option for students interested in multiple fields who are having a difficult time deciding on one area of study, or who feel that they would benefit from experiencing a year of classes before deciding on a particular area of study.

Students should take the prescribed program of study specified by the College of Engineering.

Requirements

Free Form Requirements
College of Engineering Requirements

A common curriculum for the first two semesters is provided for all engineering students. Since the actual time required for completion of the curriculum will depend on the individual student's ability and prior preparation, personal consultations with engineering faculty advisors permit students to participate in both the determination of their current status and the planning and scheduling of further coursework.

Course prerequisites are used to identify the competencies required for enrollment in a course. As a result, enrollment in any course is contingent upon successful completion of all course prerequisites. A student may, however, petition the course instructor for a waiver of prerequisite(s). Applications for requesting an exception are available in the Dean's Office. The application must be completed and signed by the student, faculty instructor, chair of the department that offers the course, and the Dean of Engineering.

Engineering majors can apply no more than 25% of business coursework to their graduation requirements.

Mathematical Analysis

MATH 127 or MATH 133 (Calculus I) and MATH 134 (Calculus II) have been designated as the two mathematics foundation courses by the College of Engineering. A minimum grade of C is required in MATH 127 or MATH 133 in order to be allowed to continue into MATH 134. Furthermore, a minimum grade of C is required in MATH 134 in order to proceed into the sophomore level engineering courses ME 202 and EE 205.

Exploratory Engineering Requirements

First Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16-17

First Year - Spring Semester

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

SBP XXX	Social/Behavioral Sciences Perspective	3 cr.
CHEM 105	General Chemistry I	4 cr.
MATH 236	Differential Equations	3 cr.
HIST XXX	Historical Perspective	3 cr.
CUL XXX	Cultural/Aesthetic Perspective	3 cr.

Subtotal: 16

Sophomore Year - Spring Semester

MATH 235	Calculus III	3 cr.
IE 212	Probability and Statistics	3 cr.
PH XXX	Ethical Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 12

Total Credit Hours: 60

Individual curricula in Biomedical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering are given in the major programs section of the Catalogue.

Design Experience

In the freshman year, students are introduced to engineering design, entrepreneurship, and product development and innovation in the Introduction to Engineering courses. Sophomore and junior courses and laboratories provide progressively more sophisticated design experiences within the student's discipline. All programs culminate in a capstone Senior Design Project course in which students work on projects under the supervision of a faculty advisor. Topics for some projects are supplied by industry. Students who select one of these topics have the opportunity to work with the industrial sponsor in an actual engineering setting.

Electives (Undergraduate Programs)

General Education electives supplement the engineering student's technical program. These electives must be selected in such a way that all General Education "perspectives of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. An assigned departmental faculty advisor must approve selection of electives from Engineering, Arts and Sciences, or Business.

FB.BS - BS in Forensic Biology

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Forensic Biology

Program Code ~
FB.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

In the Forensic Biology major you will combine scientific knowledge with critical thinking to learn the tools, techniques, and skills to analyze evidence and work with the legal system to corroborate evidence and statements in court. Not only will your career have impact, but it will also be exciting and challenging.

Requirements

Free Form Requirements
Forensic Biology Major

General Information

The Forensic Biology curriculum is designed to provide the student with a solid background in the scientific principles that underlie forensic techniques. Skills are acquired through coursework augmented by practical laboratory experience.

Career Opportunities

A baccalaureate degree in Forensic Biology provides diverse opportunities for employment as forensic scientists or as laboratory analysts, as well as for advanced training in forensics and related fields.

Physical and Biological Faculty

Forensic Biology Objectives:

To demonstrate

1. Knowledge of basic structure and functioning of cells.
2. To understand the principles and mathematical analysis of Mendelian and non-Mendelian inheritance.
3. To understand the structure and function of nucleic acids and molecular controls.
4. To collect and preserve forensic evidence using established protocol.

5. Plan and perform analyses of both biological and non-biological forensic evidence.
6. Apply chemical, physical, and biological principles to the design of procedures for the analysis of forensic evidence.
7. Communicate clearly and effectively the results and reliability of an analysis of forensic evidence.
8. Demonstrate ability to function as an ethical member of the criminal justice system.

General University and College Requirements

See General University Requirements (p.) and College of Arts and Sciences Requirements (p.).

Degree Requirements

Required Science courses: (78-80 credit hours)

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 401	Molecular Biology	4 cr.
BIO 306	Genetics	4 cr.
BIO 203	Microbiology	4 cr.
BIO 310	Cell Biology	4 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
FS 100	Introduction to Forensic Science	3 cr.
FS 255	Crime Scene and Evidence Processing	3 cr.
FS 325	Pattern Analysis	4 cr.
FS 326	Forensic Biology	4 cr.
FS 430	Expert Witness Testimony	4 cr.
FS 3XX-4XX	Three additional semester hours of FS Electives	3 cr.
FS 480 - FS 333 - FS 440	Internship in Forensic Chemistry and Forensic Biology or Independent Study in Forensic Science or Undergraduate Research	1-3 cr. - 1-3 cr. - 1-3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 78-80

Required courses in Math, and Ethics

MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
PH 208	Ethics	3 cr.

Subtotal: 9

Total Credit Hours: 87-89

The 2.0 required grade point average in the major will be based upon all BIO, CHEM, and FS courses pursued as a part of the student's degree program

Note: Courses that can fulfill the FS Elective requirement include: FS 327, CJ 348, FS 410 and PHYS 310.

Note that no transfer credit is accepted for major-level science lab courses taught online.

Forensic Biology Suggested Sequence of Courses

Notes:

The suggested sequence of courses in years two, three, and four is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

Degree Requirements

Freshman Year - Fall Semester

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

Freshman Year - Spring Semester

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
FS 100	Introduction to Forensic Science	3 cr.
ENGL 133	English Composition II	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.

Subtotal: 17

Sophomore Year - Fall Semester

CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
FS 255	Crime Scene and Evidence Processing	3 cr.
PH 208	Ethics	3 cr.

Subtotal: 14

Sophomore Year - Spring Semester

PHYS 124	Physics of the Life Sciences II	4 cr
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
GUR XXX	General University Requirement	3 cr.
GUR XXX	General University Requirement	3 cr.

Subtotal: 14

Junior Year - Fall Semester

BIO 306	Genetics	4 cr.
FS 325	Pattern Analysis	4 cr.
GUR XXX	General University Requirement	3 cr.
CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.

Subtotal: 15

Junior Year - Spring Semester

BIO 310	Cell Biology	4 cr.
FS 326	Forensic Biology	4 cr.
GUR XXX	General University Requirement	3 cr.
GEN XXX	General Elective	1 cr.
BIO 203	Microbiology	4 cr.

Subtotal: 16

Senior Year - Fall Semester

BIO 401	Molecular Biology	4 cr.
FS 3xx-4xx	FS Elective	3 cr.
GEN XXX	General Elective	3 cr
GEN XXX	General Elective	3 cr
GEN XXX	General Elective	3 cr

Subtotal: 16

Senior Year - Spring Semester

FS 430	Expert Witness Testimony	4 cr.
FS 333 - FS 480 - FS 440	Independent Study in Forensic Science or Internship in Forensic Chemistry or Forensic Biology or Undergraduate Research	1-3 cr. - 1-3 cr. - 1-3 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 12-14

Total Credit Hours: 120-122

GUR XXX = Aesthetic Perspective, Historical Perspective, Global Cultures, and Social/Behavior Perspective

FC.BS - BS in Forensic Chemistry

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Forensic Chemistry

Program Code ~
FC.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The Forensic Chemistry curriculum is designed to provide the student with a solid background in the chemical principles that underlie forensic techniques. Skills are acquired through coursework augmented by practical laboratory experience. A baccalaureate degree in Forensic Chemistry provides diverse opportunities for employment as forensic scientists or as laboratory analysts, as well as for advanced training in forensics and related fields.

Requirements

Free Form Requirements
Forensic Chemistry Major

General Information

The Forensic Chemistry curriculum is designed to provide the student with a solid background in the chemical principles that underlie forensic techniques. Skills are acquired through coursework augmented by practical laboratory experience.

Career Opportunities

A baccalaureate degree in Forensic Chemistry provides diverse opportunities for employment as forensic scientists or as laboratory analysts, as well as for advanced training in forensics and related fields.

Physical and Biological Faculty

Forensic Chemistry Objectives:

1. Perform accurate stoichiometric and chemical equilibrium calculations.
2. Predict and explain the reactivity of an organic or inorganic compound from a knowledge of its structure.
3. Assess the thermodynamic and kinetic stability of a chemical system.
4. Propose a reasonable mechanism for an organic or inorganic reaction.
5. Apply basic quantum mechanical concepts to the study of chemical systems.
6. Synthesize and characterize inorganic and organic compounds.
7. Design and perform a qualitative and quantitative analysis of a sample of matter, using both wet and instrumental methods.
8. Plan and execute experiments through the proper use of library resources.
9. Analyze data statistically and assess reliability of results.
10. Communicate effectively through oral and written reports.
11. Collect and preserve forensic evidence using established protocol.
12. Plan and perform analyses of both biological and non-biological forensic evidence.
13. Apply chemical, physical, and biological principles to the design of procedures for the analysis of forensic evidence.
14. Communicate clearly and effectively the results and reliability of an analysis of forensic evidence.
15. Demonstrate ability to function as an ethical member of the criminal justice system.

General University and College Requirements

See General University Requirements and College of Arts and Sciences Requirements.

Degree Requirements

Required Science courses: (73 - 75 credit hours)

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
CHEM 312	Instrumental Analysis	3 cr.
CHEM 322	Instrumental Analysis Laboratory	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
CHEM 402	Toxicology	3 cr.
CHEM 421	Inorganic Chemistry	3 cr.
CHEM 431	Inorganic Chemistry Laboratory	1 cr.
CHEM 317	Physical Chemistry I	3 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.
FS 100	Introduction to Forensic Science	3 cr.
FS 255	Crime Scene and Evidence Processing	3 cr.
FS 325	Pattern Analysis	4 cr.
FS 327	Forensic Chemistry	4 cr.
FS 430	Expert Witness Testimony	4 cr.
FS 3XX-4XX	Three additional semester hours of upper level FS Electives	3 cr.
FS 333 - FS 480 - FS 440	Independent Study in Forensic Science or Internship in Forensic Chemistry and Forensic Biology or Undergraduate Research	1-3 cr. - 1-3 cr. - 1-3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 73-75

Required courses in Math and Ethics

MATH 121	Introductory Probability and Statistics	3 cr.
MATH 133 - MATH 127	Calculus I or Calculus I with Precalculus Review	4 cr. - 5 cr.
MATH 134	Calculus II	4 cr.
PH 208	Ethics	3 cr.

Subtotal: 14-15

Subtotal: 87-90

Total Credit Hours: 87-90

The 2.0 required grade point average in the major will be based upon all BIO, CHEM, and FS courses pursued as a part of the student's degree program.

Note that no transfer credit is accepted for major-level science lab courses taught online.

Courses that could fulfill the FS Elective Requirement for FC majors = FS 326, CJ 348, PHYS 310

Forensic Chemistry Suggested Sequence of Courses

Notes:

The suggested sequence of courses in years two, three, and four is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

Degree Requirements

Freshman Year - Fall Semester

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 133 MATH 127	Calculus I or Calculus I with Precalculus Review	4 cr. 5 cr.

Subtotal: 17-18

Freshman Year - Spring Semester

CHEM 106	General Chemistry II	4 cr.
FS 100	Introduction to Forensic Science	3 cr.
ENGL 133	English Composition II	3 cr.
MATH 134	Calculus II	4 cr.

Subtotal: 14

Sophomore Year - Fall Semester

CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
FS 255	Crime Scene and Evidence Processing	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.

Subtotal: 14

Sophomore Year - Spring Semester

GUR XXX	General University Requirement	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
GUR XXX	General University Requirement	3cr
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 14

Junior Year - Fall Semester

CHEM 211	Analytical Methods	3 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
GUR XXX	General University Requirement	3 cr.
FS 325	Pattern Analysis	4 cr.
PH 208	Ethics	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 17

Junior Year - Spring Semester

CHEM 312	Instrumental Analysis	3 cr.
CHEM 322	Instrumental Analysis Laboratory	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
FS 327	Forensic Chemistry	4 cr.
GUR XXX	General University Requirement	3 cr.

Subtotal: 15

Senior Year - Fall Semester

CHEM 317	Physical Chemistry I	3 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.
FS 3XX	FS Elective	3 cr.
CHEM 402	Toxicology	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Senior Year - Spring Semester

FS 430	Expert Witness Testimony	4 cr.
FS 333 - FS 480 - FS 440	Independent Study in Forensic Science or Internship in Forensic Chemistry or Undergraduate Research	1-3 cr. - 1-3 cr. - 1-3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	1 cr.
CHEM 421	Inorganic Chemistry	3 cr.
CHEM 431	Inorganic Chemistry Laboratory	1 cr.

Subtotal: 13-15

Total Credit Hours: 120-123

GUR XXX = Aesthetics Perspective, Historical Perspective, Global Cultures, Social/Behavioral Perspective

FIN.BSBA - BSBA in Finance

General

College/School
College of Business

Department(s) ~
Accounting & Finance

Program Title ~
BSBA in Finance

Program Code ~
FIN.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

Courses in Finance provide the professional education for a wide spectrum of careers. Accounting, economics, quantitative analysis, and studies of the financial environment are integrated to form both the skills required for traditional financial functions and the ability to stay abreast of a rapidly evolving technological environment.

Requirements

Free Form Requirements
Finance Major

General Information

Courses in Finance provide the professional education for a wide spectrum of careers in finance. Accounting, economics, quantitative analysis, and studies of the financial environment are integrated to form both the skills required for traditional financial functions and the ability to stay abreast of a rapidly evolving technological environment.

By judicious selection of elective courses, the student, with the assistance of an academic advisor, can chart a course of specialization in the areas of investment management, personal financial management, credit analysis, or corporate financial management.

Internships in finance are required as part of the Finance major.

Career Preparation

In order to help students understand careers available to Finance majors, faculty in the Department of Finance designed activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshman year is accomplished in Introduction to Business Seminar (BUS110) where students are introduced to career opportunities in finance;
2. Career Investigation in the sophomore year courses includes classroom assignments in Introduction to Finance (FIN 214);
3. Career Determination in the junior year engages students in résumé and cover letter writing and mock interviews; and
4. Career Implementation in the senior year includes examination of professional certifications.
5. All finance majors complete their preparation with a substantive practical experience.

Career Opportunities

Finance majors find positions in brokerage firms, personal financial planning, banking, corporate financial management, international finance, underwriting, portfolio management, and insurance. Students are encouraged to take professional exams after graduation and to earn advanced business degrees.

Program Learning Goals

Having completed a major in Finance, the student will have the ability to:

1. Utilize financial statements to make informed investment decisions.
2. Demonstrate the ability to determine strategies for corporate decision-making based on standard assessments of risks and rewards.
3. Understand the financial system, the regulatory environment, and ethical standards of financial conduct.
4. Understand how capital is allocated by the financial system.
5. Understand the conceptual framework for managing multiple investments.

Degree Requirements

Required Finance courses (24 credit hours)

FIN 312	Financial Markets and Institutions	3 cr.
FIN 317	Investments	3 cr.
FIN 318	Security Analysis	3 cr.
FIN 320	Intermediate Corporate Finance	3 cr.
FIN 350	Advanced Corporate Finance	3 cr.
FIN 405 - FIN 425	Financial Statement Analysis or Portfolio Management	3 cr. - 3 cr.
FIN 3XX-AC 3XX or AC 204	FIN/AC Electives	6 cr.

Subtotal: 24

Electives (18 credit hours)

GEN XXX	General Electives	18 cr.

Subtotal: 18

Total Credit Hours: 42

Finance Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111 - MATH 123	Analysis for Business and Economics or Calculus I for Management, Life, and Social Sciences	3 cr. - 3 cr.
ENGL 132	English Composition I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101 - PSY 101	Introduction to Sociology or Introduction to Psychology	3 cr. - 3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 200	Financial Accounting	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
PH 211/MAN 240/HONB 240	Business Ethics	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326 - BUS 312/HONB 312	Business Planning for New Ventures or Business Processes and Enterprise Resource Planning with SAP	3 cr. - 3 cr.
FIN 317	Investments	3 cr.
FIN 320	Intermediate Corporate Finance	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

Junior Year - Spring Semester

FIN 318	Security Analysis	3 cr.
FIN 350	Advanced Corporate Finance	3 cr.
FIN 480 - GEN XXX	Internship in Finance or General Elective	3 cr. - 3 cr.
FIN 312	Financial Markets and Institutions	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

FIN or AC 3XX-4XX	Elective	3 cr.
FIN 405	Financial Statement Analysis	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
BAIM 310 - BAIM 312	Quality and Operations Management or Quality and Operations Management with SAP	3 cr. - 3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

BUS 423/BME 423/ME 423 - BUS 450/HONB 450	Product Development and Innovation or Business Strategy	3 cr. - 3 cr.
FIN or AC 3XX-4XX	Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300/400 level courses. All students must take 12 hours of upper level (300/400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows
All FIN 3XX-4XX, AC 3XX-4XX courses that are applied toward the degree.

GBUSF.CERT - Grad Certificate in Business Foundations

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Grad Certificate in Business Foundations

Program Code ~
GBUSF.CERT

Degree Designation ~
CERT - Certificate, GBUSF - Cert Business Foundations/Grad

Academic Level ~
GR - Graduate

Requirements

Free Form Requirements
Graduate Business Foundations Certificate

Entry requirements

Undergraduate degree with GPA of 3.000 or undergraduate degree with evidence of ability to do graduate-level work. No more than three credits approved transfer allowed.

College-Level Financial Reporting or Basic Accounting Course

Personal statement of purpose

Academic Performance

The academic standards apply to students in the Business Foundations Certificate program with the following exception: Any student who receives one or more grades of "C" or lower, will be dismissed from the program.

Certificate must be declared prior to graduation and appears on official transcript.

Certificate requirements

AC 630	Accounting for Decision Makers	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
MK 640	Marketing Management	3 cr.

Total Credit Hours: 9

GENBU.BSBA - BSBA in General Business

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
BSBA in General Business

Program Code ~
GENBU.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This program provides students with broad exposure to the functional areas of business administration while permitting wide latitude in the selection of additional courses according to individual interests. Students develop the skills and competencies necessary for success across the broad spectrum of business organizations.

Requirements

Free Form Requirements

General Business Major

General Information

The General Business (GB) program provides the opportunity to construct a personalized major when professional goals or interests sit outside of current program offerings, when existing transfer or WNE-earned credits create unique opportunities, or when life changes demand it. This program allows students to combine a selection of courses or certificates from two or more disciplines according to their interests and goals.

Career Preparation

In order to help students understand careers available to General Business majors, faculty design assignments and class projects to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshman year occurs in the Introduction to Business Seminar (BUS 110) where students are introduced to business career opportunities; as well as discussions on how certificates in the College of Business can help students build their personal brands; General Business students are encouraged to take advantage of management and leadership opportunities through their trial membership in the Management Association.
2. Career Investigation in the sophomore year includes classroom assignments and projects in core business courses such as MK 200/HONB 200, BAIM 202, BAIM 221, AC 101/HONB 203, FIN 214, and MAN 204; an introduction to certificate options and student enrollment in courses that support certificates further advance career exploration;
3. Career Determination in the junior year is accomplished through varied coursework in College of Business courses as well as Business Etiquette and Professionalism (BUS 350); an internship search with Career Services, engagement in courses embedded within certificates, and student-selected course clusters help guide career determination.
4. Career Implementation in the senior year is addressed through participation in a required internship and other field experiences in Senior Seminar in General Business (BUS 465) and Internship in Business (BUS 480).

Students should select individual courses and certificates that distinguish them from others entering the marketplace and identify their unique career path.

For students interested in certificates, see the Certificates section in the catalog.

Career Opportunities

This program permits students to pursue goals that are not addressed in a regular major program.

Faculty in this major come from all departments in the College of Business.

Program Objectives

1. To allow students to construct a unique major and guide them in planning their own education.
2. To gather courses from at least two major departments in the College of Business.
3. To help students define educational and professional goals.
4. To have students explore elements across disciplines that complement one another and prepare students for their desired careers.

Program Learning Goals

Having completed a major in General Business, the student will have the ability to:

1. Understand and apply concepts and theories from at least two business functions.
2. Apply knowledge of various business functions in order to make recommendations for business decisions or actions; and
3. Establish individual learning goals and demonstrate their accomplishment.

Degree Requirements

No more than 18 credits in any one business discipline. No more than 18 credits in any one non-business discipline. Students wishing to take more than 18 credits in any given discipline must get permission from the chair of the department.

BUS 350	Business Etiquette and Professionalism	3 cr.
BUS 465	Senior Seminar in General Business	3 cr.
BUS 480	Internship in Business	3 cr.
BUS 3XX/4XX	Upper-Level Business Elective	12 cr.
Subtotal: 21 cr.		
GEN XXX	General Electives	21 cr.
Total Credit Hours: 42		

For students interested in minoring in a business discipline, see the Minors section in the catalog.

For students interested in pursuing a certificate in a business discipline, see Certificate section in the catalog.

General Business majors may select their coursework using individual courses or they may combine business certificates. Students must declare certificates officially not later than the last day of the semester preceding graduation for these to appear on official transcripts. Certificates are not awarded automatically based on coursework.

General Business majors may count more than one certificate toward major requirements if the certificates are housed in different College of Business Programs. A General Business major may include only one of the certificates offered by Business Information Systems, by Marketing, and by Management and Leadership, for example.

General Business majors may not take the Business Minor.

General Business Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101	Introduction to Sociology	3 cr.
	or	
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 101/HONB 203	Financial Reporting I	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
PH 211/MAN 240/ HONB 240	Business Ethics	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM ~~BIS~~ 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326	Business Planning for New Ventures	3 cr.
	or	
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
BUSE 3XX/4XX	Business Upper Level course	3 cr.
BUS 480	Internship in Business	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

Junior Year - Spring Semester

BUSE 3XX/4XX	Business Upper Level course	3 cr.
BUSE 3XX/4XX	Business Upper Level course	3 cr.
BUS 350	Business Etiquette and Professionalism	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BUSE 3XX/4XX	Business Upper Level course	3 cr.
BAIM 310	Quality and Operations Management	3 cr.
	or	
BAIM 312	Quality and Operations Management with SAP	3 cr.
GEN XXX	General Elective	~~6~~ 3 cr.
GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
	or	
BUS 450/HONB 450	Business Strategy	3 cr.
BUS 465	Senior Seminar in General Business	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	~~6~~ 3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way as to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: BUS 350, BUS 465, BUS 480 and all upper level Business electives except BAIM

312/ BAIM 310, BUS 312/BUS 326, and BUS 423/BUS 450.

*The General Business major is required to complete an internship in any of the areas represented by the College of Business.

GINFO.CERT - Grad Certificate in Information Management

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Grad Certificate in Information Management

Program Code ~
GINFO.CERT

Degree Designation ~
CERT - Certificate, GINFO - Cert Information Mgt/Grad

Academic Level ~
GR - Graduate

Program Short Description

This program offers students the opportunity to explore the rapid paced changing world of business analytics and information management. The certificate program supports both information management professionals and students seeking to enter the profession. The program also serves as a pathway for further study in business information and data management.

Requirements

Free Form Requirements
Graduate Information Management Certificate

Entry requirements

Undergraduate degree with GPA of 3.000 or undergraduate degree with evidence of ability to do graduate-level work. No more than three credits approved transfer allowed.

College-level Financial Reporting or Basic Accounting Course
College-level Basic Statistics Course
College-level Introductory Finance Course

Personal statement of purpose

Academic Performance

The academic standards apply to students in the Information Management Certificate program with the following exception: Any student who receives one or more grades of "C" or lower, will be dismissed from the program.

Certificate must be declared prior to graduation and appears on official transcript.

Certificate requirements

BAIM 610	Information Technology Management and Applications	3 cr.
BAIM 620	Decision Modeling for Analytics	3 cr.
FIN 630	Managerial Finance	3 cr.

Total Credit Hours: 9

GLEAD.CERT - Grad Certificate in Leadership

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
Grad Certificate in Leadership

Program Code ~
GLEAD.CERT

Degree Designation ~
CERT - Certificate, GLEAD - Certificate in Leadership/Grad

Academic Level ~
GR - Graduate

Program Short Description

This certificate will help you craft your personal leadership style. You will learn to manage change, act ethically, and consider contemporary issues in business when making decisions. This program will help you take your career to the next level as an industry and organizational leader in your field. The certificate consists of four 3-credit courses.

Requirements

Free Form Requirements
GRADUATE LEADERSHIP CERTIFICATE

Entry requirements

Undergraduate degree with GPA of 3.000 or undergraduate degree with evidence of ability to do graduate-level work. No more than three credits approved transfer allowed.

Academic Performance

The academic standards apply to students in the Leadership Certificate program with the following exception:
Any student who receives two or more grades of "C" or lower, will be dismissed from the program.

Certificate must be declared prior to graduation and appears on official transcript.

CERTIFICATE REQUIREMENTS:

MAN 600	Foundations of Leadership Practice	3 cr.

Six credits from the following:

MAN 642	Leading Change	3 cr.
MAN 651	Ethical Leadership Practice	3 cr.
MAN 652	Contemporary Issues in Leadership	3 cr.

Total Credit Hours: 9

A student may not earn both a Leadership certificate and a Leadership concentration in the MBA.

GSTRD.CERT - Grad Certificate in Strategic Decision-Making

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Grad Certificate in Strategic Decision-Making

Program Code ~
GSTRD.CERT

Degree Designation ~
CERT - Certificate, GSTRD - Cert Strat Decision-Mak/Grad

Academic Level ~
GR - Graduate

Program Short Description

This certificate is designed fo provide students with a deep understanding of business strategy, its fundamental principles, theory, and application. Students will enhance their strategic thinking and critical analysis skills while exploring best strategic practices and implementation.

Requirements

Free Form Requirements
Graduate Strategic Decision-Making Certificate

Entry Requirements

Undergraduate degree with GPA of 3.000 or undergraduate degree with evidence of ability to do graduate-level work. No more than three credits approved transfer allowed.

Personal statement of purpose

Academic Performance

The academic standards apply to students in the Strategic Decision-Making Certificate program with the following exception: Any student who receives one or more grades of "C" or lower, will be dismissed from the program.

Certificate must be declared prior to graduation and appears on official transcript.

Certificate requirements

BUS 610/MAN 611	Business and Its Environment	3 cr.
BUS 680	Strategic Management	3 cr.
MAN 605	Leadership, Problem Solving and Decision Making	3 cr.

Total Credit Hours: 9

HIST.BA - BA in History

General

College/School
College of Arts & Sciences

Department(s) ~
Hstry, Phlsphy, Pol Sci & Econ

Program Title ~
BA in History

Program Code ~
HIST.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The History program enables students to understand the forces that have shaped the world from antiquity to the present day. Through a combination of thematic and methodological courses, research seminars, theses, and internships, students develop historical habits of mind—such as critical reasoning and understanding diverse perspectives—that are essential for many jobs. Our graduates pursue careers in the historical profession, education, law and law enforcement, social services, media, government, library and information sciences, business, museums, archives, and more.

Requirements

Free Form Requirements
History Major

General Information

The History program enables students to understand the forces that have shaped the world from antiquity to the present day. Students expand their historical knowledge in thematic and methodological courses about diverse communities, cultures, and societies on all continents. Our majors and minors further refine their analytical, communication, and research skills in the study of many different historical topics and themes, from class, race, identity, and gender to law, politics, religion, art, technology, urbanism, nationalism, war, and more. Our majors pursue capstone work in the historical profession through research seminars and theses. We encourage further career development through internships in the historical profession and related fields in government, education, the arts, and beyond.

Career Opportunities

Our students develop historical habits of mind such as critical reasoning and understanding diverse perspectives that are essential for many jobs and professions involving research, analysis, communication, leadership, and justice. Our graduates pursue careers in the historical profession, education, law and law enforcement, social services, media, government, information sciences, business, museums, archives and more.

Program Objectives

The educational goals and objectives of the History Program are to:

1. Learn historical habits of mind, including the ability to:
   a. Read critically and analyze primary and secondary sources in context;
   b. Recognize patterns of history and understand diverse fields of historical inquiry;
   c. Demonstrate empathy with different peoples, places, cultures, and societies of the world in the past and present.
2. Demonstrate the application of historical methods, including the ability to:
   a. Navigate and interpret digital and traditional databases, archives, libraries, and sources;
   b. Use historical skills, for example: research, evaluation, deliberation, differentiation, contextualization, and/or comparison.
3. Demonstrate fluency in historical communication, including the ability to:
   a. Articulate coherent historical statements in oral expression;
   b. Argue persuasively in analytical writing and/or digital and multi-media presentations.

Degree Requirements

Required Courses (19 credit hours)

HIST 111	United States History to 1877	3 cr.
HIST 112	United States History, 1878 to the Present	3 cr.
HIST 105	World History, Prehistory-1500CE	3 cr.
HIST 106	World History, 1500CE-Present	3 cr.
HIST 289	Methods Seminar in History	3 cr.
HIST 490	Research Seminar in History	4 cr.

Subtotal: 19

To promote a wide array of global and professional perspectives, an additional twenty-one credit hours of History electives are required, which may include internships. At least twelve credit hours must be at the 300-level, of which no more than three credits may be in U.S. history.

Subtotal: 21

History requires the study of diverse perspectives through an interdisciplinary lens. Therefore, History majors must take three additional credit hours from any of the following options:

EC XXX Economics elective

GEOG XXX Geography elective

POSC / INST XXX Political Science or International Studies elective

Subtotal: 3

Total Credit Hours: 43

Note: Students must take 30 credits at the 300-level or above to graduate, unless they complete a minor or another program like Education. Students are encouraged to fulfill the 300-level requirement through additional history courses and in the department (Political Science, Economics, Philosophy, International Studies, Law and Society). History majors also minor in many fields, including American Studies, Communications, Computer Science, Criminal Justice, Film, Latin American Studies, Mathematics, Psychology, Spanish, and more.

The 2.000 required grade point average in the major is based upon all HIST courses pursued as a part of the student's degree program.

History Suggested Sequence of Courses

The schedule of courses below is a sample sequence for a history major. Many students become history majors in their sophomore year and fulfill the major requirements without academic sacrifice.

First Year- Fall

HIST 111	United States History to 1877	3 cr.
HIST 105	World History, Prehistory-1500CE	3 cr.
ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
MATH XXX	Mathematical Analysis	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

HIST 112	United States History, 1878 to the Present	3 cr.
HIST 106	World History, 1500CE-Present	3 cr.
CS 13X	Computer Competence	3 cr.
ENGL 133	English Composition II	3 cr.
MATH XXX	Mathematical Analysis	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

HIST XXX	History Elective	3 cr.
GEN XXX	General Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.
EC/GEOG/POSC XXX	EC/GEOG/POSC Elective (EC strongly recommended)	3 cr.
GEN XXX	General Elective	3 cr

Subtotal: 15

Sophomore Year - Spring Semester

HIST 289	Methods Seminar in History	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
WIC 2XX	Writing Intensive Course (Can be fulfilled with specific HIST course)	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

HIST XXX	History Elective	3 cr
HIST 3XX	Upper Level History Elective	3 cr.
CUL XXX	Cultural Studies Perspective	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

HIST XXX	History Elective	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

GEN XXX	General Elective	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

HIST 490	Research Seminar in History	4 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN 3XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.

Subtotal: 15

Total Credit Hours: 120

*Both WIC requirements may be fulfilled within the major with specific HIST courses. Courses must be designated as writing intensive courses, one of which is satisfied by HIST 490.

HRM.BSBA - BSBA in Human Resource Management

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
BSBA in Human Resource Management

Program Code ~
HRM.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

The Human Resource Management program emphasizes the knowledge and competencies necessary to be a Human Resource Management professional in an organization of any size by developing expertise in employment law, workplace diversity, and HR analytics. Students become skilled as strategic business partners capable of solving organizational problems.

Requirements

Free Form Requirements
Human Resource Management Major

General Information

The Human Resource Management program emphasizes the knowledge and competencies necessary to be a Human Resource Management professional in an organization of any size by developing expertise in employment law, workplace diversity, and HR analytics. Students become skilled as strategic business partners capable of solving organizational problems. Students engage in experiential learning opportunities that prepare them to be strategic, innovative problem solvers in organizations across industries.

Career Preparation

In order to help students understand the range of careers available to Human Resource Management majors, faculty in the Department of Management provide activities to guide students from career exploration through career implementation. Examples of some of these activities include:

- Career Exploration in the freshmen year is accomplished in Introduction to Business Seminar (BUS110);
- Career Investigation in the sophomore year is accomplished in Interpersonal Skills for Leading (MAN 303), where students receive an in-depth look at HRM career opportunities and review their résumés;
- Career Determination in the junior year is accomplished through HRM specific coursework; and
- Career Implementation in the senior year is addressed through participation in the “RealTest” Assessment Exercise as part of the HRM 466 capstone course.

Career Opportunities

Human Resource Management (HRM) majors are prepared for a career path in human resources across industries. Graduates are uniquely equipped to understand the strategic direction of organizations and use analytics to identify innovative people-oriented solutions to problems and opportunities. Although career paths available to students include HRM generalist and HRM specialist (focused on a specific HRM area), HRM knowledge and skills are desired assets for many managerial positions

Program Learning Goals

Having completed a major in Human Resource Management, the student will have the ability to:

- Understand and apply the concepts and theories of Human Resource Management.

- Understand employment law, labor law, and compliance;
- Apply knowledge of workplace diversity to HRM practices in the organization;
- Use data to identify and address organizational problems and opportunities;
- Understand HRM's role as a strategic business partner; and
- Demonstrate skill and competency in HRM interpersonal practices.

For students interested in minoring in Human Resources, see Minors in this catalog.

For students interested in pursuing related certificates in Management or other business discipline, see Certificate Programs in this catalog.

Degree Requirements

Required Management, Human Resource Management and Business Law courses (30 credit hours)

BL 308	Labor Management Relations	3 cr.
BL 424	Business Law for Human Resource Management	3 cr.
MAN 303	Interpersonal Skills for Leading	3 cr.
HRM 322	Managing a Diverse Workforce	3 cr.
HRM 323	Human Resource Management	3 cr.
HRM 324	Performance Management	3 cr.
HRM 328	Human Resources Analytics	3 cr.
HRM 436	Compensation and Benefits	3 cr.
HRM 466	Senior Seminar in Human Resource Management	3 cr.
HRM 480	Internship in Human Resource Management	~~1-3~~ 3cr.

Subtotal: 30

GEN XXX	General Electives	12 cr.

Subtotal: 12

Total Credit Hours: 42

Human Resource Management Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
Or		
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101	Introduction to Sociology	3 cr.
OR		
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 101/HONB 203	Financial Reporting I	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
PH 211/MAN240/HONB 240	Business Ethics	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326	Business Planning for New Ventures	3 cr.
	or	
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
MAN 303	Interpersonal Skills for Leading	3 cr.
HRM 436	Compensation and Benefits	3 cr.
HRM 480	Internship in Human Resource Management	1-3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

Junior Year - Spring Semester

BL 308	Labor Management Relations	3 cr.
HRM 322	Managing a Diverse Workforce	3 cr.
HRM 323	Human Resource Management	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BL 424	Business Law for Human Resource Management	3 cr.
BAIM 310	Quality and Operations Management	3 cr.
	or	
BAIM 312	Quality and Operations Management with SAP	3 cr.
GEN XXX	General Elective	3 cr.
HRM 328	Human Resources Analytics	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

BUS 450/HONB 450	Business Strategy	3 cr.
HRM 466	Senior Seminar in Human Resource Management	3 cr.
HRM 324	Performance Management	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all "perspectives of understanding" requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: All HRM, BL 308, BL 424, and MAN 303.

Human Resource Management majors may not take the HR Minor or HR Fundamentals Certificate.

HS.BS - BS in Health Sciences

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Health Sciences

Program Code ~
HS.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The Health Sciences curriculum prepares students for health-related careers. It enables them to acquire the strong foundation in biology and chemistry required by many health-related professional paths including medicine, physician assistant, optometry, dentistry, and veterinary medicine, as well as graduate programs in biomedical sciences.

Requirements

Free Form Requirements
Health Sciences Major

General Information

The Health Sciences curriculum prepares students for health-related careers by enabling them to acquire a strong foundation in both biology and chemistry that is required by many health-related professional paths including medicine, physician assistant, optometry, dentistry, and veterinary medicine, as well as graduate programs in biomedical sciences.

Physical and Biological Faculty

Program Objectives:

1. Understand the features of human anatomy and physiology at the cell, tissue, and organ system levels of organization. Explain homeostasis as it applies to human physiology.
2. Apply scientific principles to understanding current issues in human health and the prevention of disease and disability.
3. Understand the principles and mathematical analysis of genetics.
4. Predict and explain the function of biological macromolecules from knowledge of their chemical structures and organization.
5. Assess the thermodynamic and kinetic stability of a biochemical system.
6. Demonstrate knowledge of mechanistic organic chemistry and apply this knowledge to understanding biochemical reactions.
7. Plan and execute experiments through proper use of library resources.
8. Collect, analyze, and interpret qualitative and quantitative data.
9. Communicate effectively through oral and written reports.

Degree Requirements

Required biology courses (20 credit hours)

BIO 107	General Biology I	3 cr.
BIO 108	General Biology II	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 215	Anatomy and Physiology I	4 cr.
BIO 216	Anatomy and Physiology II	4 cr.
BIO 306	Genetics	4 cr.

Subtotal: 20

Required health sciences courses (13 credit hours)

HS 2xx-4xx	Twelve additional semester hours of HS 2xx-4xx courses	12 cr.
HS 470	Seminar in Health Sciences	1 cr.

Subtotal: 13

The following courses can count towards the HS 2xx-HS 4xx requirements: BIO 203, BIO 310, BIO 312, NSCI 248, NSCI 348, CHEM 402, BME 425, BIO 401

Required chemistry courses (20 credit hours)

CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.

Subtotal: 20

Required courses in math, physics and statistics courses (17 credit hours)

MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.
MATH 121	Introductory Probability and Statistics	3 cr.

Subtotal: 17

Required courses in psychology and ethics (12 credit hours)

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 326	Abnormal Psychology	3 cr.
PH 208	Ethics	3 cr.
	or	
PH 231	Biomedical Ethics	3 cr.

Subtotal: 12

The 2.000 required grade-point average in the major would be based upon all HS, BIO (except BIO 15x and BIO 19x) and CHEM courses pursued as a part of the student's degree program.

Note that no transfer credit is accepted for major-level science lab courses taught online.

Total Credit Hours: 82

Health Sciences Suggested Sequence of Courses

Notes: The suggested sequence of courses in years two, three, and four is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 14

Sophomore Year - Fall

CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
PSY 101	Introduction to Psychology	3 cr.
BIO 215	Anatomy and Physiology I	4 cr.
MATH 121	Introductory Probability and Statistics	3 cr.

Subtotal: 14

Sophomore Year - Spring

CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
PSY 201	Developmental Psychology	3 cr.
GUR xxx	General University Requirement	3 cr
BIO 216	Anatomy and Physiology II	4 cr.

Subtotal: 14

Junior Year - Fall

PHYS 123	Physics of the Life Sciences I	4 cr.
PH 208	Ethics	3 cr.
	or	
PH 231	Biomedical Ethics	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 16

Junior Year - Spring

HS 2XX	HS Elective	4 cr.
HS 3XX	HS Elective	3 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 14

Senior Year - Fall

BIO 306	Genetics	4 cr.
GEN XXX	General Elective	3 cr.
GUR xxx	General University Requirement	3 cr
GUR xxx	General University Requirement	3 cr
HS 3XX	HS Elective	3 cr.

Subtotal: 16

Senior Year - Spring

CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
PSY 326	Abnormal Psychology	3 cr.
HS 470	Seminar in Health Sciences	1 cr.
GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.
HS 3XX	HS Elective	2 cr.

Subtotal: 16

Total Credit Hours: 120

Premedical Students:

Health Sciences majors intending to apply to medical school should contact the chairperson of the department or the premed advisor for additional information concerning sequence of courses.

HST.BS - BS in Health Studies

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Health Studies

Program Code ~
HST.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The goal of the Health Studies major is to provide students with the undergraduate preparation necessary to seek employment in a healthcare field or to obtain the background necessary for more advanced training in health-related fields that focus on the social, psychological, and public health perspectives. Note: The required courses of the BS in Health Studies curriculum do not fulfill all of the course prerequisite admission requirements of the WNE Doctor of Pharmacy program.

Requirements

Free Form Requirements
Health Studies

General Information

The goal of the Health Studies major is to provide students with the undergraduate preparation necessary to seek employment in a healthcare field or to obtain the background necessary for more advanced training in health-related fields that focus on the social, psychological, and public health perspectives.

Note: The required courses of the BS in Health Studies curriculum do not fulfill all of the course prerequisite admission requirements of the WNE Doctor of Pharmacy program. Students that are interested in following the undergraduate Pharmacy curriculum or are considering applying to Physician Assistant programs, Doctor of Optometry programs, or medical and dental schools are advised to consider following the BS in Health Sciences curriculum instead.

Career Opportunities

Professional programs in various health-related fields, e.g., occupational therapy, physical therapy, health education, patient advocacy, public and community health, accelerated bachelor of science degree in nursing programs, etc.

Program Objectives:

1. Upon completing this program, a Health Studies major will be able to:

   1. Understand the features of human anatomy and physiology at the cell, tissue, and organ system levels of organization. Explain homeostasis as it applies to human physiology.
2. Apply scientific principles to understanding current issues in human health and the prevention of disease and disability.
3. Collect, analyze, and interpret qualitative and quantitative data.
4. Communicate effectively through oral and written reports.

Degree Requirements

Required biology courses and chemistry courses (24 credit hours)

BIO 107	General Biology I	3 cr.
BIO 108	General Biology II	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 215	Anatomy and Physiology I	4 cr.
BIO 216	Anatomy and Physiology II	4 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.

Subtotal: 24

Required health sciences courses (12 credit hours)

HS 2xx-4xx	Twelve additional semester hours of HS 2xx-4xx courses	12 cr.

Subtotal: 12

with a minimum of 3 credits of HS coursework at the 300-level and above.

Additional courses that fulfill the HS 2xx-HS 4xx requirements: BIO 203, BIO 310, BIO 312, BIO 320, BIO 401, BME 425, CHEM 402 NSCI 212, NSCI 248, NSCI 348 (Note: BIO 310 and BIO 320 have a CHEM 210 prerequisite, BIO 401 has a BIO 306 prerequisite and CHEM 402 has a CHEM 314/CHEM 324 prerequisite.)

Other required courses (21 credit hours)

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 3XX	Psychology Elective	3 cr.
PSY 3XX	Psychology Elective	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 121	Introductory Probability and Statistics	3 cr.
PH 208	Ethics	3 cr.
	or	
PH 231	Biomedical Ethics	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.

Subtotal: 21

The 2.000 required grade-point average in the major would be based upon all HS, BIO, CHEM and PSY courses pursued as a part of the student's degree program.

Note that no transfer credit is accepted for major-level science lab courses taught online.

Total Credit Hours: 57

Health Studies Suggested Sequence of Courses

Notes: The suggested sequence of courses in years two, three, and four is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.

Subtotal: 14

Sophomore Year - Fall

MATH 1XX	Mathematical Analysis	3 cr.
PSY 101	Introduction to Psychology	3 cr.
BIO 215	Anatomy and Physiology I	4 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Sophomore Year - Spring

MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 121	Introductory Probability and Statistics	3 cr.
PSY 201	Developmental Psychology	3 cr.
BIO 216	Anatomy and Physiology II	4 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Junior Year - Fall

PH 208	Ethics	3 cr.
	or	
PH 231	Biomedical Ethics	3 cr.
GUR xxx	General University Requirement	3 cr
HS 2XX	HS Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring

HS 3XX	HS Elective	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.
PSY 3XX	Psychology Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall

GUR xxx	General University Requirement	3 cr
HS 3XX	HS Elective	3 cr.
GUR xxx	General University Requirement	3 cr
PSY 3XX	Psychology Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	1 cr.

Subtotal: 16

Senior Year - Spring

HS 3XX	HS Elective	3 cr.
GUR xxx	General University Requirement	3 cr
GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 12

Total Credit Hours: 120

Additional suggested courses

Students that are preparing for admission to specific professional health-related graduate degree programs or are interested in deeper knowledge in a particular area might consider using some of their electives to take the courses recommended below. These courses are not required to complete the BS in Health Studies degree. Some of these courses also count towards a minor program of study that a student might be interested in pursuing.

Health Communication

Recommended courses

COMM 100	Principles of Communication	3 cr.
COMM 283	Health Communication	3 cr.
COMM 320	Small Group Communication	3 cr.
COMM 321	Interpersonal Communication	3 cr.
COMM 328	Health Communication Campaigns	3 cr.

Note: COMM 100, COMM 102, COMM 320, and COMM 321 count towards the Minor in Communication.

Physical Therapy

Recommended courses

MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Students are strongly encouraged to explore the particular requirements of the Doctor of Physical Therapy program they plan to apply to.

Nursing

Recommended courses

BIO 203	Microbiology	4 cr.
HS 210	Nutrition	3 cr.

Students that are interested in applying to an Accelerated Bachelor of Science in Nursing Program after completing the BS in Health Studies should consider taking BIO 203 (Microbiology) and HS 210 (Nutrition) as part of their HS electives. In addition, students are strongly encouraged to explore the particular requirements of the program they plan to apply to.

IE.BSE - BSE in Industrial Engineering

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
BSE in Industrial Engineering

Program Code ~
IE.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

The Industrial Engineering major will teach you to be a professional problem-solver. Through lab work and experiential learning you'll apply your knowledge to solve real-world challenges.

Requirements

Free Form Requirements
Industrial Engineering Major

General Information

The Industrial Engineering curriculum prepares engineers to design, improve, install, and operate integrated systems of people, materials, and equipment needed by industry, commerce, and society. Industrial engineers prevent anticipated problems as well as solve current problems by applying the principles of engineering science, operations research, computer science, work analysis, product and process design and planning, human factors, quality assurance, and management. The curriculum is designed to provide strength in mathematics, basic science, and engineering science plus a carefully coordinated set of courses that are particularly relevant to the professional industrial engineer.

While providing Industrial Engineering students with a theoretical base, the IE program also emphasizes practical application of engineering principles to real problems and products. The program provides intensive laboratory and hands-on project work sponsored by local companies each year. Students obtain significant hands-on project experience before they graduate.

The BSE in Industrial Engineering program is accredited by the Engineering Accreditation Commission(s) of ABET, https://www.abet.org, under the General Criteria and the Program Criteria for Industrial and Similarly Named Engineering Programs.

Career Opportunities

Upon completion, students are prepared to pursue a wide variety of professional opportunities in industrial, commercial, and public service enterprises. The curriculum provides an excellent background for advanced study in industrial engineering, operations research, computer science, engineering management, business administration, law, and other fields.

The Department of Industrial Engineering and Engineering Management's primary goal is to effectively teach industrial engineering at the undergraduate level and engineering management at the graduate level. The department is guided by our Advisory Board which consists of alumni, faculty from other Industrial Engineering programs, and working professionals from local, regional, and national companies. We are proud of our students who continue to be successful, sought-after individuals who constantly serve as ambassadors for our program. Industrial Engineering (IE) at Western New England University will be a regional and national leader in communicating engineering knowledge and innovation associated with designing, operating, and improving processes for producing and delivering products and services. Industrial Engineering will educate the utilization of resources, including people, equipment, capital, materials, information, and energy. This will be accomplished by the use of classroom and laboratory instruction supplemented by repeated exposure to actual industrial projects in "learning beyond the classroom" opportunities.

Program Mission

As a strategic partner in alliance with the mission of the University, we strive to educate engineers who have the ability to help their organizations make the most effective use of resources, including people, equipment, capital, materials, information, and energy. Our graduates will enable their organization to be productive, flexible, and customer oriented. They will apply engineering skills to design effective systems and to devise procedures with which to operate these systems. And, they will continuously strive to improve both themselves through continuous education, and their organizations through avoidance and elimination of harmful or wasteful practices. Specifically, IE seeks to:

1. Educate engineers who will be successful in their professional careers;
2. Educate engineers who understand the metrics of an organization and what it takes to be a successful member of that organization;
3. Provide selected research and services to industry and government to meet their specific needs;
4. Contribute to the advancement of the IE profession through faculty leadership; and
5. Enhance the overall reputation of the College of Engineering and Western New England University.

Educational Objectives

The Educational Objectives of the Industrial Engineering program describe the expected achievements of graduates several years after graduation. Graduates of the BSE program will achieve the following:

1. Successful application of contemporary tools, knowledge, experience, and critical thinking to effectively solve engineering problems;
2. Implementation of effective solutions which successfully integrate people, materials, information, equipment, capital, and energy;
3. Effective collaboration and communication in individual and team settings;
4. Contribute as well-informed, ethical, and dependable members of society; and
5. Continually increase their knowledge and experience throughout their career.

Student Outcomes

1. Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

   Student Outcomes

   1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
   2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
   3. An ability to communicate effectively with a range of audiences
   4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
   5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
   6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
   7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

CHEM 105	General Chemistry I	4 cr.
ME 202/HONE 202	Statics	3 cr.
EE 205/HONE 205	Electrical Engineering I	4 cr.
MATH 236	Differential Equations	3 cr.
SBP XXX	Social/Behavioral Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

AC 101/HONB 203	Financial Reporting I	3 cr.
IE 212	Probability and Statistics	3 cr.
MATH 235	Calculus III	3 cr.
xxx	Mathematics or Basic Science Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

IE 308	Work Analysis and Design	3 cr.
IE 312	Engineering Economic Analysis	3 cr.
IE 318	Mathematical Programming for Engineers	3 cr.
IE 326	Production Planning and Control	3 cr.
IE 419	Python Programming and Machine Learning for Industrial Management	3 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 18

Junior Year - Spring Semester

IE 314/ME 322	Manufacturing Processes	3 cr.
IE 315	Quality Control and Engineering Statistics	3 cr.
IE 328	Lean Six-Sigma for Engineers	3 cr.
IE 334	Computer Simulation and Design	3 cr.
IE 330	Manufacturing & Production Lab	2 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Senior Year - Fall Semester

IE 429	Design and Analysis of Experiments	3 cr.
IE 428	Facility Design & Material Handling	2 cr.
IE 439	Senior Design Projects I	3 cr.
xxx	Technical or Design Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 14

Senior Year - Spring Semester

IE 420	Industrial Engineering Operations Research	3 cr.
IE 440	Senior Design Projects II	3 cr.
xxx	Technical Elective	3 cr.
xxx	Design Elective	3 cr.
IE 460	Supply Chain Engineering	3 cr.

Subtotal: 15

Total Credit Hours: 128

1. General Education courses must be selected in such a way to insure that all requirements have been satisfied.

2. Mathematics or Basic Science Electives are biological, chemical, or physical sciences courses or mathematics course 300 level or above.

3. Technical or design electives are engineering, math, or science courses normally numbered 300 or above or courses approved by the department chair.

4. General Elective. Selected on approval of the academic advisor.

The 2.000 required minimum grade point average in the major is based upon all IE major courses pursued as a part of the student's degree program. In addition, a minimum grade of C is required in IE 440.

IE.MSE - MSE in Industrial Engineering

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
MSE in Industrial Engineering

Program Code ~
IE.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

Designed for students with diverse engineering backgrounds, this program will increase your versatility and marketability as an engineer. Through advanced knowledge and skills in optimization, systems, quality, and cost analysis, you will create value for yourself and your employer.

Requirements

Free Form Requirements
Master of Science in Engineering in Industrial Engineering

Industrial engineers play key roles and are at the forefront of designing effective and efficient systems for quality products and services. The Master of Science in Engineering in Industrial Engineering is intended for students with undergraduate Engineering degrees to further advance their knowledge in areas such as analytical modeling, production planning, facilities design, and scheduling.

Program Objectives

Graduates of the program will:

• have the ability to synthesize, analyze, and optimize data for enterprise decision making

• model, improve, control, and re-design enterprise data

• be prepared to apply new tools and technique to solve industrial engineering problems

Degree Requirements

Core Courses - 9 credit hours

IE 601	Advanced Engineering Statistics	3 cr.
IE 631/EMGT 631	Production and Inventory Modeling	3 cr.
IE 635/EMGT 635	Operations Research	3 cr.

Subtotal: 9 cr.

Core Concentration - 3 credit hours

IE 626/EMGT 626	Discrete Event Simulation	3 cr.
	or	
IE 629/EMGT 629	Advanced Manufacturing Engineering Systems	3 cr.
	or	
IE 643/EMGT 643	Design of Experiments	3 cr.

Subtotal: 3 cr.

In addition to the required four core courses & concentration (12 credit hours) above, students can expand their technical knowledge in keeping with their interest and professional needs.

Students can select from a thesis or non-thesis option:

-The thesis option requires 12 credit hours of electives plus 6 credit hours of thesis (IE 698 and IE 699).

-The non-thesis option requires 15 credit hours of electives and 3 credit hours of a research project (IE 680).

-The coursework option requires 18 credit hours of electives. (see list below)

Subtotal: 18 cr.

Approved Electives

IE 604	Human Factors	3 cr.
IE 605	Reliability	3 cr.
IE 609/CEE 609/EMGT 609	Strategic Engineering Economics	3 cr.
IE 619/EMGT 619	Engineering Supply Chain	3 cr.
IE 620/EMGT 620	Multi-Criteria Decision Analysis	3 cr.
IE 622/EMGT 622	Lean Production Systems	3 cr.
IE 635/EMGT 635	Operations Research	3 cr.
IE 644/EMGT 644	Quality Systems and Process Improvement	3 cr.
IE 645/EMGT 645	Quantitative Models of Supply Chain Management	3 cr.

Total: 30 credits

Note: For students who wish to select a project/thesis topic sponsored by their employer, the topic must be approved by the student's supervisor, as well as their faculty advisor.

IE.PHD - PhD in Industrial Engineering

General

College/School
College of Engineering

Department(s) ~
Indust Engr & Engr Management

Program Title ~
PhD in Industrial Engineering

Program Code ~
IE.PHD

Degree Designation ~
PHD - Doctor of Philosophy

Academic Level ~
GR - Graduate

Program Short Description

Students with a PhD in Industrial Engineering gain advanced knowledge and skills in optimization, systems, quality, and cost analysis.

Requirements

Free Form Requirements
Doctoral Program in Industrial Engineering

Degree Requirements

All students must complete the following five core courses:

IE 702	Advanced Engineering Statistics	3 cr.
IE 701	Seminar/Research Methods for Industrial Engineering	3 cr.
IE 729	Advanced Manufacturing Engineering Systems	3 cr.
IE 731	Production and Inventory Modeling	3 cr.
IE 735	Operations Research	3 cr.

Subtotal: 15

A student who enters the program and does NOT have a Master of Science degree in Industrial Engineering, or a closely related field, will need to complete the following additional courses. Those with a Master of Science Degree will instead complete 12 credits of electives:

IE 619/EMGT 619	Engineering Supply Chain	3 cr.
IE 626/EMGT 626	Discrete Event Simulation	3 cr.
IE 643/EMGT 643	Design of Experiments	3 cr.
IE 644/EMGT 644	Quality Systems and Process Improvement	3 cr.

Subtotal: 12

In addition to the requirements above, students must take 3 credit hours of elective course work from the Industrial Engineering section of the current catalog in consultation with their preliminary and/or dissertation advisor. Courses outside of the IEEM will require the approval of the student's preliminary and/or primary advisor.

IE 6XX	IE Elective	3 cr.

Subtotal: 3

Dissertation Research (27 credit hours)

IE 700-799	IE Dissertation Research	27 cr.

Subtotal: 27

Total Credit Hours: 57

Curriculum Summary

Total number of courses recommended for the degree: 10†

Prerequisite, Concentration, Dissertation or Other Requirements: Students must take a minimum of 27 credit hours of research of any combination of IE 770-799 (Dissertation Research) and submission of Dissertation required. Additional examinations include Preliminary Examination (qualifying), Comprehensive Examination (covering major area of study), Dissertation Approval Examination (oral examination on dissertation research proposal), and Dissertation Defense (oral).

† Excludes number of Dissertation courses needed to meet 27 credit hour minimum requirement.

ILSP.BA - BA in Integrated Liberal Studies

General

College/School
College of Arts & Sciences

Department(s) ~
Arts & Sciences General

Program Title ~
BA in Integrated Liberal Studies

Program Code ~
ILSP.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Integrated Liberal Studies program provides the opportunity to construct an individualized major that combines a selection of interrelated courses from two or more disciplines based on your interests and goals. Students tailor their education toward any number of career paths based on the combination of courses chosen, enhancing their marketability after graduation. Students work closely with each department in which they propose to do a substantial part of their work.

Requirements

Free Form Requirements
Integrated Liberal Studies Major

General Information

The Integrated Liberal Studies program provides the opportunity to construct an individualized major. Such a program combines a selection of interrelated courses from two or more disciplines according to the interests and goals of the student.

Students must request permission and guidance from each department in which they propose to do a substantial part of the work. Final approval of such a program rests with the Dean of the College of Arts and Sciences upon recommendation of those departments concerned. No request for an Integrated Liberal Studies major will be considered earlier than the end of the freshman year or later than the beginning of the senior year.

Career Opportunities

This program permits students to pursue goals, which are not addressed in a regular major program. Past majors have found jobs in animal science, publishing, and pharmaceutical sales.

Faculty in this major are drawn from disciplines throughout the University.

Program Objectives

1. To allow students to construct a major.
2. To gather courses from at least two major departments.
3. To lead students to define educational goals.
4. To bring the students into planning their own education.
5. To lead students to find elements in disciplines that reinforce each other.

Non-business majors can apply no more than 25% of business coursework to their graduation requirements.

Minimum Requirements:

A minimum of 36 credit hours drawn from at least two disciplines, 18 hours in each discipline. At least 30 (15 hours in each) of these shall be courses at the 300-400 level.

Suggested Sequence of Courses

The Assistant Dean of Arts and Sciences serves as the advisor to students in this major. Each student's four-year sequence is dependent upon the courses of study selected.

INENT.CERT - Certificate in Innovation & Entrepreneurship

General

College/School
College of Business

Department(s) ~
Marketing

Program Title ~
Certificate in Innovation & Entrepreneurship

Program Code ~
INENT.CERT

Degree Designation ~
CERT - Certificate, INENT - Cert Innovation & Entrepre

Academic Level ~
UG - Undergraduate

Program Short Description

Degree seeking undergraduate students can earn an Innovation and Entrepreneurship certificate by completing ENTR 251 and BUS 423/BME 423/ME 423, plus one of the following; ENTR 430, ENTR 480, MK 302, MK 372, or FIN 330 with a grade of "C" or higher.

Requirements

Free Form Requirements
Innovation and Entrepreneurship Certificate

Degree seeking students can earn an Innovation and Entrepreneurship certificate by completing ENTR 251, ENTR 480 or, and BUS 423/BME 423/ME 423 and one of the following ENTR 430, MK 302, MK 372, or FIN 330 with a grade of "C" or higher.

Requirements

ENTR 251	Entrepreneurship and Innovation	3 cr.
BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.

Subtotal: 6

Plus one of the following courses

ENTR 430	Family Business Management	3 cr.
	or	
ENTR 480	Internship in Entrepreneurship	3 cr.
	or	
MK 302	Market Analysis	3 cr.
	or	
MK 372	Digital Media Marketing Strategies	3 cr.
	or	
FIN 330	Financing Entrepreneurial Ventures	3 cr.

Subtotal: 3

Total Credit Hours: 9

This certificate is not available to ENTR minor candidates.

Certificate must be declared prior to graduation and appears on official transcript.

INST.BA - BA in International Studies

General

College/School
College of Arts & Sciences

Department(s) ~
Arts & Sciences General

Program Title ~
BA in International Studies

Program Code ~
INST.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The International Studies major promotes global understanding and lifelong learning through an international, intercultural, and interdisciplinary curriculum. Majors learn to comprehend and communicate with diverse communities at home and abroad by studying complex international issues, including the dynamic global economy, conflict and war, environmental degradation, and human rights violations and solutions. The program prepares students to participate creatively in a global exchange of ideas and to be successful in a wide variety of career paths, ranging from public service, diplomacy, management, and communications to the arts, community service, entrepreneurship, health care support, and teaching.

Requirements

Free Form Requirements
International Studies Major

General Information

International Studies aims to educate global citizens. The major promotes global understanding and lifelong learning through an international, intercultural, and interdisciplinary curriculum. It is designed to foster understanding of world societies and global issues from varied disciplinary perspectives, including cultural diversity and norms, economic interconnectedness, conflict and war, environmental degradation, human rights violations and solutions. Students learn the communication, research, and critical thinking skills necessary to assess cultural, economic, political, and social systems in a global context. Majors learn to understand and communicate with diverse communities at home and abroad, a foundation of work and life in the twenty-first century, by studying complex international issues, including the dynamic global economy and the expectations of global citizenship.

International Studies majors shape their own course of study from a curriculum that balances depth and breadth of international and regionally comparative courses in different academic specializations. Majors are encouraged to choose a relevant minor to focus their course of study. Majors are encouraged to study abroad or to pursue international or globally related internships and service learning opportunities. International Studies advances awareness of global issues on campus by promoting participation in student organizations that support international understanding and diversity education, especially the Model United Nations and United and Mutually Equal.

Career and Community Opportunities

International Studies prepares students to participate creatively in a global exchange of ideas and to be successful in a dynamic global economy. The major opens a wide variety of career paths, ranging from public service, diplomacy, management, and communications to the arts, community service, entrepreneurship, health care support, and teaching. It prepares interested students for a variety of graduate programs, including those in international affairs, law, business, and public policy. The major helps students meet the challenges of the global economy by requiring at least twelve credits of foreign language(s). The major also encourages studying, volunteering, and interning abroad to sharpen students' critical thinking and communication skills, which most employers consider fundamental in the twenty-first century economy.

Program Objectives

1. To provide students with breadth of knowledge of cultural, economic, political, and social systems in a global context.
2. To provide students with analytical tools to explain complex global issues in different disciplines.
3. To expose students at an advanced level to different disciplinary perspectives on global issues and international context.
4. To acquire proficiency in a language or languages other than one's own.
5. To gain awareness of the connection between global problems and global citizenship, particularly, but not necessarily, through international study, internships, or service learning, or through globally related internships, service learning, or domestic academic exchange.
6. To develop skills in critical reading, research, argumentation, and presentation.

International Studies majors are encouraged to fulfill General University Requirements with courses that have international, global, or comparative focus.

Degree Requirements

Group A: Core courses required (15 credit hours):

GEOG 102	World Regional Geography I: Highly Developed Countries	3 cr.
	or	
GEOG 103	World Regional Geography II: Less Developed Countries	3 cr.
HIST 106	World History, 1500CE-Present	3 cr.
INST 101/POSC 101	Introduction to Contemporary Global Issues	3 cr.
POSC 203	International Relations	3 cr.
INST 490	Seminar in International Studies	3 cr.

Subtotal: 15 cr.

Group B: Choose at least four courses; these cannot also count as Core courses (12 cr.):

ART 212/HIST 212
ART 202
CJ 260
COMM 235
EC 111
EC 112
*ENGL 215
*ENGL 232
GEOG 102

GEOG 103
HIST 133
HIST 171
HIST 212/ART 212
HIST 261
INST 100
INST 190
INST 290
INTB 251
LSOC 203
MUS 240
PH 120
PH 214
PH 230
PH 240
POSC 201
POSC 235
POSC 2XX

Subtotal: 12

Group C: Choose at least seven courses; note any prerequisites (21 cr.):

COMM 348
COMM 356
EC 315
EC 321
EC 371
EC 372
EC 3XX
EC 39X
*ENGL 336
*ENGL 341
*ENGL 343
*ENGL 376
ENTR 380
FILM 312
FIN 322
HIST 320
HIST 332
HIST 341
HIST 343
HIST 345
HIST 346
HIST 372
HIST 373
HIST 374/INST 374
HIST 375
HIST 380
HIST 39X (topics vary; INTLS Dir. approval)
*HIST 490 (topics vary; INTLS Dir. approval)
INST 390
INST 480
LSOC 344
MAN 311
MK 311
PH 316
POSC 310
POSC 312
POSC 316
POSC 318
POSC 340
*POSC 345
POSC 346
POSC 350
POSC 355
POSC 356

POSC 39X (topics vary; INTLS Dir. approval)
POSC 490 (topics vary; INTLS Dir. approval)
SPMN 420

*Fulfills Writing Intensive Requirement. Two courses must be designated as writing intensive.

Subtotal: 21

Foreign Languages requirement (12 cr.)

At least 12 credits (four semesters) of a foreign language or languages are required. A student may earn exemption from up to two semesters of a foreign language and up to two semesters of a different native language other than English. Exemptions may be earned through a proficiency test administered and/or approved by an appropriate University faculty member or the Director of International Studies.

Students who earn the maximum language exemption will be required to take one course from Group C above. The remaining credits will become general electives.

Subtotal: 12

Total Credit Hours: 60

International Studies Suggested Sequence of Courses

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
INST 101/POSC 101	Introduction to Contemporary Global Issues	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
LANG XXX	First Semester Foreign Language	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
GEOG 1xx	World Geography Elective	3 cr.
HIST 206	World History, 1500CE-Present	3 cr.
LANG XXX	First Semester Foreign Language	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

INST 1XX/2XX	See INST Curriculum List	3 cr.
INST 1XX/2XX	See INST Curriculum List	3 cr.
GUR xxx	General University Requirement	3 cr.
PH 1XX/2XX	See INST Curriculum List	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GUR xxx	General University Requirement	3 cr.

Subtotal: 18

Sophomore Year - Spring Semester

GUR xxx	General University Requirement	3 cr.
INST XXX	See INST Curriculum List	3 cr.
INST XXX	See INST Curriculum List	3 cr.
GUR xxx	General University Requirement	3 cr.
POSC 203	International Relations	3 cr.

Subtotal: 15

Junior Year - Fall Semester (Study Abroad Encouraged)

ART/FILM/MUS/THTR XXX	See INST Curriculum List	3 cr.
INST 3XX	See INST Curriculum List	3 cr.
INST 3XX	See INST Curriculum List	3 cr.
GEN XXX	General Elective	3 cr.
LANG XXX	Foreign Language	3 cr.

Subtotal: 15

Junior Year - Spring Semester (Study Abroad Encouraged)

GUR xxx	General University Requirement	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
INST 3XX	See INST Curriculum List	3 cr.
LANG XXX	Foreign Language	3 cr.

Subtotal: 15

Senior Year - Fall Semester

GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	1 cr.
INST 3XX	See INST Curriculum List	3 cr.
INST 3XX	See INST Curriculum List	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.

Subtotal: 16

Senior Year - Spring Semester

GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
INST 3XX	See INST Curriculum List	3 cr.
INST 490	Seminar in International Studies	3 cr.

Subtotal: 15

Total Credit Hours: 124

IT.BS - BS in Information Technology

General

College/School
College of Arts & Sciences

Department(s) ~
Computer Science & Info Tech

Program Title ~
BS in Information Technology

Program Code ~
IT.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Information Technology is critical to enabling the growth and development of our connected world. You will learn about current technologies and practices that support organizations and businesses. Security aspects of Information Technology will be addressed in courses in network security and system administration.

Requirements

Free Form Requirements
Information Technology Major

General Information

The Information Technology major, which leads to a Bachelor of Science degree, prepares students to be able to identify and employ the information technology and methodologies required to help an organization meet its goals. Students are prepared to understand and meet the technology needs of users in an organization while being able to select, apply, integrate and administer computing technologies within the organization. Students are prepared to advocate for the users as well as to administer computer systems, manage networks of computers, design and develop web pages, and develop network and system security strategies for an organization. Due to the rapid rate of change in technology, students are equipped to understand and manage the information technology resources of an organization in an environment of change as new technologies emerge. Students will gain hands-on experience with a range of information technologies. An internship is required to provide students with an understanding of how information technology is used in the real world.

Opportunities

Graduates in Information Technology develop the knowledge and understanding required of IT professionals and are prepared to go on to advanced study or to enter various information technology fields. Graduates are in high demand and are well equipped to enter careers in system administration, web design and development, network administration, and cybersecurity.

Educational Objectives

The Information Technology program will prepare students to be professionals capable of applying principles to practice, able to undertake lifelong learning, and aware of social, ethical, and environmental issues associated with their professional activities. The expected accomplishments of our graduates during the first several years following graduation from the program are to:

1. successfully apply principles and practices of computing to design and maintain systems that meet customer need and support user needs;
2. function ethically and responsibly as a full participant in the computing discipline;
3. remain current in the fast-changing world of technology today by pursuing lifelong learning;
4. operate successfully as part of a team; and
5. apply knowledge and skills to the benefit of society.

Program Outcomes

Upon completion of the program, the student will have the following abilities:

- Communication—Ability to communicate ideas and concepts in written and oral forms clearly and in an organized manner.
- Mathematical Foundations —Ability to apply knowledge of computing and mathematical concepts and theory to develop and analyze computing systems.
- Teamwork —Ability to work in teams.
- Design—Ability to apply design process and notation in order to design systems.
- Critical Thinking —Ability to evaluate and analyze a computer-based system, process, component, or program to meet desired needs.
- Ethics—Ability to identify the role computers play in society and identify and analyze ethical impacts of professional behavior and actions.
- Information Management —Ability to identify and utilize appropriate information sources in order to understand and/or solve problems.
- Programming Fundamentals—Ability to create solutions to problems using code and/or components including selection of programming fundamentals and appropriate comments.

Degree Requirements

Required information technology courses (27 credit hours)

CS 101/IT 101	Introduction to Computing	4 cr.
IT 102/CS 102	Introduction to Programming	4 cr.
IT 201 - CS 200	Applied Data Structures or Data Structures	4 cr. - 4 cr.
CYBR 230	Cybersecurity Concepts	3 cr.
IT 230	Introduction to Operating Systems and Script Development	3 cr.
IT 240	Foundations of Web Systems	3 cr.
IT 250/BAIM 413	Data Communications and Networks	3 cr.
IT 300/BAIM 321 - CS 364	Database Management Systems or Design of Database Management Systems	3 cr. - 3 cr.
IT 310	System Operation and Administration	3 cr.
IT 320	Foundations of Human Computer Interaction	3 cr.
IT 360	Network Management and Operations	3 cr.
IT 410	Advanced Topics in System Administration	3 cr.
IT 460	Advanced Topics in Network Administration	3 cr.
IT 470	IT Infrastructure Design	3 cr.
IT 475	IT Project Management	3 cr.
IT 480 - IT 485	Internship in Information Technology or IT Capstone	3 cr. - 3 cr.
Subtotal: 51	**Required mathematics Courses**	
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
MATH 150	Applied Discrete Mathematics	3 cr.
Subtotal: 6	**Technical Electives**	
IT/CS/CYBR 3XX	IT/CS Upper Level Electives (Except CYBR 330 & 435)	6 cr.
Subtotal: 6	Required Philosophy	
PH 225	Ethics of Digital Technologies	3 cr.

Subtotal: 3

Total Credit Hours: 66

Information Technology Suggested Sequence of Courses

First Year- Fall

IT 101/CS 101	Introduction to Computing	4 cr.
GEN XXX	General Elective	3 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
GUR xxx	General University Requirement	3 cr.
Subtotal: 15 **First Year - Spring**		
IT 102/CS 102	Introduction to Programming	4 cr.
MATH 150	Applied Discrete Mathematics	3 cr.
ENGL 133	English Composition II	3 cr.
GEN XXX	General Elective	3 cr.
GUR xxx	General University Requirement	3 cr.
Subtotal: 16 **Sophomore Year - Fall**		
IT 201	Applied Data Structures	4 cr.
IT 230	Introduction to Operating Systems and Script Development	3 cr.
IT 250	Data Communications and Networks	3 cr.
MATH 120	Intro to Statistics for the Arts & Sciences	3 cr.
GUR XXX	General University Requirement	3 cr.
Subtotal: 16 **Sophomore Year - Spring**		
IT 240	Foundations of Web Systems	3 cr.
CYBR 230	Cybersecurity Concepts	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GUR XXX	General University Requirement	3 cr.
GUR XXX	General University Requirement	3 cr.
Subtotal: 15 **Junior Year - Fall**		
IT 300/BAIM 321	Database Management Systems	3 cr.
IT 310	System Operation & Administration	3 cr.
IT 360	Network Management & Operations	3 cr.
GEN XXX	General Elective	3 cr.
GUR XXX	General University Requirement	3 cr.
Subtotal: 15 **Junior Year - Spring**		
IT 410	Advanced Topics in System Administration	3 cr.
IT 460	Advanced Topics in Network Administration	3 cr.

PH 225	Ethics of Digital Technologies	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.
GUR XXX	General University Requirement	3 cr.
Subtotal: 15 **Senior Year - Fall**		
IT 320	Foundations of Human Computer Interaction	3 cr.
IT/CS/CYBR 3XX	IT/CS/CYBR Elective (except CYBR 330 & 435)	3 cr.
IT 475	IT Project Management	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
Subtotal: 15 **Senior Year - Spring**		
IT/CS/CYBR 3XX	IT/CS/CYBR Elective (except CYBR 330 & 435)	3 cr.
IT 480/485	Internship / Capstone	3 cr.
IT 470	IT Infrastructure Design	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.

Subtotal: 14

Total Credit Hours: 120

Note: Order of General University Requirement courses can be altered (HIST, LAB, NSP, SBP, ART, CUL).

The Computer Competence GUR is met through CS/IT 102.

The Ethical Perspective is met through PH 225.

LAW.BA - BA in Law

General

College/School
College of Arts & Sciences

Department(s) ~
Hstry, Phlsphy, Pol Sci & Econ

Program Title ~
BA in Law

Program Code ~
LAW.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Bachelor of Arts in Law is designed for the student who is interested in learning about the origins, actors, institutional frameworks, cultural development, and theoretical foundations of law and justice. This major looks at these subjects in a wide variety of contexts that include state and federal governments in the United States, similar institutions in foreign nations, and within the framework of the international community. Throughout the curriculum, students are challenged to consider the implications that the law has for building a more just and equitable world that embraces the contributions of all of its diverse communities.

Requirements

Free Form Requirements
BA in Law

General Information

The Bachelor of Arts in Law is designed for the student who is interested in learning about the origins, actors, institutional frameworks, cultural development, and theoretical foundations of law and justice. This major looks at these subjects in a wide variety of contexts that include state and federal governments in the United States, similar institutions in foreign nations, and within the framework of the international community. Throughout the curriculum, students are challenged to consider the implications that the law has for building a more just and equitable world that embraces the contributions of all of its diverse communities.

Career Opportunities

The Bachelor of Arts in Law is only one of many paths for preparing students for law school. Students interested in attending law school should select a major that matches their own personal interests and intellectual passions, whether that be in the social sciences, humanities, physical sciences or business. The broad-based education in the social sciences provided by the B.A. in Law is an excellent preparation for a variety of non-legal careers in government, education, business, and international affairs.

Please note: You are not permitted to practice law or give legal advice with this undergraduate degree. Only licensed attorneys who have completed law school and passed one or more bar exams can perform these functions.

Program Objectives

1. Understand the function and purpose of law in resolving conflicts and establishing justice both past and present.
2. Appreciate how the distribution of wealth, opportunities, and privileges is reflected in public policies and the law.
3. Help students appreciate how the law can be utilized to either promote or deny fairness, equality, equity, and rights.
4. Gain an understanding of the roles of judges, attorneys, and juries in shaping policy outcomes in American society.
5. Develop an appreciation for how legal actors and institutions function in constitutional frameworks outside the United States.
6. Understand the role of international law and governance in shaping relations between states and non-governmental institutions and actors.
7. Demonstrate the ability to think critically, construct logical arguments and express those arguments through both writing and oral presentations.

Degree Requirements

Required courses (36 credit hours)

LSOC 101	Law & Society I: Introduction to Law & Society	3 cr.
LSOC 102	Law & Society II: Legal Justice and Social Justice	3 cr.
POSC 102	American National Government	3 cr.
POSC 201 - POSC 203	Comparative Politics or International Relations	3 cr. - 3 cr.
POSC 207/LSOC 207	Introduction to Political Theory	3 cr.
POSC 225/LSOC 225	Law and Judicial Politics	3 cr.
LSOC 226/POSC 226	The Legal Profession	3 cr.
LSOC 307/POSC 307	Justice, Diversity, and Democratic Citizenship	3 cr.
POSC 325/LSOC 325	Constitutional Law	3 cr.
POSC 340/LSOC 340	International Governance and Law	3 cr.
LSOC 344	Comparative Law & Justice	3 cr.
LSOC 490	Senior Seminar in Law and Society	3 cr.

Subtotal: 36

The major will require that the student select two courses (6 credits) from any combination of the following:

BL 201/HONB 201	Introduction to Business Law	3 cr.
LSOC 330	Contemporary Political Theory	3 cr.
PH 204	Elementary Logic	3 cr.
PH 208	Ethics	3 cr.
PH 240	Gandhi and King	3 cr.
PH 245	War, Terrorism and Torture	3 cr.
POSC 203* - POSC 201* *if not already used in the major requirements listed above.	International Relations or Comparative Politics	3 cr. - 3 cr.
POSC 205	Public Administration	3 cr.
POSC 210	State and Local Politics	3 cr.
POSC 212	Political Analysis	3 cr.
POSC 218	Public Policy in America	3 cr.
POSC 310	Politics of Developing Societies	3 cr.
POSC 312	Politics of Sub-Saharan Africa	3 cr.
POSC 316	Politics of Europe	3 cr.
POSC 318	Politics of The Middle East	3 cr.
POSC 322	The U.S. Presidency	3 cr.
POSC 324	Parties and Elections	3 cr.
POSC 327	Media & Politics	3 cr.
POSC 328	Political Behavior	3 cr.
POSC 342	Environmental Law and Politics	3 cr.
POSC 345	International Human Rights	3 cr.
POSC 356	Human Security	3 cr.
SO 208	Gender	3 cr.
CJ 309	Deviance	3 cr.
SW 204	Social Work and Criminal Justice	3 cr.

Subtotal: 6

Total Credit Hours: 42

The B.A. in Law provides 30 credit hours of general electives. Students are strongly encouraged to direct these electives towards a minor program in Economics, History, International Studies, Philosophy, Political Science Public Administration or another field of study to supplement their major coursework. For students who have been accepted by the WNE Law School into the 3+3 program after the completion of their Junior year, these 30 credit hours of general electives will be fulfilled during the first year of law school.

Bachelor of Arts in Law Suggested Sequence of Courses

First Year- Fall Semester

LSOC 101	Law & Society I: Introduction to Law & Society	3 cr.
POSC 102	American National Government	3 cr.
ENGL 132	English Composition I	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 15

First Year - Spring Semester

LSOC 102	Law & Society II: Legal Justice and Social Justice	3 cr.
HIST XXX	Historical Perspective	3 cr.
ENGL 133	English Composition II	3 cr.
MATH XXX	Mathematical Analysis	3 cr.
CS 13X	Computer Competence	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

LAB XXX	Laboratory Science Requirement	3 cr.
POSC 225/LSOC 225	Law and Judicial Politics	3 cr.
POSC 201 - POSC 203	Comparative Politics or International Relations	3 cr. - 3 cr.
POSC 207/LSOC 207	Introduction to Political Theory	3 cr.
CUL XXX	Global Cultural Perspective	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

LSOC 226/POSC 226	The Legal Profession	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
WIC 2XX-4XX	Writing Intensive Requirement	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

POSC 325/LSOC 325	Constitutional Law	3 cr.
LSOC XXX	Major Elective	3 cr.
ART XXX	Aesthetics Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

LSOC 344	Comparative Law & Justice	3 cr.
LSOC 307/POSC 307	Justice, Diversity, and Democratic Citizenship	3 cr.
WIC 3XX-4XX	Writing Intensive Requirement	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

LSOC XXX	Major Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

LSOC 340/POSC 340	International Governance and Law	3 cr.
LSOC 490	Senior Seminar in Law and Society	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

LAW.ELEP.LLM - LLM in Elder Law & Estate Planning

General

College/School
School of Law

Department(s) ~
Law

Program Title ~
LLM in Elder Law & Estate Planning

Program Code ~
LAW.ELEP.LLM

Degree Designation ~
LLM - Master of Laws

Academic Level ~
LLM - Law LLM

Program Short Description

The LLM in Elder Law and Estate Planning is an interactive online program taught live and in real-time. This part-time program offers practicing attorneys the opportunity to enhance their expertise in these high-growth areas to better advocate for their clients.

Requirements

Free Form Requirements
LLM in Elder Law & Estate Planning

LLME 801	Wills and Trusts, Design, Drafting and Implementation	2 cr.
LLME 802	Fiduciary Administration	2 cr.
LLME 803	Federal Wealth Transfer Taxes	2 cr.
LLME 804	Federal Income Taxation of Estates & Trusts	2 cr.
LLME 806	Final Drafting Project	4 cr.
LLME 807	Elder Law	2 cr.
LLME XXX	LLME Electives	10 cr.

Total Credit Hours: 24

Since the primary objective of the program is to prepare our students to practice elder law and estate planning, our courses will emphasize the practical aspects of planning for elders, drafting estate plans, and administering estates. To obtain the degree, each student will be required to complete 14 credit hours in required courses and a minimum of 10 credit hours in elective courses. As a final 4 credit project, every student will design and draft a comprehensive estate plan under the supervision of an experienced estate planner.

LAW.FT.JD - JD (Full-time Day)

General

College/School
School of Law

Department(s) ~
Law

Program Title ~
JD (Full-time Day)

Program Code ~
LAW.FT.JD

Degree Designation ~
JD - Juris Doctor

Academic Level ~
LAWJD - Law JD & MS

Program Short Description

The JD program is structured to prepare you for the practice of law in any American jurisdiction. You will begin with several required courses that form the foundation for more advanced legal studies. Lawyering Skills is a required first-year course that teaches the basic techniques of legal research, writing, and analysis. While students are not required to pursue a concentration, you may choose to do so to focus your studies on a specific practice area. The experiential learning requirement provides opportunities to gain real-world legal experience. All students are required to complete 20 hours of pro bono legal work prior to graduation. Study options include full-time, part-time day, or part-time evening.

Requirements

Free Form Requirements
Juris Doctor Full-Time Program

First Year - Fall

LAW 500	Introduction to Law	1 cr.
LAW 513	Torts	4 cr.
LAW 509	Civil Procedure	4 cr.
LAW 505	Criminal Law	4 cr.
LAW 507	Lawyering Skills I	2 cr.
LAW 695	Academic Success	1 cr.

Subtotal: 16

First Year Spring

LAW 502	Intro to the Legal Profession	1 cr.
LAW 501	Constitutional Law	4 cr.
LAW 503	Contracts	4 cr.
LAW 511	Property	4 cr.
LAW 508	Lawyering Skills II	2 cr.

Subtotal: 15

Second Year

LAW 551	Business Organizations	3 cr.
LAW 555	Income Tax	3 cr.
	or	
LAW 556	Leg Admin Process	3 cr.
LAW 553	Evidence	3 cr.
LAW XXX* (required courses can be taken in fall or spring)	Electives*	15-23 cr.

Subtotal: 24-32

Third Year

LAW 599	Advanced Legal Analysis I	2 cr.
LAW 588	Advanced Legal Analysis II	2 cr.
LAW 575	Professional Responsibility	2 cr.
LAW XXX*	Electives*	20-28 cr.

Subtotal: 26-34

Total Credits Required 88

***For all students, the required 42 credits of electives must include**

--two courses that satisfy the upper-level writing requirement, designated with a LAWW course prefix
--six credits that satisfy the experiential Learning requirement, designated with a LAWE course prefix
--one course that satisfies the Antiracism and Cultural Competency (ARCC) requirement, designated with a LAWA (or LAWWA or LAWEA) prefix.

Students must also complete 20 hours of pre-approved pro bono work.

The curriculum is subject to review and change. Course sequencing may vary.

LAW.PT.DAY.JD - JD (Part-time Day)

General

College/School
School of Law

Department(s) ~
Law

Program Title ~
JD (Part-time Day)

Program Code ~
LAW.PT.DAY.JD

Degree Designation ~
JD - Juris Doctor

Academic Level ~
LAWJD - Law JD & MS

Program Short Description

The JD program is structured to prepare you for the practice of law in any American jurisdiction. You will begin with several required courses that form the foundation for more advanced legal studies. Lawyering Skills is a required first-year course that teaches the basic techniques of legal research, writing, and analysis. While students are not required to pursue a concentration, you may choose to do so to focus your studies on a specific practice area. The experiential learning requirement provides opportunities to gain real-world legal experience. All students are required to complete 20 hours of pro bono legal work prior to graduation. Study options include full-time, part-time day, or part-time evening.

Requirements

Free Form Requirements
Juris Doctor Part-Time - Day

First Year - Fall & Spring

LAW 500	Introduction to Law	1 cr.
LAW 513	Torts	4 cr.
LAW 509	Civil Procedure	4 cr.
LAW 507	Lawyering Skills I	2 cr.
LAW 695	Academic Success	1 cr.
LAW 502	Intro to the Legal Profession	1 cr.
LAW 501 - LAW 503	Constitutional Law or Contracts	4 cr. - 4 cr.
LAW 511 - LAW 505	Property or Criminal Law	4 cr. - 4 cr.
LAW 508	Lawyering Skills II	2 cr.
Subtotal: 23 First Year - Summer		
LAW XXX	Law Electives	0-6 cr.
Subtotal: 0-6 Total Year One: 23-29 cr. **Second Year - Fall & Spring**		
LAW 551	Business Organizations	3 cr.
LAW 553	Evidence	3 cr.
LAW 501 - LAW 503	Constitutional Law or Contracts	4 cr. - 4 cr.
LAW 511 - LAW 505	Property or Criminal Law	4 cr. - 4 cr.
LAW XXX	Law Electives	2-8 cr.
Subtotal: 16-22 **Second Year - Summer**		
LAW XXX	Law Electives	0-6 cr.
Subtotal: 0-6 Total Year Two: 16-28 **Third Year - Fall & Spring**		
LAW 555 - LAW 556	Income Tax or Leg Admin Process	3 cr. - 3 cr.
LAW 575	Professional Responsibility	2 cr.
LAW XXX	Law Electives	11-17 cr.

Subtotal: 16-22 **Third Year - Summer**		
LAW XXX	Law Electives	0-6 cr.
Subtotal: 0-6 Total Year Three: 16-28 **Fourth Year - Fall**		
LAW 599	Advanced Legal Analysis I	4 cr.
LAW XXX	Law Electives	4-7 cr.
Subtotal: 8-11 **Fourth Year - Spring**		
LAW 588	Advanced Legal Analysis II	4 cr.
LAW XXX	Law Electives	4-7 cr.

Subtotal: 8-11

Total Year Four: 16-22

Total Credits Required 88

***For all students, the required 38 credits of electives must include:**

--two courses that satisfy the upper-level writing requirement, designated with a LAWW course prefix
--six credits that satisfy the experiential Learning requirement, designated with a LAWE course prefix
--one course that satisfies the Antiracism and Cultural Competency (ARCC) requirement, designated with a LAWA (or LAWWA or LAWEA) prefix.

Students must also complete 20 hours of pre-approved pro bono work.

The curriculum is subject to review and change. Course sequencing may vary.

LAW.PT.EVE.JD - JD (Part-time Evening)

General

College/School
School of Law

Department(s) ~
Law

Program Title ~
JD (Part-time Evening)

Program Code ~
LAW.PT.EVE.JD

Degree Designation ~
JD - Juris Doctor

Academic Level ~
LAWJD - Law JD & MS

Program Short Description

The JD program is structured to prepare you for the practice of law in any American jurisdiction. You will begin with several required courses that form the foundation for more advanced legal studies. Lawyering Skills is a required first-year course that teaches the basic techniques of legal research, writing, and analysis. While students are not required to pursue a concentration, you may choose to do so to focus your studies on a specific practice area. The experiential learning requirement provides opportunities to gain real-world legal experience. All students are required to complete 20 hours of pro bono legal work prior to graduation. Study options include full-time, part-time day, or part-time evening.

Requirements

Free Form Requirements
Juris Doctor Part-Time - Evening

First Year - Fall & Spring

LAW 500	Introduction to Law	1 cr.
LAW 513	Torts	4 cr.
LAW 509	Civil Procedure	4 cr.
LAW 507	Lawyering Skills I	2 cr.
LAW 695	Academic Success	1 cr.
LAW 502	Intro to the Legal Profession	1 cr.
LAW 501 - LAW 503	Constitutional Law or Contracts	4 cr. - 4 cr.
LAW 511 - LAW 505	Property or Criminal Law	4 cr. - 4 cr.
LAW 508	Lawyering Skills II	2 cr.
Subtotal: 23 First Year - Summer		
LAW XXX	Law Electives	0-6 cr.
Subtotal: 0-6 Total Year One: 23-29 cr. **Second Year - Fall & Spring**		
LAW 551	Business Organizations	3 cr.
LAW 553	Evidence	3 cr.
LAW 501 - LAW 503	Constitutional Law or Contracts	4 cr. - 4 cr.
LAW 511 - LAW 505	Property or Criminal Law	4 cr. - 4 cr.
LAW XXX	Law Electives	2-8 cr.
Subtotal: 16-22 **Second Year - Summer**		
LAW XXX	Law Electives	0-6 cr.
Subtotal: 0-6 Total Year Two: 16-28 **Third Year - Fall & Spring**		
LAW 555 - LAW 556	Income Tax or Leg Admin Process	3 cr. - 3 cr.
LAW 575	Professional Responsibility	2 cr.
LAW XXX	Law Electives	11-17 cr.

Subtotal: 16-22 **Third Year - Summer**		
LAW XXX	Law Electives	0-6 cr.
Subtotal: 0-6 Total Year Three: 16-28 **Fourth Year - Fall**		
LAW 599	Advanced Legal Analysis I	4 cr.
LAW XXX	Law Electives	4-7 cr.
Subtotal: 8-11 **Fourth Year - Spring**		
LAW 588	Advanced Legal Analysis II	4 cr.
LAW XXX	Law Electives	4-7 cr.

Subtotal: 8-11

Total Year Four: 16-22

Total Credits Required 88

***For all students, the required 38 credits of electives must include:**

--two courses that satisfy the upper-level writing requirement, designated with a LAWW course prefix
--six credits that satisfy the experiential Learning requirement, designated with a LAWE course prefix
--one course that satisfies the Antiracism and Cultural Competency (ARCC) requirement, designated with a LAWA (or LAWWA or LAWEA) prefix.

Students must also complete 20 hours of pre-approved pro bono work.

The curriculum is subject to review and change. Course sequencing may vary.

LIBST.AA - AA in Liberal Studies

General

College/School
College of Arts & Sciences

Department(s) ~
Arts & Sciences General

Program Title ~
AA in Liberal Studies

Program Code ~
LIBST.AA

Degree Designation ~
AA - Associate of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The AA in Liberal Studies is particularly appropriate for nontraditional students entering or reentering college after a long pause in their formal education. The two-year degree may be designed by the student, with the assistance of an academic advisor, to serve as a career development tool as well as preparation for upper-level study in a four-year degree program.

Requirements

Free Form Requirements
Liberal Studies Major - Associate's Degree

General Information

The Liberal Studies programs are open only to part-time students (no more than 11 credits per semester).

Program Objectives

1. To provide a wide array of courses.
2. To present a well balanced program of courses.
3. To frame (for the associate's degree) a realistic, near-term goal.

4. To allow students to make maximum use of courses taken.

Associate of Arts in Liberal Studies

The Associate of Arts in Liberal Studies is particularly appropriate for nontraditional students who are entering or reentering college after a long pause in their formal education. The two-year degree may be designed by the student, with the assistance of an academic advisor, to serve as a career development tool as well as preparation for upper-level study in a four-year degree program.

Non-business majors can apply no more than 25% of business coursework to their graduation requirements.

Candidates for the Bachelor of Arts in Liberal Studies must meet all general requirements of the University and area requirements of the College of Arts and Sciences.

Associate of Arts in Liberal Studies Requirements

ENGL xxx	Freshman English	6 cr.
WIC XXX	Writing Intensive course	3 cr.
xxx	Humanities	9 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
xxx	Mathematics	3 cr.
xxx	Mathematics or Computer	3 cr.
xxx	Social Sciences	12 cr.
GEN XXX	General Electives	21 cr.

Subtotal: 60

LIBST.BA - BA in Liberal Studies

General

College/School
College of Arts & Sciences

Department(s) ~
Arts & Sciences General

Program Title ~
BA in Liberal Studies

Program Code ~
LIBST.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The BA in Liberal Studies offers a flexible, interdisciplinary degree option that satisfies the interests and needs of students who want to further their formal education while also preparing broadly for graduate study.

Requirements

Free Form Requirements
Liberal Studies Major

General Information

The Liberal Studies programs are open only to part-time students (no more than 11 credits per semester).

Program Objectives

1. To provide a wide array of courses.
2. To present a well balanced program of courses.
3. To frame (for the associate's degree) a realistic, near-term goal.
4. To allow students to make maximum use of courses taken.

Bachelor of Arts in Liberal Studies

The Bachelor of Arts in Liberal Studies satisfies the broad interests of older students who wish to further their formal education without reference to specific career preparation or as preparation for graduate study. Advisors can give more information and guidance on this flexible degree option.

Non-business majors can apply no more than 25% of business coursework to their graduation requirements.

Candidates for the Bachelor of Arts in Liberal Studies must meet all general requirements of the University and area requirements of the College of Arts and Sciences.

Degree Requirements Bachelor of Arts in Liberal Studies

ART XXX	Aesthetic Perspective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
PH XXX	Philosophy Elective	3 cr.
CS XXX	Computer Science	3 cr.
ENGL xxx	Freshman English	6 cr.
WIC XXX	Writing Intensive course	6 cr.
HIST XXX	History	3 cr.
POSC XXX	Political Science/Economics	3 cr.
PSY/SO XXX	Behavioral Science Perspective	3 cr.
xxx	Humanities	18 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
LAB XXX	Laboratory Science	3 cr.
xxx	Mathematics	6 cr.
xxx	Social Sciences	21 cr.
GEN XXX	General Electives	36 cr.

Total Credit Hours: 120

Humanities: 9 credit hours at 300-400 level

Social Sciences: 9 credit hours at 300-400 level

General Electives: 12 credit hours at 300-400 level

MAN.BSBA - BSBA in Management & Leadership

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
BSBA in Management & Leadership

Program Code ~
MAN.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This program emphasizes the knowledge, competencies, and characteristics necessary for effective leadership in meeting organizational objectives and challenges. Students undertake a wide range of academic and experiential learning opportunities to develop the proactive, critical, and creative thinking skills needed for problem-solving, communication, commitment to excellence, and personal integrity that enable them to provide effective management and leadership in work and community settings.

Requirements

Free Form Requirements
Management and Leadership Major

General Information

The Management and Leadership program emphasizes the knowledge, competencies, and characteristics necessary for effective leadership in meeting organizational objectives and challenges. Students undertake a wide range of academic and experiential learning opportunities to develop the proactive, critical, and creative thinking skills needed for problem-solving, communication, commitment to excellence, and personal integrity that enable them to provide effective management and leadership in work and community settings. Certificate opportunities allow students the flexibility to develop and refine their personal business brand.

Career Preparation

In order to help students understand careers available to Management and Leadership majors, faculty in the Department of Management designed activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshmen year Introduction to Business Seminar (BUS110) through guest speakers from local businesses; and discussions about opportunities provided by certificates; freshman are encouraged to join the Management Association and join in its leadership;

2. Career Investigation in the sophomore year courses includes ~~to~~ discussion on career choices in Management and Organizational Behavior (MAN 204/HONB 204);

3. Career Determination in the junior year is accomplished through a required internship, and résumé review and internship search with Career Services and exploration of Management and Leadership, including departmental and non-departmental certificate options and functional coursework options such as BUS 326, BUS 450, HRM 323, and MAN 370; and

4. Career Implementation in the senior year is addressed through internships and participation in the "RealTest" Assessment Exercise. During this daylong event, students demonstrate their management and leadership abilities and are coached by local business people and alumni volunteers.

Majors are encouraged to select and declare one or more Management Department certificates to build on core management and leadership skills. This helps fine-tune your professional identity and brand yourself to meet market demands. Eligible Management certificates include Diversity Management, Socially-Conscious Management, Project Management, HR Fundamentals, and Remote Work Skills.

Students meeting major requirements are further encouraged to consider using elective credits to earn one additional management department certificate or combine work in Management with available certificates from other programs, such as SAP, SAS, or Innovation and Entrepreneurship to further distinguish their unique professional identity and career path.

Career Opportunities

Management and Leadership majors are prepared to embark on a career path with the promise of increasing responsibility in a rapidly changing global environment.

Graduates work in a wide range of organizations and positions that include: manufacturing, corporate business, financial services, small business, hospitality industry, government, and public administration. Many enroll in graduate programs or law school. Our focus is on preparation for career-entry and our successful graduates typically enter businesses and organizations in entry-level professional positions.

Program Learning Goals

Having completed a major in Management and Leadership, the student will have the ability to:

1. Understand and synthesize the basic concepts and theories of management and leadership that serve as a basis for high performance;
2. Apply theories and concepts of management and leadership to develop strategies for improving the performance of people and processes in organizations;
3. Perform well on teams, provide leadership, and contribute and collaborate to achieve team goals;
4. Demonstrate skill and competency in developmental performance feedback; and
5. Apply theories and concepts of management and leadership to develop strategies for dealing with organizational and interpersonal conflict.

For students interested in minoring in Management, see Description of Minors Programs in catalog.

For students interested in pursuing related certificates in Management, Human Resources, or other business discipline, see Description of Certificate Programs in catalog.

All Management and Leadership majors take core people and process courses that compose the Leadership Certificate, but majors still must formally declare that certificate before the last day of the semester preceding graduation to earn that certificate and have it recorded on their official transcript. These are not awarded automatically based on coursework.

Degree Requirements

Required Management and (24 credit hours)

MAN 303	Interpersonal Skills for Leading	3 cr.
MAN 315/SO 315	Organizational Theory	3 cr.
MAN 353	Leadership and Team Skills	3 cr.
MAN 3XX	Management Elective	9 cr.
MAN 466	Senior Seminar in Management and Leadership	3 cr.
MAN 480	Internship in Management	3 cr.

Subtotal: 24

GEN XXX	General Electives	18 cr.

Subtotal: 18

Management electives may include Management & Leadership certificates: Diversity Management, Socially-Conscious Management, Project Management, HR Fundamentals, and Remote Work Skills.

Total Credit Hours: 42

Management and Leadership Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar		3 cr.
BAIM 102	Problem Solving with Business Tools		3 cr.
MATH 111	Analysis for Business and Economics		3 cr.
Or			
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.	
ENGL 132	English Composition I	3 cr.	
EC 111	Principles of Microeconomics	3 cr.	

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101	Introduction to Sociology	3 cr.
OR		
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 101/HONB 203	Financial Reporting I	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM ~~BIS~~ 221	Statistics for Business Analytics	3 cr.
PH 211/MAN 240/ HONB 240	Business Ethics	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326	Business Planning for New Ventures	3 cr.
	or	
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
MAN 303	Interpersonal Skills for Leading	3 cr.
MAN 480	Internship in Management	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.

Subtotal: 15

Junior Year - Spring Semester

BL 308	Labor Management Relations	3 cr.
HRM 323	Human Resource Management	3 cr.
MAN 370	Project Management	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BL 424	Business Law for Human Resource Management	3 cr.
BAIM 310	Quality and Operations Management	3 cr.
	or	
BAIM 312	Quality and Operations Management with SAP	3 cr.
MAN 3XX/4XX	Upper Level Management Elective	3 cr.
GEN XXX	General Elective	6 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

BUS 450/HONB 450	Business Strategy	3 cr.
MAN 466	Senior Seminar in Management and Leadership	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.0 minimum average in the major are as follows: MAN 303, all upper level MAN courses, BL 308, BL 424, HRM 323, and BUS 450.

Management & Leadership majors may not take the Management Minor or Leadership Certificate.

MATHS.BS - BS in Mathematical Sciences

General

College/School
College of Arts & Sciences

Department(s) ~
Mathematical Sciences

Program Title ~
BS in Mathematical Sciences

Program Code ~
MATHS.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

This degree exposes students to the beauty and rigor of mathematics, teaching them to solve problems, both concrete and abstract, by using critical thinking, mathematical modeling, imagination, and careful logic. The skills developed prepare students for jobs in business, industry, government, and education, as well as for graduate study.

Requirements

Free Form Requirements
Mathematical Sciences Major

General Information

The primary goals of the Mathematical Sciences curriculum are to offer general training in mathematical reasoning and to develop mastery of mathematical tools needed for a lifelong series of different jobs and continuing education. Much emphasis is placed on the theory of problem-solving and nurturing such abilities as intuition, inductive and deductive reasoning, and model building.

The student is also made aware of the power and elegance of mathematical truth through careful analysis of axiomatic systems and mathematical theories. Throughout the undergraduate program students are encouraged to formulate their own problems and conjectures, thus challenging their own ability to cope with the mathematical literature.

In fostering these goals the Mathematical Sciences curriculum provides grounding in the traditional areas of theoretical mathematics. It also allows student the flexibility of choosing elective courses based on future career or graduate school goals.

In the senior year, students work individually with a faculty member on their self-selected senior project, which culminates in a research paper and a presentation, usually at the Hudson River Undergraduate Mathematics Conference. For interested students, there can be the opportunity to do research with a faculty member before senior year.

The programs lead to a Bachelor of Science in the Mathematical Sciences, including if pursuing the teacher preparation-secondary school major, or a Bachelor of Arts in Mathematics, if pursuing the teacher preparation-elementary major. The programs have been patterned to follow the recommendations of the Committee on Undergraduate Programming in Mathematics of the Mathematical Association of America.

Program Objectives

The Mathematical Sciences curriculum provides instruction and support for students in achieving the following objectives. It is our purpose that our students:

1. Correctly apply inductive and deductive reasoning skills.
2. Demonstrate the ability to compose a mathematical proof using formal mathematical language.
3. Demonstrate successful application of mathematical computations and algorithms.
4. Demonstrate success in learning mathematical concepts independently.
5. Effectively communicate mathematics in written form.
6. Effectively communicate mathematics in oral form.
7. Use technology to solve mathematical problems.
8. Use technology to communicate mathematics effectively.

Career Opportunities

Graduates in mathematics develop the type of creative thinking and problem-solving abilities required of professional mathematicians. As a consequence, they are well prepared to complete advanced study or pursue a wide variety of employment opportunities in industry, commerce, or the public sector. Graduates have secured positions in the areas of actuarial science, finance, operations research, computer programming, statistics, systems analysis, software engineering, and teaching. Others have received fellowships to pursue graduate study in mathematics or related areas.

Degree Requirements

Required mathematics and other courses (36 - 37 credit hours)

for the Bachelor of Science degree in the Mathematical Sciences:

CS 170	Technology in Mathematics	3 cr.
CS 171	Programming for Mathematics	4 cr.
MATH 121	Introductory Probability & Statistics I	3 cr.
MATH 127 - MATH 133	Calculus I with Pre-Calculus Review or Calculus I	5 cr. - 4 cr.
MATH 134	Calculus II	4 cr.
MATH 235	Calculus III	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.
MATH 306	Linear Algebra	3 cr.
MATH 418	Introduction to Modern Algebra	3 cr.
MATH 421	Real Analysis	3 cr.
MATH 451	Senior Project I	1 cr.
MATH 452	Senior Project II	2 cr.

Subtotal: 36-37

In addition, the student must take 12 credit hours (four courses) of mathematics electives selected from 300- and 400-level MATH courses.

Teacher Preparation-Secondary School

If pursuing the Teacher Preparation-Secondary School major, 12 additional credit hours as follows:

MATH XXX	Math Elective	3 cr.
MATH 371	Modern Aspects of Geometry	3 cr.
MATH 375	Creative Problem Solving	3 cr.
MATH 377	Elementary Number Theory	3 cr.

Subtotal: 12

Teacher Preparation - Elementary School (41 credits)

Required mathematics and other courses for the Bachelor of Arts degree in Mathematical Sciences.

CS 170	Technology in Mathematics	3 cr.
MATH 107	Mathematics For Elementary Education I	3 cr.
MATH 108	Mathematics for Elementary Education II	3 cr.
MATH 121	Introductory Probability & Statistics I	3 cr.
MATH 133	Calculus I	4 cr.
MATH 134	Calculus II	4 cr.
MATH 235	Calculus III	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.
MATH 306	Linear Algebra	3 cr.
MATH 371	Modern Aspects of Geometry	3 cr.
MATH 377	Elementary Number Theory	3 cr.
MATH 451	Senior Project I	1 cr.
MATH 452	Senior Project II	2 cr.

Subtotal: 38

Note: Concurrent completion of the Elementary Education major, which yields a Bachelor of Arts Degree in Elementary Education, is required for the Teacher Preparation - Elementary School major.

For the Mathematical Sciences major, including if pursuing the Teacher Preparation-Secondary School option, taking PH 204 Symbolic Logic in the spring semester of the freshman year is recommended as good preparation for MATH 281. In addition, for those pursuing the Teacher Preparation-Secondary School option, taking MATH 302 MTEL Prep in the fall semester of the sophomore year is recommended as good preparation for taking the MTEL exam.

Bachelor of Science in the Mathematical Sciences Suggested Sequence of Courses

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
MATH 127 - MATH 133	Calculus I with Pre-Calculus Review or Calculus I	5 cr. - 4 cr.
LA 100	First Year Seminar	2 cr.
GUR xxx	General University Requirement	3 cr.
GUR xxx	General University Requirement	3 cr.

Subtotal: 15-16

Freshman Year - Spring Semester

CS 170	Technology in Mathematics	3 cr.
ENGL 133	English Composition II	3 cr.
MATH 121	Introductory Probability & Statistics I	3 cr.
MATH 134	Calculus II	4 cr.
GUR xxx	General University Requirement	3 cr.

Subtotal: 16

Sophomore Year - Fall Semester

MATH 281	Foundations of Mathematics I	3 cr.
MATH 235	Calculus III	3 cr.
GUR xxx	General University Requirement	3 cr.
GUR xxx	General University Requirement	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

MATH 306	Linear Algebra	3 cr.
CS 171	Programming for Mathematics	4 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Junior Year - Fall Semester

MATH 418	Introduction to Modern Algebra	3 cr.
MATH 3xx-4xx	Mathematics Elective	3 cr.
GUR xxx	General University Requirement	3 cr.
GUR xxx	General University Requirement	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

MATH 421	Real Analysis	3 cr.
MATH 3xx-4xx	Mathematics Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

MATH 451	Senior Project I	1 cr.
MATH 3xx-4xx	Mathematics Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	1 cr.

Subtotal: 14

Senior Year - Spring Semester

MATH 452	Senior Project II	2 cr.
MATH 3xx-4xx	Mathematics Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 14

Total Minimum Credit Hours: 120

Note: The order of the General University Requirement courses can be altered (ARTS, CUL, HIST, LAB, LAB/NSP, PH, SBP).

MATHT.MA - MA in Mathematics for Teachers

General

College/School
College of Arts & Sciences

Department(s) ~
Mathematical Sciences

Program Title ~
MA in Mathematics for Teachers

Program Code ~
MATHT.MA

Degree Designation ~
MA - Master of Arts

Academic Level ~
GR - Graduate

Program Short Description

In contrast to a traditional master's degree in either education or mathematics, the Master of Arts in Mathematics for Teachers is a practically focused graduate mathematics program designed for in-service teachers. With a dedicated faculty, wide array of course offerings, and convenient schedule, in this part-time online program you'll gain mathematical insights that will directly benefit your students at all levels.

Requirements

Free Form Requirements
Master of Arts in Mathematics for Teachers

Purpose

The Master of Arts in Mathematics for Teachers degree program is designed primarily for middle school and secondary school teachers who have an initial license and need a master's degree for final professional licensure, who want Professional Development Points, or who are interested in continuing their study of mathematics. Mathematics majors who have graduated from college but who have not completed the requirements necessary for initial licensure, current teachers who do not have an initial license, and professionals who have decided on a career change may also be interested in the program (in order to become qualified teachers, in addition to establishing Mathematics competencies, these students, on their own, must take certification tests, fulfill state requirements, and complete a practicum). The program is designed to be inspiring, engaging, and challenging.

The broad challenge of mathematics education at all levels is to actively engage students in mathematical thinking. Mathematics education must have immediacy and relevance to attain this goal. Excellent teaching of mathematics occurs when the teacher has a broad-based, in-depth understanding of content coupled with an understanding of how pedagogy and technology can significantly enhance learning environments. This program is structured so that the scholar-teachers will be active participants in a learning process committed to content, pedagogy, and technology.

Program Objectives

The program provides instruction and support for scholar-teachers in achieving the following objectives. It is our purpose that our students:

1. Learn mathematical habits of mind
    a. Correctly apply inductive and deductive reasoning skills.
    b. Demonstrate correct use of formal mathematical language and ability to compose a mathematical proof.
    c. Demonstrate the ability to successfully apply mathematical computations and algorithms.
    d. Understand the connections between different branches of mathematics, as well as between mathematics and other disciplines.
2. Demonstrate fluency in mathematical communication/link content knowledge to classroom experience.
    a. Write about mathematics correctly and in a clear manner.
    b. Develop proficiency in introducing advanced mathematical concepts to the classroom.

3. Use technology relevant to mathematics.
    a. Use relevant and current technology to aid the understanding of new mathematical concepts and to solve difficult problems.
    b. Interpret and communicate correctly the results from the technology.

Structure

The program is a part-time online graduate program with courses offered synchronously during the fall 11-week term, the spring 15-week semester, and summer 8- or 12-week session. One or two mathematics courses are typically offered each term or semester, running two days a week, in the late afternoon or early evening, at hours convenient for the expected teacher audience. Free online tools, like shared whiteboards and mathematical web apps, are provided to allow for an interactive online class experience in real time. Both online and in-person office hours are held and accessible Zoom links provided for online classroom spaces for students to congregate and study during non-class hours.

The courses will be sequenced to run every three years, so that it would be possible to complete all degree requirements in about 2 1/2 years. The degree requires the completion of 10 courses. The program also allows students to commit to a longer period of stay to complete the degree and allows students to enroll in courses without an interest in obtaining the degree if they so desire. Upon admission into the program, the student will be assigned a faculty advisor who will work closely with the student in identifying a curriculum that best suits the objectives and needs of the student.

Requirements

The program requires 10 courses (30 credit hours), at least five of which must be core mathematics courses and at most five of which can be non-core mathematics courses. Students will be required to have an overall GPA of 3.00 or higher to become a degree candidate.

Degree Requirements

Core Mathematics:

At least five, must be core mathematical courses:

MAMT 550	Discrete Mathematics	3 cr.
MAMT 552	Geometry Revisited	3 cr.
MAMT 554	Number Theory	3 cr.
MAMT 556	Graph Theory	3 cr.
MAMT 561	Probability	3 cr.
MAMT 564	Analysis	3 cr.
MAMT 566	Algebraic Structures	3 cr.
MAMT 568	Mathematical Modeling	3 cr.
MAMT 570	The Mathematics of Symmetry	3 cr.
MAMT 574	Origami in Math and Education	3 cr.
MAMT 590-593	Special Topics in Mathematics (if designated as core)	1-3 cr.

Subtotal: 15

Non-Core Mathematics:

At most five, can be non-core mathematical courses:

MAMT 540	Calculus Revisited: Theory and Applications	3 cr.
MAMT 542	History of Mathematics	3 cr.
MAMT 543	Linear Algebra	3 cr.
MAMT 544	Creative Problem Solving in Mathematics	3 cr.
MAMT 545	Cryptology	3 cr.
MAMT 546	Chance	3 cr.
MAMT 547	Statistics	3 cr.
MAMT 548	What is Mathematics?	3 cr.
MAMT 590-593	Special Topics in Mathematics (if designated as non-core)	1-3 cr.

Subtotal: 15

Total Credit Hours: 30

MBA.GENBU.MBA - MBA in General Business

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
MBA in General Business

Program Code ~
MBA.GENBU.MBA

Degree Designation ~
MBA - Master of Business Admin

Academic Level ~
GR - Graduate

Program Short Description

The MBA program is designed to develop and enhance the skills of those who hold or aspire to hold management responsibilities within organizations. Students attain a theoretical understanding and demonstrate a practical grasp of the management skills required to effectively negotiate a turbulent business environment.

Requirements

Free Form Requirements
Master of Business Administration

Managers today have to operate in a rapidly changing and uncertain environment, ready for any situation, good or bad, that requires skilled decision-making. Anticipating and responding to these changes in positive ways is what will distinguish the successful manager.

Program Learning Goals

The Master of Business Administration (MBA) program is designed to develop and enhance the skills of those who hold or aspire to hold management responsibilities within organizations. Students attain a theoretical understanding and demonstrate a practical grasp of the management skills required to effectively negotiate a turbulent business environment. Knowledge and skills will be developed through theoretical study and experiential activities. Upon completion, successful students in the MBA program will be able to exhibit their knowledge of business and management in a global and multicultural context in the following ways:

Strategic: Apply a strategic mindset in managing the long-term value of the organization.

Entrepreneurial: Apply an entrepreneurial and sustainable mindset to a diverse global context.

Leadership: Apply a leadership mindset to organizational challenges and opportunities.

Analytics & Systems: Apply an analytics & systems mindset to managing the complexity of the organization and its stakeholders

Admissions Standard

As an AACSB International accredited institution, the College of Business requires all applicants to satisfy specific core business knowledge requirements within six months of entry into the graduate business programs. This core knowledge includes an introductory understanding of accounting, finance, and quantitative methods. Additionally, coursework in the MBA program requires a moderate level of proficiency in computer skills, including the use of Microsoft Office (specifically Word and PowerPoint) and the internet. Of particular importance is an above average knowledge of Excel software skills. Applicants must demonstrate competency in each of the areas mentioned above in one of the following ways:

- Completion of an undergraduate business degree (typically a 'B' 3.0 or better average with no grade below a 'C') in relevant core coursework.
- Completion of relevant undergraduate coursework in the following areas with acceptable performance (typically a 'B' 3.0 or better average with no grade below a 'C').
- Accounting: Financial Reporting
- Finance: Introduction to Corporate Finance
- Quantitative Methods: Introduction to Statistics
- Completion of the Prerequisite Self Study modules available at Western New England University. Applicants may elect to complete self study modules that provide the necessary background to maximize the student's graduate business education experience. The self study modules are designed to be accessed online, with no required classroom involvement. These modules provide students with access to the prerequisite content material, problem sets for practice, and diagnostic self assessments. Those electing to complete the self study modules will need to validate their learning by successfully passing a final test administered through the modules (notifying the College of Business to confirm exemption from prerequisite).
- Applicants may enroll in the self study modules at any time during the year. The modules are self-paced.

MBA Program Structure

The MBA degree, earned after 36 credit hours of study, comprises core and elective coursework. Each area of coursework requires the following:

Core requirements: 27 credit hours

Elective requirements: 9 credit hours

Students who meet the admission standards for entry into the MBA program but have not completed the core knowledge requirement will be admitted under Tentative Status. Applicants to the MBA program who are in the process of completing the admission process may take two graduate business courses and work on satisfying the core knowledge requirement concurrently. If core knowledge requirements are not completed, students may not continue to take any additional 600 level courses (beyond two) until the requirements have been completed.

There is an option for students currently enrolled, or accepted to, the Western New England University School of Law to complete both the Juris Doctorate and the MBA in a unique combined degree program. Interested students should contact the School of Law Admissions Office and the College of Business Associate Dean's Office for specific information. There is also an option for students currently enrolled in the Western New England University College of Pharmacy and Health Sciences to complete both the PharmD and the MBA. Students enrolled in Western New England University College of Engineering Master of Science in Engineering Management (MSEM) can complete both the MSEM and the MBA.

Degree Requirements

Core Course Requirements 27 credit hours

MAN 605	Leadership, Problem Solving and Decision Making	3 cr.
BUS 610/MAN 611	Business and Its Environment	3 cr.
AC 630	Accounting for Decision Makers	3 cr.
FIN 630	Managerial Finance	3 cr.
BAIM 610	Information Technology Management and Applications	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
BAIM 620	Decision Modeling for Analytics	3 cr.
MK 640	Marketing Management	3 cr.
BUS 680	Strategic Management	3 cr.

Subtotal: 27

Elective Course Requirements 9 credit hours

GEN 6XX	Elective	9 cr.

Subtotal: 9

Total Credit Hours: 36

The final course in the program is designed to integrate the knowledge learned in the core coursework to enhance student understanding of management practice.

Students may choose to take elective courses based on their individual interests and professional needs. Throughout the program, students will be provided with a variety of elective course offerings in accounting, business information systems, finance, general business, management, and marketing. Elective courses can be taken at any time during the program. It is best, however, for students to plan on taking electives later in their MBA study after completing the majority of their foundation coursework

MBA.MBAAC.MBA - MBA in Program Accounting Conc

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
MBA in Program Accounting Conc

Program Code ~
MBA.MBAAC.MBA

Degree Designation ~
MBA - Master of Business Admin

Academic Level ~
GR - Graduate

Program Short Description

Students with a background in Accounting can enhance their MBA by learning about relevant current issues and theoretical perspectives or develop their knowledge in areas such as taxation or fraud and legal issues.

Requirements

Free Form Requirements
Master of Business Administration (MBA) Program Accounting Concentration

Purpose

For interested students, a concentration in Accounting is available in the MBA program. Students with a background in Accounting can enhance their MBA by learning about relevant current issues and theoretical perspectives or develop their knowledge in areas such as taxation ~~or fraud~~ and legal issues. Students without a background in Accounting can enhance their MBA by gaining a deeper understanding of financial statements and an introductory understanding of relevant accounting issues in law, nonprofit accounting, or fraud. In addition to the MBA program learning goals, this concentration has the following learning goals:

- Demonstrate the ability to analyze reported financial performance and the impact of managerial choices on performance.
- Demonstrate the ability to understand and apply various other accounting concepts and areas, depending upon elective coursework chosen.

Structure

The concentration consists of three courses.

Degree Requirements

MBA Core courses 27 credit hours

MAN 605	Leadership, Problem Solving and Decision Making	3 cr.
BUS 610/MAN 611	Business and Its Environment	3 cr.
AC 630	Accounting for Decision Makers	3 cr.
FIN 630	Managerial Finance	3 cr.
BAIM 610	Information Technology Management and Applications	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
BAIM 620	Decision Modeling for Analytics	3 cr.
MK 640	Marketing Management	3 cr.
BUS 680	Strategic Management	3 cr.

Subtotal: 27

Required Concentration Courses 9 credit hours (Undergraduate Degree Accounting recommended*)

AC/FIN 6XX	Elective*	9 cr.

Subtotal: 9

Total Credit Hours: 36

*Recommended students with undergraduate degree in Accounting replace AC 630 with AC 6xx.

MBA.MBABL.MBA - MBA in Business Law Conc

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
MBA in Business Law Conc

Program Code ~
MBA.MBABL.MBA

Degree Designation ~
MBA - Master of Business Admin

Academic Level ~
GR - Graduate

Program Short Description

Students in this program will enhance their MBA with business law courses that provide a solid foundation for careers or advanced study in business law. Students will develop a legal perspective for understanding business challenges and solutions in a changing global legal landscape.

Requirements

Free Form Requirements
Master of Business Administration (MBA) Business Law Concentration

Purpose

For interested students, a concentration in Business Law is available in the MBA program. Students with an interest in Business Law can enhance their MBA by learning about relevant current legal issues and theoretical perspectives or develop their knowledge by exposure to a wide range of corporate and commercial topics. In addition to the MBA program learning goals, this concentration has the following learning goal:

- Demonstrate a working knowledge of legal subjects affecting business.

Degree Requirements

MBA Core courses 27 credit hours

MAN 605	Leadership, Problem Solving and Decision Making	3 cr.
BUS 610/MAN 611	Business and Its Environment	3 cr.
AC 630	Accounting for Decision Makers	3 cr.
FIN 630	Managerial Finance	3 cr.
BAIM 610	Information Technology Management and Applications	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
BAIM 620	Decision Modeling for Analytics	3 cr.
MK 640	Marketing Management	3 cr.
BUS 680	Strategic Management	3 cr.

Subtotal: 27

Required Concentration Courses 9 credit hours (Undergraduate Degree Accounting recommended*)

LAWM 500	Intro to the Law	1 cr.
LAWM 503	Contracts	4 cr.
LAWM 507	Lawyering Skills I	2 cr.
LAW XXX	Law Elec*	2 cr.

Subtotal: 9

Total Credit Hours: 36

*Options for Additional Electives:

Any additional courses from those listed with the Transactional Law Practice Concentration.

MBA.MBAL.MBA - MBA in Program Leadership Conc

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
MBA in Program Leadership Conc

Program Code ~
MBA.MBAL.MBA

Degree Designation ~
MBA - Master of Business Admin

Academic Level ~
GR - Graduate

Program Short Description

Students with an interest in Leadership can enhance their MBA by learning about relevant current issues and theoretical perspectives or develop their knowledge in areas such as leading change and ethical leadership.

Requirements

Free Form Requirements
Master of Business Administration (MBA) Program Leadership Concentration

Purpose

For interested students, a concentration in Leadership is available in the MBA program. Students with an interest in Leadership can enhance their MBA by learning about relevant current issues and theoretical perspectives or develop their knowledge in areas such as leading change and ethical leadership. In addition to the MBA program learning goals, this concentration has the following learning goal:

- Demonstrate a working knowledge of leadership theory and current leadership best practices.

A student who completes an MBA with a Leadership Concentration may not also obtain a Leadership Certificate.

Degree Requirements

MBA Core courses 27 credit hours

MAN 605	Leadership, Problem Solving and Decision Making	3 cr.
BUS 610/MAN 611	Business and Its Environment	3 cr.
AC 630	Accounting for Decision Makers	3 cr.
FIN 630	Managerial Finance	3 cr.
BAIM 610	Information Technology Management and Applications	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
BAIM 620	Decision Modeling for Analytics	3 cr.
MK 640	Marketing Management	3 cr.
BUS 680	Strategic Management	3 cr.

Subtotal: 27

Required Concentration Courses 9 credit hours (Undergraduate Degree Accounting recommended*)

MAN 6XX	Elective	9 cr.

Subtotal: 9

Total Credit Hours: 36

*Recommended students with undergraduate degree in Accounting replace AC 630 with AC 6xx.

Options for Electives

MAN 600	Foundations of Leadership Practice	3 cr.
MAN 630	Leadership and the Human Experience	3 cr.
MAN 642	Leading Change	3 cr.
MAN 651	Ethical Leadership Practice	3 cr.
MAN 652	Contemporary Issues in Leadership	3 cr.

ME.BSE - BSE in Mechanical Engineering

General

College/School
College of Engineering

Department(s) ~
Mechanical Engineering

Program Title ~
BSE in Mechanical Engineering

Program Code ~
ME.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

You'll study the design and creation of everything that moves as a Mechanical Engineering major. Whether you are interested in aerospace, transportation, or robotics, you'll be prepared to develop tomorrow's technology.

Requirements

Free Form Requirements
Mechanical Engineering Major

General Information

Mechanical engineering is one of the broadest and most diverse of the engineering disciplines and affects all aspects of our lives. It involves the application of science and technology essential to industry, government, environment, and society. Mechanical engineers design, analyze, build, test, and control mechanical devices and systems. They are involved in the design and development of automobiles, airplanes, satellites, robots, power plants, machine tools, material handling systems, medical devices and instrumentation, communications equipment, semiconductor devices, heating and air-conditioning systems, consumer products, and alternative energy systems. Mechanical engineers contribute on interdisciplinary teams to work in emerging areas such as advanced manufacturing processes, mechatronics, nanotechnology and green engineering technology. Mechanical engineering is generally recognized as the engineering discipline that offers the broadest choice of technical career directions.

The Mechanical Engineering curriculum provides a thorough background in thermal and mechanical systems and mechanical design. By selecting an appropriate group of technical and design electives, a student can concentrate in either thermal and fluid science or mechanical design. Thermal and fluid science electives include courses related to energy conversion, aerodynamics, introduction to flight, and turbomachinery design. Mechanical design electives include courses in stress analysis and computer-aided design, material selection, and metrology. The coursework is coupled with extensive practical hands-on experience in modern well-equipped laboratories. The use of computers to aid in engineering analysis and design is emphasized throughout the curriculum.

Students can choose to study either the broad areas of thermal-fluid sciences or mechanical design or select Mechatronics Engineering Concentration that is a blend of mechanical and electrical engineering. A Green Engineering Sequence of elective courses is also available with courses in renewable energy, alternative energy systems, and green engineering.

The BSE in Mechanical Engineering program is accredited by the Engineering Accreditation Commission(s) of ABET, https://www.abet.org, under the General Criteria and the Program Criteria for Mechanical and Similarly Named Engineering Programs.

Career Opportunities

Mechanical engineers are employed in all types of industry and government. They work in research, product development, product design, manufacturing, consulting, and sales. Our graduates are employed at Allston Power, UTC Aerospace Systems, Disney, Goodrich, Northrup Grumman, Pratt and Whitney, United Technologies Research Center, General Dynamics, Boeing, Lockheed-Martin, Otis, Carrier, Hasbro-Bradley, General Motors, NASA, Electric Boat, Andersen Consulting, General Electric, Smith and Wesson, American Saw, Northeast Utilities, Rolls Royce, Areva, Gerber Scientific Research, Spalding Sports Worldwide, Sikorsky, Westinghouse, BAE systems, and many others. Mechanical Engineering graduates have also become physicians and patent attorneys. Mechanical engineers occupy executive positions in many large corporations and others have gone on to become entrepreneurs and founded their own companies.

Design Experience

Students are introduced to engineering design in the freshman year; sophomore, junior, and senior courses provide progressively more sophisticated design experiences within the student's discipline. All programs are culminated by a capstone Senior Design Project course in which a student works on an independent or integrated project under the supervision of a faculty advisor. Integrated projects reflect modern industrial practices, where students work on independent portions of a project which are then integrated to arrive at an overall project solution. Many projects involve a collaboration with an industry partner, and a student who selects one of these topics has the opportunity to work with the industrial sponsor in an actual engineering experience.

Electives

Electives supplement the engineering student's technical program. These electives must be selected in such a way that all General Education "perspective of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. The student's departmental faculty advisor must approve the selection of electives from engineering, mathematics, science, or business.

Mission

The mission of the Department of Mechanical Engineering is to educate, prepare, inspire, and mentor students to excel as professionals and to grow throughout their careers in the art, science and responsibilities of engineering. This is accomplished by:

• Providing the facilities and environment conducive to a high-quality education, well grounding the students in the fundamental principles of engineering, and preparing them for diverse careers;
• Engaging in academic and scholarly activities, which strengthen the major's regional, national, and international reputation.

Vision

The vision of the Department of Mechanical Engineering is to be regionally, nationally, and internationally recognized in providing mechanical engineering education, leading to well qualified engineers who are innovative, immediate contributors to their profession, and successful in advanced studies.

Educational Objectives

The objectives of the Mechanical Engineering Program are to produce graduates whose careers and professional behavior several years after graduation are marked by:

- A commitment to continuing education and technical competency in solving engineering problems, consistent with the ethics of the profession, and serving the needs of local, national, and multinational communities and enterprises.

- Advancement in their professional careers, including the attainment of increased technical or managerial capabilities.
- Continual improvement in effective technical and non-technical communication and teamwork.

Student Outcomes

1. Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

   1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
   2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
   3. An ability to communicate effectively with a range of audiences
   4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
   5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
   6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
   7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Degree Requirements

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

CHEM 105	General Chemistry I	4 cr.
EE 205/HONE 205	Electrical Engineering I	4 cr.
MATH 236	Differential Equations	3 cr.
ME 202/HONE 202	Statics	3 cr.
SBP XXX	Social/Behavioral Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

IE 212	Probability and Statistics	3 cr.
MATH 235	Calculus III	3 cr.
ME 203	Dynamics	3 cr.
ME 205	Measurement Computing	2 cr.
ME 208	Mechanics of Materials	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 17

Junior Year - Fall Semester

MATH 350	Vector Calculus and Fourier Series	3 cr.
ME 303	Thermodynamics I	3 cr.
ME 309	Materials Science	3 cr.
ME 311	Mechatronics	3 cr.
ME 313	Mechanical Laboratory I	2 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 17

Junior Year - Spring Semester

ME 304	Thermodynamics II	3 cr.
ME 314	Mechanical Laboratory II	2 cr.
ME 316	Fluid Mechanics	3 cr.
ME 320	Mechanical Vibrations	3 cr.
xxx	Engineering/Science Elective	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Senior Year - Fall Semester

ME 417	Heat Transfer	3 cr.
ME 425	Design of Machine Elements	3 cr.
ME 423/BME 423/BUS 423	Product Development and Innovation	3 cr.
ME 439	Professional Awareness	1 cr.
ME 449	Computer-Aided Engineering	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Senior Year - Spring Semester

IE 312	Engineering Economic Analysis	3 cr.
ME 440	Senior Design Projects	3 cr.
xxx	Design Elective	3 cr.
xxx	Engineering Elective	3 cr.

Subtotal: 12

Total Credit Hours: 128

1. General Education courses must be selected in such a way to insure that all "perspectives of understanding" requirements have been satisfied.

2. An engineering, math, or science course usually numbered 300 or above selected from a list published by the Mechanical Engineering Department and approved by the faculty advisor.

3. A design elective is selected from a list published in each semester's course schedule.

4. An engineering course usually numbered 300 or above and approved by the faculty advisor.

5. General Elective selected on approval of the academic advisor.

The 2.000 required minimum grade point average in the major is based upon all ME major courses pursued in the student's degree program.

Green Engineering Sequence Courses

As the growth of the world's populations and economies puts an ever-increasing strain on the social and physical environment, today's engineers are faced with developing solutions that use renewable energy sources, reduce waste energy, minimize the impact on the environment, reduce poverty in the world, and provide prosperity for all.

In the junior year, a student may choose electives in the general mechanical engineering course of study, or specialize with electives in Green Engineering.

Green elective courses are designed to satisfy the need for mechanical engineers with a knowledge of (1) renewable energy sources such as wind, water, solar, and geothermal energy, (2) power generation, distribution, and management, (3) energy management, and (4) principles of green engineering.

Green Courses

In the Junior and Senior years, there are green engineering courses that can be selected to satisfy mechanical engineering program elective requirements, as well as, a required mechanical engineering project based course in which a green engineering component can be included.

Junior Year-Senior Year

ME 318	Design of Solar Energy Systems	3 cr.
ME 415	Wind/Water Turbine Fundamentals	3 cr.
ME 423/BME 423/BUS 423	Product Development and Innovation	3 cr.
ME 440	Senior Design Projects	3 cr.
ME 445	Design of Alternative Energy Systems	3 cr.
EE 336	Electrical Energy Systems	3 cr.
EE 338	Electric Drives	3 cr.

ME.MSE - MSE in Mechanical Engineering

General

College/School
College of Engineering

Department(s) ~
Mechanical Engineering

Program Title ~
MSE in Mechanical Engineering

Program Code ~
ME.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

As new technologies in sustainability and production become increasingly critical to the free market, the MS in Mechanical Engineering will help you stay ahead of the curve in both technological knowledge and developmental expertise.

Requirements

Free Form Requirements
Master of Science in Engineering in Mechanical Engineering

Degree Requirements

Core Courses

EMGT 605	Engineering Management	3 cr.
	or	
EMGT 648	Project Management	3 cr.
6XX	ME course	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 650/IE 650	Systems Integration	3 cr.

Subtotal: 12 cr.

Non-Thesis Option—Minimum Curriculum Requirements

ME 6XX	ME Elective	15 cr.
ME 5XX	ME Elective	3 cr. (max)

Subtotal 18 cr.

Thesis Option—Minimum Curriculum Requirements

ME 6XX	ME Elective	9 cr.
ME 5XX	ME Elective	3 cr. (max)
ME 698/699	Thesis	6 cr.

Subtotal: 18 cr.

Project Option—Minimum Curriculum Requirements

ME 6XX	ME Elective	12 cr.
ME 5XX	ME Elective	3 cr. (max)
ME 685	Mechanical Engineering Project	3 cr.

Subtotal: 18 cr.

Total Credit Hours: 30

**Graduate ME courses can be selected in such a way to expand a student's technical knowledge in keeping with their interest and professional needs. Students are required to meet with their advisor to develop a plan of study.*

ME.PHD - PhD in Mechanical Engineering

General

College/School
College of Engineering

Department(s) ~
Mechanical Engineering

Program Title ~
PhD in Mechanical Engineering

Program Code ~
ME.PHD

Degree Designation ~
PHD - Doctor of Philosophy

Academic Level ~
GR - Graduate

Program Short Description

The PhD in Mechanical Engineering prepares students to be successful teachers, researchers and practitioners in mechanical engineering and technology.

Requirements

Free Form Requirements
Doctoral Program in Mechanical Engineering

General Information

Mechanical engineering is an essential discipline needed to allow all of us to work and live smarter: automating functions to enhance productivity and performance, harnessing energy sources, developing novel materials, discovering new applications in science and medicine, and designing methods, systems, and manufacturing techniques to improve our world. The National Science Foundation and Academy of Engineering have projected significant shortages of scientists and engineers by the early

2020s. With a PhD in Mechanical Engineering from WNE, you can fill that important talent gap and contribute to the body of knowledge in the field of mechanical engineering as you conduct research in your individual area of interest leading to your dissertation. The PhD research experience and curriculum can be pursued after having received either the MS or the BS degrees.

Program Goals and Objectives

The goal of the program is to prepare graduates with the appropriate technical depth and breadth of knowledge so that they may be successful educators, researchers, and practitioners in the analysis and improvement of complex human technological systems. Earning a PhD in Mechanical Engineering from WNE gives you the opportunity to advance in your career through undertaking signature work at the threshold of emerging technologies and in pursuit of a deeper understanding of a complex world. At the outset of your work and study you will select an advisor from the faculty. You will have access to state-of-the art laboratories and academic resources. Studying at Western New England University, ranked among Best Undergraduate Engineering Programs by *US News & World Report*, also offers exciting opportunities to develop your own mentorship and teaching skills as a graduate teaching fellow working with undergraduates on their own research and design initiatives such as the WNE's SAE Baja Project or ASME Design Project.

The program emphasizes the acquisition of advanced knowledge and the fostering of individual experience and intellectual exploration needed for careers in technical leadership. The goal of the program is to prepare graduates with appropriate technical depth and breadth of knowledge and experience to become researchers, engineering practitioners and technology leaders.

It is the philosophy of the program to graduate students who have the ability to create, evaluate, improve, design, and manage complex mechanical and technological systems. The systems include solid mechanics, heat transfer, thermo-fluids and energy, materials science, mechanical design and manufacturing, and mechatronics and robotics. Additionally, students will demonstrate the ability, through dissertation research, to contribute to the body of knowledge in the field of Mechanical Engineering.

Admission Requirements

Admissions for the PhD in Mechanical Engineering are rolling and entry points into the program occur in the Fall, Spring, and Summer semesters. Candidates for the PhD in Mechanical Engineering should possess a master's or bachelor's degree in Mechanical Engineering or closely related discipline. Students seeking admissions to the PhD program will have an undergraduate academic record that demonstrates outstanding performance. A GRE score from the last five years, with a combined verbal and quantitative score of at least a 300 with a quantitative score in at least the top 40th percentile will be required for consideration. Candidates whose primary language is not English will be required to demonstrate proficiency in English.

Test of English as a Foreign Language (TOEFL) scores at a minimum of 80 or higher on the internet-based test with a 19 or higher in the speaking section. (An acceptable alternative to the TOEFL is the International English Language Testing System (IELTS) test, on which you must achieve a minimum composite score of 6.5.)

How is the Degree Offered?

The PhD degree is a research based degree. Typically, a degree requires 30 or more course hours beyond the MS degree. There is a core course requirement of 15 credit hours and a minimum of 27 research/dissertation credit hours. Course requirements are established solely by the doctoral committee. You must spend at least two consecutive semesters in a twelve-month period as a full-time registered student, during which time you are engaged in full-time academic work at the Western New England University campus, before taking your comprehensive examination.

The PhD in ME at Western New England is a thesis-based research-oriented degree for students who intend to pursue careers in Research and Development, Research Management or Academia.

Degree Requirements

1. **Total credit hours**

Graduate Course Work:

The degree requires a minimum of 57 credit hours. The required 15 hours of core course work consists of five courses: ME 610, Measurement Systems, ME 646, Applied Finite Element Analysis, IE 643 Design of Experiments, ME 655, Design of Mechatronic Systems, and ME 701, Research Methods. Based on individual student preparation for graduate research in their selective area of interest, additional elective courses will be recommended by the faculty. The addition of elective courses will be a minimum of 15 credit hours.

The minimum number of research credit hours to be undertaken for the degree is 27. The degree requires the completion and successful defense of a PhD thesis and approval of the ME graduate committee.

2. **PhD Candidacy – Preliminary Examination**

You must be approved by the graduate faculty committee by successfully completing the preliminary or qualifying examination. The exam will be taken within two semesters after entry into the doctoral program. This exam is given to assess the student's potential to excel in PhD studies. This exam is comprised of two parts; a written exam based on undergraduate course work and an oral exam that has as a basis a preliminary research proposal. A student may attempt the examination no more than twice. Given that the doctoral degree committee will be guiding students through their course of study, subject material may additionally be based on foundational graduate courses that may include ME 610 ME 646, ME 655, IE 643 and ME 701. A PhD candidate must be registered as either full or part time at the time of the examination. We strongly encourage you to take the exam as early as possible.

3. **Advisor, Advisory Committee and Plan of study**

Before completing two (2)semesters at WNE University, a student must confirm the selection of the PhD advisor and an advisory committee. With the assistance of the advisor, the student must prepare a plan of study that must be approved by the advisory committee, department chair, and dean before the comprehensive examination is attempted. Advisory committees will consist of at least 3 departmental members (1 of which must be the PhD advisor) and at least one faculty member from outside the department.

4. **Comprehensive Examination**

The comprehensive exam should cover the specific areas of mechanical engineering, designated by the PhD advisory committee that relate to the student's area of research and study. The purpose of the Comprehensive Examination is to demonstrate that the candidate is qualified to successfully complete the research phase of their degree. This exam is taken when the student has substantially completed the program of courses approved by the Doctoral Committee. The student may attempt this examination no more than twice. This examination will be administered by the student's advisory committee and is intended to ensure that the student has the comprehensive understanding needed to complete the dissertation research effort.

The basis for the comprehensive exam is the proposal related to the dissertation research. A written examination may be given at the discretion of the PhD committee. The comprehensive exam will consist of an oral examination, administered by the doctoral committee. The exam will include a presentation of the final research proposal related to the thesis and plans for completing the work.

5. **Dissertation Defense**

The purpose of this examination is for students to defend their PhD dissertation. Students must defend their dissertation through an oral presentation.

In the time between successful completion of the Comprehensive Examination and the final oral examination (thesis defense) the following will apply:

- The final oral exam must be requested and scheduled through the office of the Dean of the College
- The student must be continuously registered
- If a period of more than five years passes between the successful passing of the comprehensive exam and the oral defense, the comprehensive exam must be retaken and passed before the final oral examination can be scheduled.
- The final oral exam is administered by the entire doctoral committee. It is a defense of the doctoral thesis. The final oral exam will be publicized, and members of the entire academic community are invited to attend.

Students must complete this milestone within 8 years of initial enrollment into the program.

PhD Program Core Curriculum Outline

Major Required (Core) Courses)		
ME 610	Measurement Systems	3 cr.
ME 646	Applied Finite Element Analysis	3 cr.
ME 655	Design of Mechatronics Systems	3 cr.
ME 701	Seminar / Research Methods for Mechanical Engineering	3 cr.
IE 643	Design of Experiments	3 cr.
ME 798 / ME799	Dissertation	27 cr. minimum
Subtotal: 42 cr. **Elective Course Choices by Area**		
Mechatronics and Robotics		
ME 654	Computer Control of Manufacturing	3
ME 656	Advanced Mechatronics	3
ME 755/690	Machine Vision	3
ME 756	Advanced Robotics	3
ME 737	Special Topics in Mechanical Engineering	3
Subtotal: 15 cr. Thermofluids and Energy		
ME 626	Advanced Fluid Mechanics	3
ME 635	Design of Alternative Energy Systems	3
ME 726	Design of Heat Exchangers	3
ME 752	Computational Fluid Dynamics	3
ME 737	Special Topics in Mechanical Engineering	3
Subtotal: 15 cr. Design and Manufacturing		
ME 619	Experimental and Analytical Stress Analysis	3
ME 737	Special Topics in Mechanical Engineering	3
ME 620	Applied Mechanical Design	3
ME 694/747	Advanced Manufacturing and Materials Processing	3
ME 714	Composite Design and Fabrication	3

Subtotal: 15 cr.

Total Credit Hours: 57 cr.

Curriculum Summary		
Total minimum number of courses required for the degree	10††	
Total minimum credit hours required for the degree	57	

Prerequisite, Concentration, Dissertation or Other Requirements: Students must take a minimum of 27 credit hours of research of any combination of ME 798/799 (Dissertation) and submission of Dissertation required. Additional examinations include Preliminary Examination (qualifying), Comprehensive Examination (covering major area of study), Dissertation Approval Examination (oral examination on dissertation research proposal), and Dissertation Defense (oral).

†† Excludes number of Dissertation courses needed to meet 27 credit hour minimum requirement.

MEA.MSE - MSE in Mechanical Engineering/Acoustic Processing Conc

General

College/School
College of Engineering

Department(s) ~
Mechanical Engineering

Program Title ~
MSE in Mechanical Engineering/Acoustic Processing Conc

Program Code ~
MEA.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

The MSE in Mechanical Engineering/Acoustic Processing for Cell & Gene Therapy provides advanced training and experience in performing independent research on topics with theoretical and applied interests in acoustics.

MEM.BSE - BSE in Mechanical Engineering/Mechatronics Conc

General

College/School
College of Engineering

Department(s) ~
Mechanical Engineering

Program Title ~
BSE in Mechanical Engineering/Mechatronics Conc

Program Code ~
MEM.BSE

Degree Designation ~
BSE - BS in Engineering

Academic Level ~
UG - Undergraduate

Program Short Description

In the junior year, students may choose to specialize in Mechatronics. This concentration is designed to satisfy the need for mechanical engineers with a thorough knowledge of transducers, smart sensors, and signal conditioners; modeling, analysis and control techniques; pneumatic, electric, hydraulic and smart actuators incorporating integrated controls; database management using SQL language; design of Human Machine Interface (HMI); and PLC and embedded controllers.

Requirements

Free Form Requirements

Mechanical Engineering Major

General Information

Mechanical engineering is one of the broadest and most diverse of the engineering disciplines and affects all aspects of our lives. It involves the application of science and technology essential to industry, government, environment, and society. Mechanical engineers design, analyze, build, test, and control mechanical devices and systems. They are involved in the design and development of automobiles, airplanes, satellites, robots, power plants, machine tools, material handling systems, medical devices and instrumentation, communications equipment, semiconductor devices, heating and air-conditioning systems, consumer products, and alternative energy systems. Mechanical engineers contribute on interdisciplinary teams to work in emerging areas such as advanced manufacturing processes, mechatronics, nanotechnology and green engineering technology. Mechanical engineering is generally recognized as the engineering discipline that offers the broadest choice of technical career directions.

The Mechanical Engineering curriculum provides a thorough background in thermal and mechanical systems and mechanical design. By selecting an appropriate group of technical and design electives, a student can concentrate in either thermal and fluid science or mechanical design. Thermal and fluid science electives include courses related to energy conversion, aerodynamics, introduction to flight, and turbomachinery design. Mechanical design electives include courses in stress analysis and computer-aided design, material selection, and metrology. The coursework is coupled with extensive practical hands-on experience in modern well-equipped laboratories. The use of computers to aid in engineering analysis and design is emphasized throughout the curriculum.

Students can choose to study either the broad areas of thermal-fluid sciences or mechanical design or select Mechatronics Engineering Concentration that is a blend of mechanical and electrical engineering. A Green Engineering Sequence of elective courses is also available with courses in renewable energy, alternative energy systems, and green engineering.

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Career Opportunities

Mechanical engineers are employed in all types of industry and government. They work in research, product development, product design, manufacturing, consulting, and sales. Our graduates are employed at Allston Power, UTC Aerospace Systems, Disney, Goodrich, Northrup Grumman, Pratt and Whitney, United Technologies Research Center, General Dynamics, Boeing, Lockheed-Martin, Otis, Carrier, Hasbro-Bradley, General Motors, NASA, Electric Boat, Andersen Consulting, General Electric, Smith and Wesson, American Saw, Northeast Utilities, Rolls Royce, Areva, Gerber Scientific Research, Spalding Sports Worldwide, Sikorsky, Westinghouse, BAE systems, and many others. Mechanical Engineering graduates have also become physicians and patent attorneys. Mechanical engineers occupy executive positions in many large corporations and others have gone on to become entrepreneurs and founded their own companies.

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Students are introduced to engineering design in the freshman year; sophomore, junior, and senior courses provide progressively more sophisticated design experiences within the student's discipline. All programs are culminated by a capstone Senior Design Project course in which a student works on an independent or integrated project under the supervision of a faculty advisor. Integrated projects reflect modern industrial practices, where students work on independent portions of a project which are then integrated to arrive at an overall project solution. Many projects involve a collaboration with an industry partner, and a student who selects one of these topics has the opportunity to work with the industrial sponsor in an actual engineering experience.

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Electives supplement the engineering student's technical program. These electives must be selected in such a way that all General Education "perspective of understanding" requirements are covered. In addition, technical, design, and general electives provide the opportunity for specialization within a chosen field. The student's departmental faculty advisor must approve the selection of electives from engineering, mathematics, science, or business.

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• Engaging in academic and scholarly activities, which strengthen the major's regional, national, and international reputation.

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- A commitment to continuing education and technical competency in solving engineering problems, consistent with the ethics of the profession, and serving the needs of local, national, and multinational communities and enterprises;
- Advancement in their professional careers, including the attainment of increased technical or managerial capabilities; and
- Continual improvement in effective technical and non-technical communication and teamwork.

Student Outcomes

Accordingly, the program has documented student outcomes that support the program educational objectives. Attainment of these outcomes prepares graduates to enter the professional practice of engineering.

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Mechatronics Concentration

Mechatronics is a modern discipline that transcends the boundaries between Mechanical, Electrical, and Computer Engineering. It is defined as the science of intelligent systems in which engineers integrate mechanical, electrical, and computer engineering to design, develop, fabricate, and test smart systems that learn over time and become more intelligent. The evolution of this area is particularly a consequence of the tremendous growth in the area of Computers, intelligent sensors and Electronic controllers.

Recent rapid growth of mechatronics as an area of engineering has given rise to a significant demand for mechatronics engineers. In the Department of Mechanical Engineering at Western New England, our Mechatronics Concentration is helping meet this need by producing engineering graduates who are capable, well-rounded mechatronics designers and system integrators.

In the junior year, a student may choose to remain in the general Mechanical Engineering course of study or specialize with a concentration in Mechatronics and Systems Integration. The Mechatronics Concentration is designed to satisfy the need for mechanical engineers with a thorough knowledge of (1) transducers, smart sensors, and signal conditioners, (2) Modeling, Analysis, and Control Techniques, (3) Pneumatic, Electric, hydraulic, and smart actuators incorporating integrated controls, (4) Database management using SQL language (5) Design of Human Machine Interface (HMI), (6) PLC and Embedded Controllers.

Degree Requirements

Freshman Year - Fall Semester

ENGL 132	English Composition I	3 cr.
ENGR 102/HONE 102	First Year Engineering Seminar	1 cr.
ENGR 103	Introduction to Engineering	4 cr.
MATH 127 or MATH 133	Calculus I With Pre-Calculus Calculus I	5 cr. 4 cr.
PHYS 133	Mechanics	4 cr.

Subtotal: 16

Freshman Year - Spring Semester

ENGL 133	English Composition II	3 cr.
ENGR 105/HONE 105	Computer Programming for Engineers	2 cr.
ENGR 110/HONE 110	Data Acquisition and Processing	3 cr.
MATH 134	Calculus II	4 cr.
PHYS 134	Electricity and Magnetism	4 cr.

Subtotal: 16

Sophomore Year - Fall Semester

CHEM 105	General Chemistry I	4 cr.
EE 205/HONE 205	Electrical Engineering I	4 cr.
MATH 236	Differential Equations	3 cr.
ME 202/HONE 202	Statics	3 cr.
SBP XXX	Social/Behavioral Perspective	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

IE 212	Probability and Statistics	3 cr.
MATH 235	Calculus III	3 cr.
ME 203	Dynamics	3 cr.
ME 205	Measurement Computing	2 cr.
ME 208	Mechanics of Materials	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 17

Junior Year - Fall Semester

MATH 350	Vector Calculus and Fourier Series	3 cr.
ME 303	Thermodynamics I	3 cr.
ME 309	Materials Science	3 cr.
ME 311	Mechatronics	3 cr.
ME 313	Mechanical Laboratory I	2 cr.
CUL XXX	Cultural/Aesthetic Perspective/"CA"	3 cr.

Subtotal: 17

Junior Year - Spring Semester

EE 336	Electrical Energy Systems	3 cr.
ME 314	Mechanical Laboratory II	2 cr.
ME 316	Fluid Mechanics	3 cr.
ME 320	Mechanical Vibrations	3 cr.
ME 324	Design of Mechatronic Systems	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 17

Senior Year - Fall Semester

ME 417	Heat Transfer	3 cr.
ME 423/BME 423/BUS 423	Product Development and Innovation	3 cr.
ME 425	Design of Machine Elements	3 cr.
ME 427	Kinematics and Control of Electro-Mechanical Systems	3 cr.
ME 439	Professional Awareness	1 cr.
ME 455/ME 656	Applications of Mechatronic Systems	3 cr.

Subtotal: 16

Senior Year - Spring Semester

IE 312	Engineering Economic Analysis	3 cr.
ME 440	Senior Design Projects	3 cr.
xxx	Engineering Design Elective	3 cr.
ME 449	Computer-Aided Engineering	3 cr.

Subtotal: 12

Total Credit Hours: 128

1. General Education courses must be selected in such a way to insure that all “perspectives of understanding” requirements have been satisfied.

2. An engineering design elective, usually numbered 3xx or above, selected from a list published by the Department of Mechanical Engineering and approved by the faculty advisor.

3. Select a Senior Design Project topic that contains a mechatronic related component approved by the Department of Mechanical Engineering.

The 2.000 required minimum grade point average in the major is based on all ME and Mechatronics major courses pursued in the student’s degree program.

MEM.MSE - MSE in Mechanical Engineering/Mechatronics Conc

General

College/School
College of Engineering

Department(s) ~
Mechanical Engineering

Program Title ~
MSE in Mechanical Engineering/Mechatronics Conc

Program Code ~
MEM.MSE

Degree Designation ~
MSE - MS in Engineering

Academic Level ~
GR - Graduate

Program Short Description

The Mechatronics concentration is directed toward both full-time and part-time students with a special emphasis on providing advanced training, experience in performing independent research on topics with theoretical as well as applied interest, and managing projects. A combination of courses from Electrical Engineering, Mechanical Engineering and Engineering Management, is offered to provide the graduates with a systems perspective.

Requirements

Free Form Requirements
Master of Science in Engineering in Mechanical Engineering - Mechatronics Concentration

The Mechatronics concentration in ME is directed toward both full-time and part-time students with a special emphasis on providing advanced training, experience in performing independent research on topics with theoretical as well as applied interest, and managing projects. A combination of courses from Electrical Engineering, Mechanical Engineering, and Engineering Management is offered to provide the graduates with a systems perspective.

Degree Requirements

Core Course Requirements

EMGT 605	Engineering Management	3 cr.
	or	
EMGT 648	Project Management	3 cr.
6XX	ME course	3 cr.
EMGT 643/IE 643	Design of Experiments	3 cr.
EMGT 650/IE 650	Systems Integration	3 cr.

Subtotal: 12 cr.

Select two of the following EE courses

EE 675	Advanced Motion Controls	3 cr.
	or	
EE 676	AI: Applied Fuzzy Logic	3 cr.
	or	
EE 677	Advanced Continuous and Discrete Systems Analysis and Controls	3 cr.
	or	
EE 678	Linear and Non-Linear Systems Modeling and Simulation	3 cr.
and both:		
ME 655	Design of Mechatronic Systems	3 cr.
ME 656/ME 455	Advanced Mechatronics	3 cr.

Subtotal: 12

Electives

Non-Thesis Option

ME 5XX/6XX	ME Elective	6 cr.

Two ME 500/600 level courses from an approved list of courses.

Subtotal: 6 cr.

Project Option

ME 5XX/6XX	ME Elective	3 cr.
ME 685	ME Project	3 cr.

Subtotal: 6 cr.

Thesis Option

ME 698/699	Thesis	6 cr.

Subtotal: 6 cr.

Total Credit Hours: 30

Note: For students who wish to select a project/thesis topic sponsored by their employer, the topic must be approved by the student's supervisor as well as their faculty advisor.

Mechanical Engineering Elective Courses

ME 610	Measurement Systems	3 cr.
ME 619	Experimental and Analytical Stress Analysis	3 cr.
ME 620	Applied Mechanical Design	3 cr.
ME 626	Advanced Fluid Mechanics I	3 cr.
ME 632	Fundamentals of Flight	3 cr.
ME 635	Design of Alternative Energy Systems	3 cr.
ME 640	Materials Selection for Engineering Design and Manufacturing	3 cr.
ME 651	Applied Computational Fluid Dynamics	3 cr.
ME 654	Computer Control of Manufacturing	3 cr.
ME 656/ME 455	Advanced Mechatronics	3 cr.
ME 685	Mechanical Engineering Project	3 cr.
ME 690 - 694	Special Topics in Mechanical Engineering	3 cr.
ME 698	Thesis Research	3 cr.

MK.BSBA - BSBA in Marketing

General

College/School
College of Business

Department(s) ~
Marketing

Program Title ~
BSBA in Marketing

Program Code ~
MK.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

Students in this program learn how to develop their marketing skills to become efficient marketing managers. Course projects provide students with exposure to real world marketing management problems. Students often work in group projects where they meet with business clients, gather marketing information, and develop real-time marketing solutions.

Requirements

Free Form Requirements
Marketing Major

General Information

Marketing is a dynamic force in today's multinational economy. Given the highly competitive nature of business, it is essential that business organizations understand and respond to the wants and needs of multiple markets. In order to manage markets successfully, marketing managers must employ a combination of good business judgment, effective analytical techniques, and professional communication skills. The Marketing program strives to provide students with abilities in each of these areas.

Students in the Marketing major learn how to develop their marketing skills to become efficient marketing managers. Course projects are designed to provide students with exposure to real world marketing management problems. Students often work in group on team projects where they meet with business clients, gather marketing information, and develop real-time marketing solutions.

Career Preparation

In order to help students understand careers available to Marketing majors, faculty in the Department of Marketing design activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshman year is accomplished in Introduction to Business Seminar (BUS 110), where students are introduced to marketing career opportunities.
2. Career Investigation in the sophomore year courses includes classroom assignments in Principles of Marketing (MK 200/HONB 200).
3. Career Determination in the junior year is accomplished using an assignment in Market Analysis (MK 302) which is designed to help students become more knowledgeable about career options and to assist students with selecting an appropriate career path.
4. Career Implementation in the senior year includes résumé writing and review of job descriptions and responsibilities Internship in Marketing (MK 480) where they experience marketing within an existing business.

Career Opportunities

Students majoring in Marketing often pursue careers in marketing management, marketing research, sport marketing, sales and sales management, consumer relations, and product/brand management.

Program Learning Goals

Having completed a major in Marketing, the student will have the ability to:

1. Identify value offerings for key stakeholders.
2. Create value offerings for key stakeholders.
3. Deliver value to key stakeholders.

Degree Requirements

MK 302	Market Analysis	3 cr.
MK 303	Customer Solutions	3 cr.
MK 423	Applied Marketing Capstone	3 cr.
MK 480	Internship In Marketing	3 cr.

Subtotal: 12

MK 3XX/4XX	Marketing Elective	3 cr.
MK 3XX/4XX	Marketing Elective	3 cr.
COMM 340	Business Communication	3 cr.
	or	
MK 3XX/4XX	Marketing Elective	3 cr.

Subtotal: 9

GEN XXX	General Electives	21 cr.

Subtotal: 21

Total Credit Hours: 42

Marketing Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
Or		
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101	Introduction to Sociology	3 cr.
OR		
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 201/HONB 203	Financial Reporting I	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
PH 211/MAN 240/ HONB 240	Business Ethics	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326	Business Planning for New Ventures	3 cr.
	or	
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.
MK 302	Market Analysis	3 cr.

Subtotal: 15

Junior Year - Spring Semester

BAIM 310	Quality and Operations Management	3 cr.
	or	
BAIM 312	Quality and Operations Management with SAP	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
MK 303	Customer Solutions	3 cr.
COMM 340	Business Communication	3 cr.
	or	
MK 3XX/4XX	Marketing Elective	3 cr.
MK 3XX/4XX	Marketing Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
MK 480	Internship In Marketing	3 cr.

Subtotal: 15

Senior Year - Spring Semester

MK 423	Applied Marketing Capstone	3 cr.
MK 3XX/4XX	Marketing Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” GUR requirements are satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: All upper level MK courses and COMM 340 (if taken as a marketing elective).

MKCMA.BSBA - BSBA in Marketing Communication/Advertising

General

College/School
College of Business

Department(s) ~
Marketing

Program Title ~
BSBA in Marketing Communication/Advertising

Program Code ~
MKCMA.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This program prepares students to enter the workforce with an understanding of how promotional strategies can be effectively used in executing and enhancing marketing messages. Students learn how marketers utilize and implement communication and promotional concepts when delivering the marketing message.

Requirements

Free Form Requirements
Marketing Communication/Advertising Major

General Information

Marketing and advertising are dynamically changing. New technologies enable interactive engagement with customers. Marketers who understand the current communication and digital environment and adjust company marketing communications have a competitive edge. The Marketing Communication/Advertising major prepares students to understand and to develop integrated marketing communication strategies, including relevant certifications.

Career Preparation

In order to help students understand careers available to Marketing Communication/Advertising majors, faculty in the Department of Marketing design activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshman year is accomplished in Introduction to Business Seminar (BUS 110), where students are introduced to marketing career opportunities;

2. Career Investigation in the sophomore year courses includes classroom assignments in Principles of Marketing (MK 200);

3. Career Determination in the junior year is accomplished using an assignment in Market Analysis (MK 302) which is designed to help students become more knowledgeable about career options and to assist students with selecting an appropriate career path; and

4. Career Implementation in the senior year includes résumé writing and review of job descriptions and responsibilities in Internship in Marketing Communications/ Advertising (MK 485) where they experience marketing communications within an existing business.

Career Opportunities

Students majoring in Marketing Communication/Advertising often pursue careers in promotional management, marketing communication, direct marketing, public relations, and advertising account management.

Program Learning Goals

Having completed a major in Marketing Communication/Advertising, the student will have the ability to:

1. Understand the function of marketing communication strategy within the context of the overall marketing strategy;

2. Analyze marketing communication problems using analytics and appropriate theories;

3. Develop a marketing communication plan for a business.

Degree Requirements

MK 302	Market Analysis	3 cr.
MK 303	Customer Solutions	3 cr.
MK 372	Digital Media Marketing Strategies	3 cr.
MK 423	Applied Marketing Capstone	3 cr.
MK 485	Marketing Communication/Advertising Internship	3 cr.
COMM 245	Video Editing and Production	4 cr.
COMM 285	Introduction to Public Relations	3 cr.

Subtotal: 22

GEN XXX	General Electives	14 cr.
GEN 3XX/4XX	Upper Level General Elective	6 cr.

Subtotal: 20

Total Credit Hours: 42

Marketing Communication/Advertising Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
Or		
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.
EC 111	Principles of Microeconomics	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
SO 101	Introduction to Sociology	3 cr.
OR		
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 201/HONB 203	Financial Reporting I	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
PH 211/MAN 240/ HONB 240	Business Ethics	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
AC 202	Managerial Accounting	3 cr.
FIN 214	Introduction to Finance	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326	Business Planning for New Ventures	3 cr.
	or	
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
COMM 245	Video Editing and Production	4 cr.
GEN XXX	General Elective	3 cr.
LAB XXX	Laboratory Science	3 cr.
MK 302	Market Analysis	3 cr.

Subtotal: 16

Junior Year - Spring Semester

BAIM 310	Quality and Operations Management	3 cr.
	or	
BAIM 312	Quality and Operations Management with SAP	3 cr.
COMM 285	Introduction to Public Relations	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
MK 303	Customer Solutions	3 cr.
MK 372	Digital Media Marketing Strategies	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
	or	
BUS 450/HONB 450	Business Strategy	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
MK 423	Applied Marketing Capstone	3 cr.
MK 485	Marketing Communication/Advertising Internship	3 cr.

Subtotal: 14

Total Credit Hours: 120

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all "perspectives of understanding" requirements have been satisfied.

Courses to be included in computing the 2.0 minimum average in the major are as follows: All upper level MK courses COMM 245 and COMM 285.

NSCIC.BS - BS in Neuroscience/Course Intensive Track

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
BS in Neuroscience/Course Intensive Track

Program Code ~
NSCIC.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Students in the neuroscience major study the structure, development, and function of the nervous system. Students earning a BS in Neuroscience often work in the health sciences or biotechnology professions or continue their studies at the masters or doctoral level in the sciences, medicine, or health care professions.

Requirements

Free Form Requirements
Neuroscience Major - Course Intensive Track

General Information

Neuroscience is a field of study that integrates psychology, biology, physics, and chemistry for the common goal of understanding the structure, development, and function of the brain and nervous system. Through research, neuroscientists are able to describe the normal function of electrical tissue. For example, improving our understanding of the brain allows us to understand and find ways to prevent or treat many devastating neurological and psychiatric disorders. Students majoring in neuroscience will have access to a range of tools including behavioral testing, electrophysiology, histology, and molecular biology, as they participate first-hand in basic exploratory research. Students are involved in all stages of research including project design, data collection, and results reporting. This major is housed in a research-rich environment that supports a curriculum steeped in scientific investigation, where students and faculty work as partners in research and education.

Career Opportunities

Students who receive an undergraduate degree in Neuroscience typically continue their studies at the master's or doctoral level or pursue advanced degrees in a variety of medical professions (e.g. MD, DDO, DDS, VDM, or OD). Career options include positions within neuroscience, psychiatry, medicine, academia, pharmaceuticals, forensic science, health and allied health professionals, science writing and communications, and state and federal governmental science agencies (e.g. CIA, FBI, NIH, CDC, or FDA).

Student Competencies

As an undergraduate Neuroscience major, students will study the nervous system, and behavior and cognitive processes from a variety of perspectives. The Neuroscience major has been patterned to follow the recommendations of the advisory committee of the Faculty for Undergraduate Neuroscience. Students, at the point of graduation, should be able to demonstrate the following core competencies:

- An understanding of natural science and three major divisions within neuroscience (behavioral, cellular and molecular, and systems physiology)
- An understanding of experimental methodology, design, and data analysis
- An understanding of historical trends and theoretical perspectives that inform the field
- An advanced understanding of a particular area or areas of study within neuroscience
- Critical thinking and independent thought

- The ability to communicate effectively
- The ability to discern and articulate a rationale for ethical conduct in research

Degree Requirements - Course Intensive Track

PSY 101	Introduction to Psychology	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
NSCI 224	Sensation and Perception	3 cr.
NSCI 232	Research Methods in Neuroscience	3 cr.
NSCI 267	Neurobiology	4 cr.
NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 385	Neurodevelopment	3 cr.
NSCI 405	Seminar in Neuroscience	3 cr.
Electives		
NSCI 2XX-4XX	Neuroscience Electives	9 cr.
NSCI 3XX-4XX	Neuroscience Electives	12 cr.

Subtotal: 59

Basic Science and Math Courses

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 22

TOTAL CREDIT HOURS: 81

Neuroscience Major - Course Intensive Track - Suggested Sequence of Courses

First Year – Fall Semester

PHAR 100	First Year Seminar for CoPHS	1 cr.
ENGL 132	English Composition I	3 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
PSY 101	Introduction to Psychology	3 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 14

First Year – Spring Semester

NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
ENGL 133	English Composition II	3 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
GEN XXX	General Elective	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 16

Sophomore Year – Fall Semester

NSCI 224	Sensation and Perception	3 cr.
NSCI 267	Neurobiology	4 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
CHEM 105	General Chemistry I	4 cr.

Subtotal: 14

Sophomore Year – Spring Semester

NSCI 232	Research Methods in Neuroscience	3 cr.
CHEM 106	General Chemistry II	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.

Subtotal: 16

Junior Year – Fall Semester

NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior Year – Spring Semester

NSCI 385	Neurodevelopment	3 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year – Fall Semester

NSCI 405	Seminar in Neuroscience	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year – Spring Semester

NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

NSCIO.BS - 3+3 BS in Neuroscience/OTD

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
3+3 BS in Neuroscience/OTD

Program Code ~
NSCIO.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The 3+3 BS in Neuroscience/OTD is an accelerated
pathway to the Doctor of Occupational Therapy
degree. The prerequisite requirements for the OTD degree have been strategically placed within the requirements of the undergraduate neuroscience 3+3 program. The dual-degree pathway consists of three years of coursework toward a BS in Neuroscience (Course-Intensive Track), followed by the three-year OTD program.

Requirements

Free Form Requirements
Bachelor of Science in Neuroscience (BS Neuroscience) and Doctorate in Occupational Therapy (OTD) Dual Degree Program

General Information

The 3+3 BS in Neuroscience/OTD is an accelerated pathway to the Doctor of Occupational Therapy degree. The prerequisite requirements for the OTD degree have been strategically placed within the requirements of the undergraduate neuroscience 3+3 program. The dual-degree pathway consists of three years of coursework toward a BS in Neuroscience (Course-Intensive Track), followed by the three-year OTD program.

In addition to fulfilling the requirements of the undergraduate Neuroscience 3+3 portion of the program, all candidates for admission to the OTD program must successfully complete all other OTD admission requirements as listed on the OTD Admissions webpage, including an admission interview and submission of a writing sample. Students applying through the 3+3 pathway are not required to apply through the OTCAS system.

Students "in good standing" in the 3+3 BS in Neuroscience program are eligible to apply for admission to the Doctor of Occupational Therapy Degree program during their junior year after December 1. To be considered "in good standing" in the 3+3 BS in Neuroscience program and to secure their admission into the OTD program, a student must:

1. Complete the required 90 credits listed below within three academic years.
2. Complete at least 15 credits of undergraduate coursework at WNE counting toward the major course requirements of the BS in Neuroscience.
3. Maintain (a) a minimum cumulative GPA of 3.200 at the end of each academic year, (b) a minimum GPA of 3.200 in the required prerequisite coursework for the Doctor of Occupational Therapy program (see WNE OTD Admissions webpage for the list of courses), and (c) earned no course grade less than "C" in any required pre-requisite coursework for the OTD program.

Students who fall below the minimum cumulative GPA of 3.200 will no longer have guaranteed admission but may remain in a Neuroscience program and apply to the Doctor of Occupational Therapy program during their third year.

Students in the 3+3 BS in Neuroscience program that either (a) do not meet the Doctor of Occupational Therapy Degree program admission requirements outlined above, or (b) elect not to apply for admission to the Doctor of Occupational Therapy Degree program at that time, remain eligible to apply for admission to the Doctor of Occupational Therapy Degree as part of the general applicant pool following four years of University study and completion of a bachelor's degree. These students would follow the standard OTD Admissions Requirements as listed on the OTD Admissions Requirements webpage.

Once a student enrolls into the OTD program after completing the 3+3 BS in Neuroscience program, they must achieve final course grades of "B-" or higher in all courses in the curriculum. Remediation allowances are outlined in the OTD Student Handbook. Students in the 3+3 BS in Neuroscience program pathway will be held to the same standards as outlined in the OTD Student Handbook. Students who fail to fulfill these requirements in their first year of the OTD program will be disenrolled from the OTD program and are given the option to complete the degree requirements of a BS in Neuroscience.

Students are eligible to request reinstatement to the OTD program following completion of their BS in Neuroscience. Reinstatement will be determined by the College of Pharmacy and Health Sciences' Academic Standards Committee and the OTD Admissions Committee. Reinstatement is not guaranteed.

BS in Neuroscience

After completing the 95 credits of the 3+3 BS in Neuroscience, any 25 credits of first year OTD courses will be accepted to fulfill the general elective requirements of the undergraduate neuroscience degree (120 total required credits). Therefore, after successfully completing the first year of the OTD program, students will be awarded a BS in Neuroscience assuming all degree requirements have been met.

SUGGESTED SEQUENCE OF COURSES

First Year - Fall Semester

PHAR 100	First Year Seminar for COPH	1 cr.
ENGL 132	English Composition I	3 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
PSY 101	Introduction to Psychology	3 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 14

First Year - Spring Semester

NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
ENGL 133	English Composition II	3 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
PSY 211	Developmental Psychology	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II Mgt, Life & Soc Sciences	3 cr.

Subtotal: 16

Sophomore Year - Fall Semester

NSCI 224	Sensation and Perception	3 cr.
NSCI 267	Neurobiology	4 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
CHEM 105	General Chemistry I	4 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.

Subtotal: 17

Sophomore Year - Spring Semester

NSCI 232	Research Methods in Neuroscience	3 cr.
CHEM 106	General Chemistry II	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 16

Junior Year - Fall Semester

NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 405	Seminar in Neuroscience	3 cr.
BIO 215	Anatomy and Physiology I	4 cr.
PSY 326	Abnormal Psychology	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.

Subtotal: 16

Junior Year - Spring Semester

NSCI 385	Neurodevelopment	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.
BIO 216	Anatomy and Physiology II	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.

Subtotal: 16

Credit transferred back from OTD credits taken after the first professional year of study: 25 cr.

Total Credit Hours: 120

NSCIP.BS - 3+2 BS in Neuroscience/MS in Pharmaceutical Sciences

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
3+2 BS in Neuroscience/MS in Pharmaceutical Sciences

Program Code ~
NSCIP.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The 3+2 BS in Neuroscience/MS in Pharmaceutical Sciences is a program unique to western Massachusetts for those students interested in attaining a BS in Neuroscience and furthering their career with a thesis-based MS in Pharmaceutical Sciences. Both programs provide excellent experience in designing and performing research. The combination of the research-intensive BS with the thesis-based MS provides students with two excellent programs geared toward employment in the pharmaceutical industry and/or pharmaceutical research.

Requirements

Free Form Requirements
3+2 BS in Neuroscience/MS in Pharmaceutical Sciences

The undergraduate Neuroscience and Pharmacy graduate programs at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in attaining a BS in Neuroscience and furthering their career with a thesis-based MS in Pharmaceutical Sciences. This dual degree option is designed for the research-intensive Neuroscience program student. Students in this program will receive two separate degrees requiring just one additional year of study beyond the normal undergraduate degree timeline.

Students earn both the BS in Neuroscience and the MS in Pharmaceutical Sciences degrees within five years of entry as an undergraduate. Students admitted by WNE Admissions as undergraduates are only admitted into the BS degree portion of the program. Transition into the MSPS program is not automatic, nor is acceptance into the MSPS program guaranteed, but requires application and acceptance into the MSPS program. The MSPS program admission requirements can be found in the MS in Pharmaceutical Sciences program description in this catalog.

Students in good standing in the Neuroscience major, who are on track to complete the required courses of their major within three years (including General University and college requirements), are eligible to apply for admission to the MSPS program during their junior year after December 1. Candidates must successfully submit their application materials, as well as complete an admissions interview, if requested of them.

There will be cross-credits between the two programs, i.e., courses for which credit will apply to the completion of both degrees. For the BS Neuroscience degree, up to 19 credits of first-year MSPS program courses will fulfill course requirements in the BS degree. All students choosing this unique curricular path must consult closely with their faculty advisor to ensure all course requirements of their BS program are completed before their fourth year. In addition, the MSPS program offers six different areas in which a student can focus their program and research: Pharmacology or Neuropharmacology; Medicinal Chemistry and Drug Development; Pharmaceutics and Drug Delivery; Pharmacogenomics; Biomedical Sciences; and Pharmacoeconomics and Healthcare Data Analytics. These focus areas are accomplished through different sequence elective courses, the details of which can be found in the MS in Pharmaceutical Sciences program description. All students in the dual degree program must consult with both their BS and MSPS faculty advisors to select the correct MSPS elective sequences in the proper order.

Students in the Neuroscience major that either (a) do not meet the MSPS program admission requirements during their junior year, or (b) elect not to apply for admission to the MSPS program at that time, remain eligible to apply for admission as part of the general applicant pool following four years of University study and completion of a bachelor's degree.

Undergraduate Degree Requirements

PSY 101	Introduction to Psychology	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
NSCI 224	Sensation and Perception	3 cr.
NSCI 232	Research Methods in Neuroscience	3 cr.
NSCI 267	Neurobiology	4 cr.
NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 385	Neurodevelopment	3 cr.
NSCI 405	Seminar in Neuroscience	3 cr.
Neuroscience Research Requirements		
NSCI 350	Neuroscience Lab Placement I	3 cr.
NSCI 351	Neuroscience Lab Placement II	3 cr.
NSCI 450	Senior Neuroscience Thesis I	4 cr.
NSCI 451	Senior Neuroscience Thesis II	4 cr.
Electives		
NSCI 2XX-4XX	Neuroscience Electives	9 cr.
NSCI 3XX-4XX	Neuroscience Electives	6 cr.

Subtotal: 57

Basic Science and Math Courses

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry I Lab	1 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry II Lab	1 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 30

Total Credit Hours: 87

MS Pharmaceutical Sciences Required Courses

PHRSC 510	Seminar & Journal Club I	1 cr.
PHRSC 515	Principles of Pharmacology (NSCI 3XX/4XX)	3 cr.
PHRSC 520	Seminar & Journal Club II	1 cr.
PHRSC 526	Analytical Techniques (GEN XXX)	1 cr.
PHRSC 527	Data Analysis and Biostatistics (GEN XXX)	3 cr.
PHRSC 528	Thesis Research I	2 cr.
PHRSC 529	Responsible Conduct of Research	3 cr.
PHRSC 532	Advanced Pharmacology & Drug Action (NSCI 3XX/4XX)	3 cr.
PHRSC 618	Thesis Research II	3 cr.
PHRSC 630	Scientific Communication	3 cr.
PHRSC 628	Thesis Research III	3 cr.
PHAR-PHRSC XXX	MSPS Sequence Electives (GEN XXX)	12 cr.

Subtotal: 38

BS-Neuroscience Curriculum Years – Suggested Sequence of Courses

120 total credit hours over the first 4 Years

Freshman Year BS Neuroscience - Fall Semester

PSY 101	Introduction to Psychology	3 cr.
ENGL 132	English Composition I	3 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
PHAR 100	First Year Seminar for CoPHS	1 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 14

Freshman Year BS Neuroscience - Spring Semester

NSCI 212	Introduction to Behavioral Neurosciences	3 cr.
ENGL 133	English Composition II	3 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
GUR XXX	GUR – AESTH, CULT, or HIST	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

Sophomore Year BS Neuroscience - Fall Semester

NSCI 224	Sensation and Perception	3 cr.
NSCI 267	Neurobiology	4 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
CHEM 105	General Chemistry I	4 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 17

Sophomore Year BS Neuroscience - Spring Semester

NSCI 232	Research Methods in Neuroscience	3 cr.
CHEM 106	General Chemistry II	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GUR XXX	GUR – AESTH, CULT, or HIST	3 cr.

Subtotal: 16

Junior Year BS Neuroscience - Fall Semester

NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 350	Neuroscience Lab Placement I	3 cr.
NSCI 405	Seminar in Neuroscience	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.

Subtotal: 17

Junior Year BS Neuroscience - Spring Semester

NSCI 351	Neuroscience Lab Placement II	3 cr.
NSCI 385	Neurodevelopment	3 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
GUR XXX	GUR – AESTH, CULT, or HIST	3 cr.

Subtotal: 16

MSPS Curriculum Years - Sequence of Courses

38 Total MS credit hours over the last 2 years

Senior Year (First Year MSPS) - Fall Semester

NSCI 450	Senior Neuroscience Thesis I	4 cr.
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 515	Principles of Pharmacology	3 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHRSC 529	Responsible Conduct of Research	3 cr.
PHAR-PHRSC xxx	MSPS Sequence Elective(s)	2-4 cr.

MSPS Subtotal: 12-14

Subtotal: 16-18

Senior Year (First Year MSPS) - Spring Semester

NSCI 451	Senior Neuroscience Thesis II	4 cr.
PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 532	Advanced Pharmacology & Drug Action	3 cr.
PHAR-PHRSC xxx	MSPS Sequence Elective(s)	5-6 cr.

MSPS Subtotal: 10-11

Subtotal: 14-15

First Year MSPS - Summer Term

PHRSC 528	Thesis Research 1	2 cr.

MSPS Subtotal: 2

Second Year MSPS - Fall Semester

PHRSC 618	Thesis Research 2	3 cr.
PHRSC 630	Scientific Communication	3 cr.
PHRSC-PHAR xxx	MSPS Sequence Elective(s)	3-4 cr.

MSPS Subtotal: 9-10

Second Year MSPS - Spring Semester

PHRSC 628	Thesis Research 3	3 cr.

MSPS Subtotal: 3

MSPGx Degree completion requirements:

1) All courses passed ("C" or better), with no more than two courses with a grade of "C" or "C+"; and
2) Attain an overall grade point average of 3.0 or higher.

BS Neuroscience Subtotal: 120 credits

MSPS Subtotal: 38 credits

Total Dual Degree Credit Hours: 139-142

NSCIR.BS - BS in Neuroscience/Research Intensive Track

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
BS in Neuroscience/Research Intensive Track

Program Code ~
NSCIR.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

This major studies the structure, development and function of the brain and nervous system. Students in this major will have the opportunity to conduct their own research, present their findings, and attend regional and/or national conferences. This major is excellent preparation for entry into MD and PhD graduate programs or for working in research laboratories at universities or biotech companies.

Requirements

Free Form Requirements
Neuroscience Major - Research Track

General Information

Neuroscience is a field of study that integrates psychology, biology, physics, and chemistry for the common goal of understanding the structure, development, and function of the brain and nervous system. Through research, neuroscientists are able to describe the normal function of electrical tissue. For example, improving our understanding of the brain allows us to understand and find ways to prevent or treat many devastating neurological and psychiatric disorders. Students majoring in neuroscience will have access to a range of tools including behavioral testing, electrophysiology, histology, and molecular biology, as they participate first-hand in basic exploratory research. Students are involved in all stages of research including project design, data collection, and results reporting. This major is housed in a research-rich environment that supports a curriculum steeped in scientific investigation, where students and faculty work as partners in research and education.

Career Opportunities

Students who receive an undergraduate degree in Neuroscience typically continue their studies at the master's or doctoral level or pursue advanced degrees in a variety of medical professions (e.g. MD, DDO, DDS, VDM, or OD). Career options include positions within neuroscience, psychiatry, medicine, academia, pharmaceuticals, forensic science, health and allied health professionals, science writing and communications, and state and federal governmental science agencies (e.g. CIA, FBI, NIH, CDC, or FDA).

Student Competencies

As an undergraduate Neuroscience major, students will study the nervous system, and behavior and cognitive processes from a variety of perspectives. The Neuroscience major has been patterned to follow the recommendations of the advisory committee of the Faculty for Undergraduate Neuroscience. Students, at the point of graduation, should be able to demonstrate the following core competencies:

- an understanding of natural science and three major divisions within neuroscience (behavioral, cellular and molecular, and systems physiology)
- an understanding of experimental methodology, design, and data analysis
- an understanding of historical trends and theoretical perspectives that inform the field
- an advanced understanding of a particular area or areas of study within neuroscience
- critical thinking and independent thought
- the ability to communicate effectively
- the ability to discern and articulate a rationale for ethical conduct in research

Research Intensive Track

Students will have the opportunity to rotate through labs to observe and become familiar with various research practices and theories. Students are then required to select a faculty sponsor to engage in research in a more concentrated capacity. After placement, students will engage in a year-long senior thesis project.

Degree Requirements

PSY 101	Introduction to Psychology	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
NSCI 224	Sensation and Perception	3 cr.
NSCI 232	Research Methods in Neuroscience	3 cr.
NSCI 267	Neurobiology	4 cr.
NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 385	Neurodevelopment	3 cr.
NSCI 405	Seminar in Neuroscience	3 cr.
Neuroscience Research Requirements		
NSCI 350	Neuroscience Lab Placement I	3 cr.
NSCI 351	Neuroscience Lab Placement II	3 cr.
NSCI 450	Senior Neuroscience Thesis I	4 cr.
NSCI 451	Senior Neuroscience Thesis II	4 cr.
Electives		
NSCI 2XX-4XX	Neuroscience Electives	9 cr.
NSCI 3XX-4XX	Neuroscience Electives	6 cr.

Subtotal: 57

Basic Science and Math Courses

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry I Lab	1 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry II Lab	1 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 30

Total Credit Hours: 87

Suggested Sequence of Courses - Research Intensive Track

First Year – Fall Semester

PHAR 100	First Year Seminar for CoPHS	1 cr.
ENGL 132	English Composition I	3 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
PSY 101	Introduction to Psychology	3 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 14

First Year – Spring Semester

NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
ENGL 133	English Composition II	3 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
GEN XXX	General Elective	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 16

Sophomore Year – Fall Semester

NSCI 224	Sensation and Perception	3 cr.
NSCI 267	Neurobiology	4 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
CHEM 105	General Chemistry I	4 cr.

Subtotal: 14

Sophomore Year – Spring Semester

NSCI 232	Research Methods in Neuroscience	3 cr.
CHEM 106	General Chemistry II	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.

Subtotal: 16

Junior Year – Fall Semester

NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 350	Neuroscience Lab Placement I	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Lab I	1 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.

Subtotal: 16

Junior Year – Spring Semester

NSCI 385	Neurodevelopment	3 cr.
NSCI 351	Neuroscience Lab Placement II	3 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Lab II	1 cr.
GUR XXX	GUR – AESTH, CULT, HIST	3 cr.

Subtotal: 16

Senior Year – Fall Semester

NSCI 405	Seminar in Neuroscience	3 cr.
NSCI 450	Senior Neuroscience Thesis I	4 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	2 cr.

Subtotal: 15

Senior Year – Spring Semester

NSCI 451	Senior Neuroscience Thesis II	4 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GEN 3XX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 13

Total Credit Hours: 120

NSCIX.BS - 3+1 BS in Neuroscience/MS in Pharmacogenomics

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
3+1 BS in Neuroscience/MS in Pharmacogenomics

Program Code ~
NSCIX.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The 3+1 BS in Neuroscience/MS in Pharmacogenomics is a program for students interested in attaining a BS in Neuroscience and furthering their career with an experiential-based MS in Pharmacogenomics. Both programs provide an excellent background in neuroscience and pharmacogenomics, a combination which provides students with the knowledge and experience needed for gainful employment in the clinical research and/or the clinical implementation of pharmacogenomics in industry and practice.

Requirements

Free Form Requirements
3+1 BS Neuroscience/MS in Pharmacogenomics

The undergraduate Neuroscience and Pharmacy graduate programs at Western New England University have collaborated to offer a program unique to western Massachusetts for those students interested in attaining a BS in Neuroscience and furthering their career with an MS in Pharmacogenomics (knows as the MSPGx program). The dual degree option is designed for the course-intensive Neuroscience program student. Students in this program will receive two separate degrees requiring just one additional summer of study beyond the normal undergraduate degree timeline.

Students admitted by WNE Admissions as undergraduates are only admitted into the BS degree portion of the program. Transition into the MSPGx program is not automatic, nor is acceptance into the MSPGx program guaranteed, but requires application and acceptance into the MSPGx program. Program admission requirements can be found in the MS in Pharmacogenomics program description in this catalog.

Students in good standing in the Neuroscience major, who are on track to complete the bulk of the required (not elective) courses of their major within three years (including General University and college requirements), are eligible to apply for admission to the MSPGx program during their junior year after December 1. Candidates must successfully submit their application materials for admission consideration to the MSPGx program.

After successfully completing the first year (Fall and Spring) of the MSPGx program, students will be awarded a BS in Neuroscience, assuming all degree requirements have been met (including the 30 hours of 300-level or above credit requirement and the 120 minimum credit requirement). After completing the summer semester of the MSPGx program, assuming all of the degree requirements have been met (41 credits), students will be awarded the MS in Pharmacogenomics.

There are many cross-credits between the two programs, i.e., courses for which credit will apply to the completion of both degrees. Up to 27 credits of first-year (Fall and

Spring) MSPGx courses (with some exceptions) will be accepted into the BS in Neuroscience program as follows

- PHAR 516 (Pharmacy Ethics), PHAR 526 (Pharmacy Outcomes), PHRSC 510 (Seminar & Journal Club 1), PHRSC 520 (Seminar & Journal Club 2), PHRSC 526 (Analytical Techniques), PHRSC 527 (Data Analysis and Biostatistics), and PHRSC 551 (Introduction to Genetics and Genetic Counseling) can fulfill GEN XXX (General Elective) requirements.
- The courses PHAR 513 (Biochemistry), PHAR 522 (Pathophysiology), PHAR 523 (Basic Principles of Genetics & Genomics), PHAR 611 (Principles of Pharmacology) , PHRSC 552 (Advanced Genetics and Genomics), and PHRSC 553 (Genetics Data Analysis—Bioinformatics) can fulfill NSCI or GEN elective requirements, but only if the student did not already take a similarly-titled course as part of their undergraduate degree program. If the student already took such a course, the graduate course credits cannot count towards the undergraduate degree.

Students in the Neuroscience major that either (a) do not meet the MSPGx program admission requirements during their junior year, or (b) elect not to apply for admission to the MSPGx program at that time, remain eligible to apply for admission as part of the general applicant pool following four years of University study and completion of a bachelor's degree.

Undergraduate Degree Requirements - Course Intensive Track

PSY 101	Introduction to Psychology	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
NSCI 224	Sensation and Perception	3 cr.
NSCI 232	Research Methods in Neuroscience	3 cr.
NSCI 267	Neurobiology	4 cr.
NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 385	Neurodevelopment	3 cr.
NSCI 405	Seminar in Neuroscience	3 cr.
Electives		
NSCI 2XX-4XX	Neuroscience Electives	9 cr.
NSCI 3XX-4XX	Neuroscience Electives	12 cr.

Subtotal: 59

Basic Science and Math Courses

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.

Subtotal: 22

Total Credit Hours: 81

MS Pharmacogenomics Required Courses

PHAR 513	Biochemistry	3 cr.
PHAR 516	Pharmacy Ethics	3 cr.
PHAR 522	Pathophysiology	3 cr.
PHAR 523	Basic Prin. Genetics & Genomics	2 cr.
PHAR 526	Pharmacy Outcomes	2 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHRSC 510	Seminar and Journal Club 1	1 cr.
PHRSC 520	Seminar and Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 527	Data Analysis and Biostatics	3 cr.
PHRSC 551	Introduction to Genetics and Genetic Counseling	3 cr.
PHRSC 552	Advanced Genetics and Genomics	1 cr.
PHRSC 553	Genetic Data Analysis - Bioinformatics	3 cr.
PHRSC 554	Applied Pharmacogenomics Experience	6 cr.
PHRSC 555	Clinical Pharmacogenomics Experience	6 cr.

Total Credit Hours: 41

Neuroscience Major - Course Intensive Track - Suggested Sequence of Courses

120 Total Credit hours over the First 4 Years

Students meet with their faculty advisor to select the proper order and courses to take in the first three years so as to incorporate the MSPGx courses in the fourth year.

Freshman Year BS Neuroscience - Fall Semester

PSY 101	Introduction to Psychology	3 cr.
ENGL 132	English Composition I	3 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
PHAR 100	First Year Seminar for CoPHS	1 cr.
MATH 109	Precalculus Mathematics	3 cr.
	OR	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 14

Freshman Year BS Neuroscience - Spring Semester

NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
ENG 133	English Composition II	3 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
GEN XXX	Elective	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	OR	
MATH 124	Calculus II for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

Sophomore Year BS Neuroscience - Fall Semester

NSCI 224	Sensation and Perception	3 cr.
NSCI 267	Neurobiology	4 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
CHEM 105	General Chemistry I	4 cr.
GUR XXX	GUR – AESTH, CULT, or HIST	3 cr.

Subtotal: 17

Sophomore Year BS Neuroscience - Spring Semester

NSCI 232	Research Methods in Neuroscience	3 cr.
CHEM 106	General Chemistry II	4 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 16

Junior Year BS Neuroscience - Fall Semester

NSCI 312	Cognitive Neuroscience	3 cr.
NSCI 405	Seminar in Neuroscience	3 cr.
NSCI 2XX/4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.
GUR XXX	GUR – AESTH, CULT, or HIST	3 cr.

Subtotal: 15

Junior Year BS Neuroscience - Spring Semester

NSCI 385	Neurodevelopment	3 cr.
GUR XXX	GUR – ART, CULT, or HIST	3 cr.
NSCI 2XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX-4XX	Neuroscience Elective	3 cr.
NSCI 3XX/4XX	Neuroscience Elective	3 cr.

Subtotal: 15

MSPGx Sequence of Courses

41 Total Credit Hours over the Last Year and One Additional Summer

Senior Year BS Neuroscience / First Year MSPGx - Fall Semester

PHAR 513	Biochemistry	3 cr.
PHAR 516	Pharmacy Ethics	3 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHRSC 551	Introduction to Genetics and Genetic Counseling	3 cr.

Subtotal: 16

Senior Year BS / First Year MSPGx - Spring Semester

PHAR 522	Pathophysiology	3 cr.
PHAR 523	Basic Prin. Genetics & Genomics	2 cr.
PHAR 526	Pharmacy Outcomes	2 cr.
PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 552	Advanced Genetics and Genomics	1 cr.
PHRSC 553	Genetic Data Analysis - Bioinformatics	3 cr.

Subtotal: 13

First Year MSPGx - Summer Semester

PHRSC 554	Applied Pharmacogenomics Experience	6 cr.
PHRSC 555	Clinical Pharmacogenomics Experience	6 cr.

Subtotal: 12

BS in Neuroscience Subtotal: 120 credits

MS in Pharmacogenomics Subtotal: 41 credits

Total Dual-Degree Credit Hours: 134

MS in Pharmacogenomics Degree completion requirements:
1) All courses passed ("C" or better), with no more than two courses with a grade of "C" or "C+".
2) Attain an overall grade point average of 3.000 or higher.

OL.MS - MS in Organizational Leadership

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
MS in Organizational Leadership

Program Code ~
OL.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

This program is designed to develop and enhance the knowledge and skills of those who hold or desire to hold leadership positions in organizations. Students are exposed to theories and best practices involving people and processes in organizations.

Requirements

Free Form Requirements
Master of Science in Organizational Leadership (MS in Organizational Leadership)

Purpose

The Master of Science in Organizational Leadership (MS in Organizational Leadership) is designed to develop and enhance the knowledge and skills of those who hold or desire to hold leadership positions in organizations. Students are exposed to theories and best practices involving people and processes in organizations.

Program Learning Goals

A student will be able to:

1. Critically analyze research used to evaluate the unique needs, challenges, and opportunities of organizations.
2. Determine alternatives for problem solving and decision-making as they relate to human behavior issues in organizations.
3. Integrate knowledge of ethics and leadership into practice.

4. Apply knowledge of leadership theory, organizational behavior theory, and change theory as they relate to best practices in organizational leadership.

5. Demonstrate self-awareness of personal leadership style, strengths and skills, and how these impact others in an organization and a personal plan for leadership development.

Structure

Degree requirements

MAN 600	Foundations of Leadership Practice	3 cr.
MAN 605	Leadership, Problem Solving and Decision Making	3 cr.
MAN 610	Organizational Behavior and Theory	3 cr.
MAN 630	Leadership and the Human Experience	3 cr.
MAN 642	Leading Change	3 cr.
MAN 651	Ethical Leadership Practice	3 cr.
MAN 652	Contemporary Issues in Leadership	3 cr.

Subtotal: 21

Plus three 3-credit electives in Management or BUS 610 or other graduate courses focused on leadership as approved

XXX	Major Elective	3 cr.
XXX	Major Elective	3 cr.
XXX	Major Elective	3 cr.

Subtotal: 9

Total Credit Hours: 30

OT.OTD.OTD - Doctor of Occupational Therapy

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Occupational Therapy

Program Title ~
Doctor of Occupational Therapy

Program Code ~
OT.OTD.OTD

Degree Designation ~
OTD - Doctor of Occupational Therapy

Academic Level ~
OT - Occupational Therapy

Program Short Description

The WNE Doctor of Occupational Therapy program provides academic preparation beyond a generalist level, including advanced graduate knowledge, skills, and fieldwork/experiential opportunities. The OTD program is a full-time program completed over 8 consecutive semesters including summers. The program combines opportunities for classroom learning, the development of performance laboratory skills, and on-site practice experience through the WNE OTD student-run OT Center and Level I and II Fieldwork experiences, as well as a culminating Doctoral Capstone project.

Requirements

Free Form Requirements
Doctor of Occupational Therapy Program

The OTD program at Western New England University restructured the curriculum following an extensive curricular review process. The restructured curriculum moved to an eight-semester model from the previous three-year model. This will allow for a more efficient and targeted implementation of the curriculum design, and will be even more effective in fostering student learning and experiential progression.

Students who entered the OTD program prior to academic year 2022-2023 should take note that course titles, credits, and the sequence of courses has changed. Students should refer to the catalog for the year in which they entered the OTD program.

Program Emphasis

The OTD program at Western New England University is responding to the national and international call for changing the way healthcare is delivered, and the way healthcare professionals are educated by emphasizing:
• population health perspectives that focus on community health, wellness and prevention, and health literacy;
• innovative interprofessional practice models in traditional and community-based health settings that focus on collaborative teams;
• interprofessional education/practice research applications that permit faculty and students to develop as applied scholars of teaching and practice;
• practitioner, leader, and scholar roles and competencies to revolutionize the delivery of inclusive, equitable, client-centered, evidence-based, culturally-competent, and distinctive occupational therapy practice.

Program Outcomes

A. Academic Division Goals:

1. Develop and implement an innovative, entry-level Doctor of Occupational Therapy (OTD) Program that prepares entry-level graduates for leadership roles in a global healthcare marketplace, by educating them to be: responsive to diversity; culturally sensitive; population health-focused; and outcomes-driven healthcare practitioners.
2. Ensure that a critical outcome of the OTD program is that graduates are provided with a conceptual framework and applied strategies to excel at client-centered, evidence-based, collaborative interprofessional practice, as a means to innovatively transform the way that clients receive care in current medical, educational and community-based settings
3. Academically develop and support a high-quality graduate occupational therapy faculty membership who will excel in teaching and mentorship, scholarship, and professional service roles in ways that will enhance the reputation of the Department, the COPHS, and Western New England University (WNE).
4. Enhance the image and visibility of the Department of Occupational Therapy within College of Pharmacy and Health Sciences, the WNE campus, and the larger external community.

B. Student Learning Outcomes:
By demonstrating the application of the curriculum design themes and threads, OTD Students will:

1. Interprofessional Practice/Education & Diversity Themes and Autonomy/Identity Thread:

   · Articulate the philosophical, theoretical, and conceptual foundations upon which the occupational therapy process is based.

   · Define the value of occupations to performance and participation in life.

   · Exemplify the profession's core values/principles.

   · Design and provide competent, considerate, and collaborative occupational therapy services for diverse populations within both traditional and non-traditional settings.

   · Represent occupational therapy as collaborative members of intraprofessional and interprofessional teams.

2. Population Health/Cultural Competence Themes and Clinical Excellence Thread:

   · Apply clinical reasoning (procedural, interactive, narrative, ethical, scientific, pragmatic) to plan and deliver occupation-based and evidence-driven occupational therapy.

   · Design and provide direct and indirect services such as screening, evaluation, planning, intervention, consultation, advocacy, & policy/program development.

   · Demonstrate cultural awareness and humility in professional and interpersonal activities.

   · Demonstrate an understanding of the principles, and implement the corresponding practices necessary to focus on the quadruple-aim of health care, to improve the health of populations, enhance the experience and outcomes of individual clients, reduce the cost of care for the benefit of individuals and communities, and improve healthcare team wellbeing.

   · Utilize conceptual models to develop occupational therapy programs that are focused on prevention, wellness, primary care, health literacy, and reducing health disparities.
   in existing settings and emerging practice settings.

3. Technology/Health Literacy Themes & Scholarship Thread:

   · Employ technology to engage students, collaborators, and consumers in coordination of services, to: improve access to care; reduce health disparities; support quality of life; and improve personal and population health needs.

   · Utilize specific learning platforms and other technology to foster health literacy by providing access to general health care information (e.g. library databases; on-line or cellular applications), and individual-specific health information (e.g. electronic health records or telehealth applications) in a variety of contexts.

   · Gather, analyze, and interpret the results of evaluations and scholarly projects that will provide benefit to individual consumers and the health of populations.

4. Multiple Curriculum Design Themes & Leadership Thread:

   · Synthesize knowledge from preparatory coursework to support the development of a doctoral experiential capstone project.

   · Engage in leadership development by collaborating with faculty and site mentors to integrate didactic learning, experiential education and scholarship experience in a community setting.

   · Complete an evidence-based professional paper and deliver a professional presentation (e.g., manuals; policy documents; publications) that represent the findings and recommendations of the doctoral experiential capstone project.

Admission Requirements

- A baccalaureate degree from an accredited institution of higher education must be completed prior to matriculation into the OTD program.
- An undergraduate GPA of 3.0 (4.0 scale) is preferred for admission. Candidates with a lower GPA are encouraged to apply and will be considered on a case-by-case basis.
- The GRE is not required for admission, however, GRE scores for testing within the last five years will be considered if submitted.
- Recommendations: applicants are required to enter a minimum of three evaluator names within their application; it is preferred that one recommendation be from a professor. Additional recommendations should be from individuals with knowledge of your educational and/or professional history. (Current WNE students are not required to provide recommendations.)
- Personal Statement: applicants must submit the standard personal statement which should address why you selected OT as a career and how an occupational therapy degree relates to your immediate and long-term professional goals. Describe how your personal, educational, and professional background will help you to achieve your goals.
- Observation Hours: No minimum number of hours; it is highly recommended that prospective students observe more than one practice area or population. Candidates must complete and upload signed observation forms within the Documents Section of their OTCAS application.

Prerequisite Coursework Requirements

- Human Anatomy and Physiology I and II (8 credits)
- Developmental Psychology or Lifespan Development
- Abnormal Psychology
- Statistics or any research-based course

For a complete overview of the Admissions requirements, please visit www1.wne.edu/pharmacy-and-health-sciences/admissions/otd/admissions-requirements.cfm.

Program Structure

The OTD program is a full-time program completed over 8 consecutive semesters including summers. The 109 credit curriculum will include:
• Level I Fieldwork (five 1-credit courses over five semesters)
• Level II Fieldwork (960 hours)
• Doctoral Experiential Capstone (640 hours)

The program combines opportunities for classroom learning, the development of performance laboratory skills, and on-site practice experience (i.e. Level I & Level II Fieldwork). The program integrates sequential course content with a series of five Level I Fieldwork experiences (Year 1 and 2), providing a strong foundation for Level II Fieldwork (Years 2 and 3), and the Doctoral Experiential Capstone (Year 3, Semester 8). Level II Fieldwork must be completed within 2 years of completing entry-level OTD coursework. The curriculum permits students to develop entry-level skills in current and emerging occupational therapy practice areas. The doctoral experiential capstone takes place at an off-campus site, and provides students with advanced skills beyond generalist practice in areas of leadership, research, advocacy and program development/implementation/evaluation.

The curriculum design includes four primary professional themes: Leadership; Scholarship; Clinical Excellence; and Autonomy/Identity. Evolving from these broad themes are the core interwoven threads upon which the curriculum is built. The threads are: Interprofessional Education/Practice; Information/Assistive Technology; Health Literacy, Diversity, and Cultural Competence; and Population/Community Based Health Practices. A series of course sequences are designed to tie the threads into a complete doctoral curriculum. The course sequences include: Occupational Performance (two courses each in Adult Practice, Lifespan, Children and Youth, and Population Health and Interprofessional Practice); Research/Evidence-Based Practice 1 and 2; Level I fieldwork 1 through 5; Level II Fieldwork 1 and 2; and Doctoral Experiential Development and Mentorship 1 through 4.

Accreditation

In December, 2019, the Accreditation Council for Occupational Therapy Education (ACOTE) granted the WNE OTD Program accreditation for the maximum length of time through academic year 2026-2027, for having achieved full compliance with the academic standards. The American Occupational Therapy Association (AOTA) is located at 6116 Executive Blvd., Suite 200, North Bethesda, MD 20852-4929. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its web address is www.acoteonline.org.

OTD Degree Requirements Year 1

Fall 1 Degree Requirements List

OTD 500	Occupational Therapy/Occupational Science	2 cr.
OTD 504	Foundations of Occupational Therapy Practice	2 cr.
OTD 506	Group Interventions & Therapeutic Use of Self	2 cr.
OTD 509	Functional Anatomy & Kinesiology	4 cr.
OTD 512	Evaluation: Occupational Profile and Analysis of Occupations	2 cr.
OTD 517	Occupational Performance: Mental Health	4 cr.
OTD 518	Level IA Fieldwork Experience	1 cr.

Subtotal: 17

Spring 1 Degree Requirements List

OTD 523	Assessment: Theory and Measures	2 cr.
OTD 525	Research/Evidence-Based Practice 1	3 cr.
OTD 527	Occupational Performance: Acute & Chronic Care OT	4 cr.
OTD 531	Clinical Applications of Neuroscience	4 cr.
OTD 537	Occupational Performance: Post-Acute and Outpatient OT	4 cr.
OTD 539	Level IB Fieldwork Experience	1 cr.

Subtotal: 18

Summer 1 Degree Requirements List

OTD 541	Doctoral Experiential 1: Needs Assessment & Program Development	2 cr.
OTD 544	Doctoral Experiential 1: Mentorship Seminar	1 cr.
OTD 545	Population Health & Interprofessional Practice: Children & Youth	2 cr.
OTD 547	Occupational Performance: Infants & Young Children	4 cr.
OTD 549	Level 1C Fieldwork Experience	1 cr.

Subtotal: 10

Subtotal: 45

OTD Degree Requirements Year 2

Fall 2 Degree Requirements List

OTD 627	Transformational Management	2 cr.
OTD 628	Leadership Development & Entrepreneurship	2 cr.
OTD 631	Doctoral Experiential 2: Proposal Development	3 cr.
OTD 634	Doctoral Experiential 2: Mentorship Seminar	2 cr.
OTD 635	Research/Evidence-Based Practice 2	3 cr.
OTD 637	Occupational Performance: Childhood & Adolescence	4 cr.
OTD 639	Level 1D Fieldwork Experience	1 cr.

Subtotal: 17

Spring 2 Degree Requirements List

OTD 645	Population Health and Interprofessional Practice: Adult & Aging	2 cr.
OTD 649	Level 1E Fieldwork Experience	1 cr.
OTD 651	Doctoral Experiential 3: Pre-Implementation Planning	3 cr.
OTD 652	Comprehensive Exam Preparation	1 cr.
OTD 653	Professionalism in OT Practice	2 cr.
OTD 654	Doctoral Experiential 3: Mentorship Seminar	3 cr.
OTD 657	Occupational Performance: Community-Based OT	4 cr.

Subtotal: 16

Summer 2 Degree Requirements List

OTD 675	Level II Fieldwork 1	9 cr.

Subtotal: 9

Subtotal: 42

OTD Degree Requirements Year 3

Fall 3 Degree Requirements List

OTD 775	Level II Fieldwork 2	9 cr.

Subtotal: 9

Spring 3 Degree Requirements List

OTD 781	Doctoral Experiential 4: Implementation/Capstone	10 cr.
OTD 784	Doctoral Experiential 4: Mentorship Seminar	3 cr.

Subtotal: 13

Subtotal: 22

Total Credit Hours: 109

PHAR.PHAR.PHRMD - Doctor of Pharmacy

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
Doctor of Pharmacy

Program Code ~
PHAR.PHAR.PHRMD

Degree Designation ~
PHRMD - Doctor of Pharmacy

Academic Level ~
PHAR - Pharmacy

Program Short Description

The Doctor of Pharmacy curriculum prepares learners to enter the practice of pharmacy as general practitioners in a variety of settings and to deliver optimal patient care to diverse populations. This comprehensive educational program transitions dependent learners into independent professional practitioners who are dedicated to serving the community in which they live. The curriculum provides opportunities to develop the knowledge, skills, and attitudes necessary to become licensed professionals who will provide optimal patient care in a caring, collaborative, safe, and culturally aware manner.

Requirements

Free Form Requirements
Doctor of Pharmacy Major

Program of Study

Program Outcomes

General Abilities

Thinking and Learning
The competent graduate can obtain, understand, analyze, evaluate, and synthesize information in order to problem-solve and make informed, rational, and responsible decisions. The graduate takes responsibility for the acquisition of new knowledge through the process of self-assessment and reflection and a sense of accountability.

Social and Cultural Awareness
The competent graduate will have an awareness and understanding of the differences present in a pluralistic society in order to work effectively and collaboratively to produce better outcomes.

Active Citizenship and Leadership
The competent graduate understands his/her role as a member of the civic and professional community, taking steps to actively contribute and lead to produce betterments.

Personal Judgment (Legal and Ethical)
The competent graduate recognizes the ethical and legal dimensions of pharmacy practice and health policy and makes decisions and actions based on integrity, responsibility, compassion, empathy, and respect.

Communication
The competent graduate listens attentively and communicates clearly, utilizing situation appropriate verbal, nonverbal, and written methods, with patients, caregivers, families, and health care team members.

Professional Abilities
Knowledge Base
The competent graduate has a solid foundation of scientific knowledge and is able to apply basic science in the practice of pharmacy, especially with regard to safe medication usage.

Patient-Centered Care
The competent graduate provides patient-centered care in collaboration with interprofessional health care providers as well as the patient and their caregivers in order to produce optimal medication therapy outcomes. The competent graduate provides pharmacy care based on sound therapeutic principles and evidence-based data.

Population-Based Care
The competent graduate provides therapeutic guidance in the provision of population-based care as part of an interprofessional collaboration. The competent graduate develops and implements population-specific programs and protocols based on sound therapeutic principles and evidence based data.

Systems Management
The competent graduate uses and manages health care resources in cooperation with patients, health care providers, and administrative and support personnel in the professional environment in order to evaluate, implement, and provide patient care services, including pharmaceutical dispensing, with the goal of improving patient outcomes. The health care resources a graduate may use and manage include: human, physical, medical, informational, and technological resources as well as medical use systems.

Public Health and Wellness
The competent graduate will proactively promote good health and disease prevention in cooperation with patients, communities, at-risk populations, and other health care professionals for the public welfare.

Collaboration and Teamwork
The competent graduate has the ability to actively participate as a healthcare team member to provide patient care and population care and effectively manage healthcare systems. The graduate demonstrates mutual respect and understanding and values the roles of the healthcare team in the provision of patient care.

Prerequisite Coursework

Recommended Pre-Pharmacy Coursework:

- General Biology 1 & 2 with labs
- Human Anatomy and Physiology I & 2 with labs
- Microbiology
- General Chemistry 1 & 2 with labs
- Organic Chemistry 1 & 1 with labs
- Physics with lab
- Calculus
- Statistics
- English Composition
- Psychology
- Economics
- Social Science elective

Doctor of Pharmacy - required coursework and Suggested Sequence of Courses

First Professional Year - Fall Semester

PHAR 510	Intro to Pharmacy	1 cr.
PHAR 511	Drug Information & Informatics	2 cr.
PHAR 512	Immunology	3 cr.
PHAR 513	Biochemistry	3 cr.
PHAR 514	Pharmaceutics I	2 cr.
PHAR 516	Pharmacy Ethics	3 cr.
PHAR 517	Healthcare Policy & Delivery	2 cr.
PHAR 518	Pharmaceutical Calculations	2 cr.
PHAR 580	Professional Development I	0 cr.

Subtotal: 18

First Professional Year - Spring Semester

PHAR 520	Healthcare Communications	3 cr.
PHAR 522	Pathophysiology	3 cr.
PHAR 523	Genetics & Genomics	2 cr.
PHAR 524	Pharmaceutics II	2 cr.
PHAR 525	Pharmaceutics II Lab	1 cr.
PHAR 526	Pharmacy Outcomes	2 cr.
PHAR 527	Self-Care Therapeutics	3 cr.
PHAR 528	Intro to Pharmacy & Health Prof II	1 cr.
PHAR 540 PHAR 541	IPPE Health System or IPPE Community	2 cr. 2 cr.
PHAR 580	Professional Development I	0 cr.

Subtotal: 19

Second Professional Year - Fall Semester

PHAR 610	Principles of Pharmacokinetics	4 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHAR 612	Principles of Medicinal Chemistry	3 cr.
PHAR 614	Patient Assessment Skills Lab	1 cr.
PHAR 615	Professional Pharmacy Practice Lab	1 cr.
PHAR 616	Practice Management I	2 cr.
PHAR 642 PHAR 643	IPPE Community or IPPE Health System	2 cr. 2 cr.
PHAR 6XX	Pharmacy Elective	3 cr.
PHAR 680	Professional Development II	0 cr.

Subtotal: 19

Second Professional Year - Spring Semester

PHAR 621	Integrated Pharmacy Care- Renal	2 cr.
PHAR 622	Integrated Pharmacy Care- Respiratory	2 cr.
PHAR 623	Integrated Pharmacy Care - CVS I	2 cr.
PHAR 624	Integrated Pharmacy Care - CVS II	2 cr.
PHAR 625	Applied Pharmacy Care I	1 cr.
PHAR 626	Practice Management II	2 cr.
PHAR 627	Sterile Products Lab	1 cr.
PHAR 628	Drug Lit Eval & Evidence-Based Practice	3 cr.
PHAR 6XX	Pharmacy Elective	3 cr.
PHAR 680	Professional Development II	0 cr.

Subtotal: 18

Third Professional Year - Fall Semester

PHAR 710	Integrated Pharmacy Care-GI/Nutr/Hep	3 cr.
PHAR 711	Integrated Pharmacy Care-Endo/Repro/Gu	3 cr.
PHAR 712	Integrated Pharmacy Care-Infect Dis I	2 cr.
PHAR 713	Integrated Pharmacy Care-Infect Dis II	2 cr.
PHAR 715	Applied Pharmacy Care II	1 cr.
PHAR 718	Pharmacy Law I	2 cr.
PHAR 744	IPPE Health System	2 cr.
	or	
PHAR 745	IPPE Community	2 cr
PHAR 7XX	Pharmacy Elective	3 cr.
PHAR 780	Professional Development III	0 cr.

Subtotal: 18

Third Professional Year - Spring Semester

PHAR 720	Integrated Pharmacy Care-Derm/Musc	2 cr.
PHAR 721	Integrated Pharmacy Care-Neuro/CNS	2 cr.
PHAR 722	Integrated Pharmacy Care-Psych	3 cr.
PHAR 723	Integrated Pharmacy Care-Heme/Onc	3 cr.
PHAR 724	Integrated Pharmacy Care-Spec Population	2 cr.
PHAR 725	Applied Pharmacy Care III	1 cr.
PHAR 727	Patient Care Management	3 cr.
PHAR 728	Pharmacy Law II	2 cr.
PHAR 780	Professional Development III	0 cr.

Subtotal: 18

Fourth Professional Year

PHAR 800	APPE Ambulatory Care	6 cr.
PHAR 801	APPE Acute Care	6 cr.
PHAR 802	APPE Community Care	6 cr.
PHAR 803	APPE Institutional	6 cr.
PHAR 804	APPE Elective	6 cr.
PHAR 805	APPE Elective	6 cr.
PHAR 880	Professional Development IV	0 cr.

Subtotal: 36

Subtotal: 146

PHAR.PHARO.PHRMD - Doctor of Pharmacy, Distance Pathway

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
Doctor of Pharmacy, Distance Pathway

Program Code ~
PHAR.PHARO.PHRMD

Degree Designation ~
PHRMD - Doctor of Pharmacy

Academic Level ~
PHAR - Pharmacy

Program Short Description

The College of Pharmacy and Health Sciences will offer a distance pathway to the Doctor of Pharmacy (PharmD) degree for those who desire more flexibility through online and limited campus instruction. The program prepares learners to be general practitioners in a variety of settings and to deliver optimal patient care to diverse populations. This comprehensive educational program transitions dependent learners into independent professional practitioners who are dedicated to serving the community in which they live. The curriculum provides opportunities to develop the knowledge, skills, and attitudes necessary to become licensed professionals who will provide optimal patient care in a caring, collaborative, safe, and culturally aware manner.

Requirements

Free Form Requirements
Doctor of Pharmacy

Degree Requirements-Distance Pathway

Program Description:

The College of Pharmacy and Health Sciences offers a distance pathway to the Doctor of Pharmacy (PharmD) degree for those who desire more flexibility through online and limited campus instruction. The program prepares learners to be general practitioners in a variety of settings and to deliver optimal patient care to diverse populations. This comprehensive educational program transitions dependent learners into independent professional practitioners who are dedicated to serving the community in which they live. The curriculum provides opportunities to develop the knowledge, skills, and attitudes necessary to become licensed professionals who will provide optimal patient care in a caring, collaborative, safe, and culturally aware manner.

Required Coursework and Sequence of Courses:

First Professional Year - Fall Semester

PHAR 510	Intro to Pharmacy	1 cr.
PHAR 511	Drug Information & Informatics	2 cr.
PHAR 512	Immunology	3 cr.
PHAR 513	Biochemistry	3 cr.
PHAR 514	Pharmaceutics I	2 cr.
PHAR 516	Pharmacy Ethics	3 cr.
PHAR 517	Healthcare Policy & Delivery	2 cr.
PHAR 518	Pharmaceutical Calculations	2 cr.
PHAR 580	Professional Development I	0 cr.

Subtotal: 18

First Professional Year - Spring Semester

PHAR 520	Healthcare Communications	3 cr.
PHAR 522	Pathophysiology	3 cr.
PHAR 523	Genetics & Genomics	2 cr.
PHAR 524	Pharmaceutics II	2 cr.
PHAR 525	Pharmaceutics II Lab	1 cr.
PHAR 526	Pharmacy Outcomes	2 cr.
PHAR 527	Self Care Therapeutics	3 cr.
PHAR 528	Intro to Pharmacy & Health Prof II	1 cr.
PHAR 580	Professional Development I	0 cr.

Subtotal: 17

First Professional Year - Summer

PHAR 644 - PHAR 645	IPPE Community or IPPE Health System	3 cr. - 3 cr.

Subtotal: 3

Second Professional Year - Fall Semester

PHAR 610	Principles of Pharmacokinetics	4 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHAR 612	Principles of Medicinal Chemistry	3 cr.
PHAR 614	Patient Assessment Skills Lab	1 cr.
PHAR 615	Professional Pharmacy Practice Lab	1 cr.
PHAR 616	Practice Management I	2 cr.
PHAR 6XX	Pharmacy Elective	3 cr.
PHAR 680	Professional Development II	0 cr.

Subtotal: 17

Second Professional Year - Spring Semester

PHAR 621	Integrated Pharmacy Care- Renal	2 cr.
PHAR 622	Integrated Pharmacy Care- Respiratory	2 cr.
PHAR 623	Integrated Pharmacy Care - CVS I	2 cr.
PHAR 624	Integrated Pharmacy Care - CVS II	2 cr.
PHAR 625	Applied Pharmacy Care I	1 cr.
PHAR 626	Practice Management II	2 cr.
PHAR 627	Sterile Products Lab	1 cr.
PHAR 628	Drug Lit Eval & Evidence-Based Practice	3 cr.
PHAR 6XX	Pharmacy Elective	3 cr.
PHAR 680	Professional Development II	0 cr.

Subtotal: 18

Second-Professional-Year - Summer

PHAR 644 - PHAR 645	IPPE Community or IPPE Health System	3 cr. - 3 cr.

Subtotal: 3

Third Professional Year - Fall Semester

PHAR 710	Integrated Pharmacy Care-GI/Nutr/Hep	3 cr.
PHAR 711	Integrated Pharmacy Care-Endo/Repro/Gu	3 cr.
PHAR 712	Integrated Pharmacy Care-Infect Dis I	2 cr.
PHAR 713	Integrated Pharmacy Care-Infect Dis II	2 cr.
PHAR 715	Applied Pharmacy Care II	1 cr.
PHAR 718	Pharmacy Law I	2 cr.
PHAR 7XX	Pharmacy Elective	3 cr.
PHAR 780	Professional Development III	0 cr.

Subtotal: 16

Third Professional Year - Spring Semester

PHAR 720	Integrated Pharmacy Care-Derm/Musc	2 cr.
PHAR 721	Integrated Pharmacy Care-Neuro/CNS	2 cr.
PHAR 722	Integrated Pharmacy Care-Psych	3 cr.
PHAR 723	Integrated Pharmacy Care-Heme/Onc	3 cr.
PHAR 724	Integrated Pharmacy Care-Spec Population	2 cr.
PHAR 725	Applied Pharmacy Care III	1 cr.
PHAR 727	Patient Care Management	3 cr.
PHAR 728	Pharmacy Law II	2 cr.
PHAR 780	Professional Development III	0 cr.

Subtotal: 18

Fourth Professional Year - Summer or Fall or Spring

PHAR 800	APPE Ambulatory Care	6 cr.
PHAR 801	APPE Acute Care	6 cr.
PHAR 880	Professional Development IV	0 cr.

Subtotal: 12

Fourth Professional Year - Summer or Fall or Spring

PHAR 802	APPE Community Care	6 cr.
PHAR 803	APPE Institutional	6 cr.
PHAR 880	Professional Development IV	0 cr.

Subtotal: 12

Fourth Professional Year - Summer or Fall or Spring

PHAR 804	APPE Elective	6 cr.
PHAR 805	APPE Elective	6 cr.
PHAR 880	Professional Development IV	0 cr.

Subtotal: 12

Total Credit Hours: 146

PHAR.PHRGN.MS - MS in Pharmacogenomics

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
MS in Pharmacogenomics

Program Code ~
PHAR.PHRGN.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
PHAR - Pharmacy

Program Short Description

Pharmacogenomics is a fast-growing field that helps medical practitioners prescribe personalized treatment plans to patients based on how they may respond to medications due to their DNA sequence. Pharmacogenomics supports personalized or precision medicine, which explores a patient's genetics, environment, and lifestyle as a way to craft a treatment plan that will best suit the patient. The goal of this modern approach to medication therapy is to limit adverse effects while optimizing response and beneficial outcomes. The MS in Pharmacogenomics degree--the only degree of this type in New England--prepares graduates for careers that will revolutionize the delivery of healthcare and make the most of emerging opportunities from basic laboratory research to clinical implementation of personalized healthcare.

Requirements

Free Form Requirements
Master of Science in Pharmacogenomics

Overview

A 41 credit MS in Pharmacogenomics degree (known as the “MSPGx program”), offered by the Department of Pharmaceutical and Administrative Sciences in the College of Pharmacy and Health Sciences, can be completed in as few as three full-time semesters (fall, spring, summer). With an MS in Pharmacogenomics from WNE, you will be ready to make the most of emerging opportunities from basic or industrial research to clinical implementation through a well-rounded program that aligns with your personal career goals.

Pharmacogenomics is a fast-growing field that helps medical practitioners prescribe personalized treatment plans to patients based on how they may respond to medications due to their DNA sequence. Pharmacogenomics supports personalized or precision medicine, which explores a patient’s genetics, environment, and lifestyle as a way to design a treatment plan that will best suit the patient. The goal of this modern approach to medication therapy is to limit adverse effects, while optimizing response and beneficial outcomes. The design of the WNE Master of Science in Pharmacogenomics has purposely integrated all major aspects of this field, from basic genetics to clinical implementation.

Program Outcomes

Students will be expected to fulfill the following primary goals and objectives prior to graduation, which will demonstrate competency in core knowledge areas and relevant skill sets:

1. To comprehend and have a thorough understanding of fundamental biological systems, processes, and core principles that are critical to proficiency in the field of pharmacogenomics, including knowledge of basic cell biology, biochemistry, genetics, and other biological systems.
2. To comprehend and have a thorough understanding of pharmacogenomics and other areas critical to developing proficiency in this field, including pathophysiology, pharmacology, healthcare outcomes, and medical genetics.
3. To gain an understanding and proficiency in basic pharmaceutical and molecular genetic techniques.
4. To achieve proficiency in understanding and applying biologically relevant statistical analysis to research methodology, and the interpretation and analysis of data from genetic sequencing.
5. To be abreast of current scientific advances in the fields of pharmaceutical sciences and pharmacogenomics.
6. To achieve proficiency in skills such as hypothesis development and experimental design.
7. To acquire skills needed for the implementation of pharmacogenomics in a clinical setting.
8. To develop proficiency in oral and written communication related to dissemination of pharmacogenomics concepts and interprofessional collaboration.

MSPGx Admissions Requirements

Applications to the MSPGx program must be submitted via PharmGrad.org.

Application Requirements:

- Bachelor's degree: A bachelor's degree from a regionally accredited college or university.
- Preferred Prerequisites: A previous genetics course.
- Preferred minimum GPA: Undergraduate GPA of at least 3.000 or foreign equivalent.
- Transcripts: Transcripts from all colleges attended must be submitted to PharmGrad. Students already enrolled at WNE must request their WNE transcript be submitted to PharmGrad to complete their application.
- Recommendations: A minimum of two evaluator names must be submitted within your PharmGrad application; one recommendation must be from a professor.
- A current résumé or CV must be uploaded to the Documents section within PharmGrad.

English-language test scores are required for all applicants who are non-native English speakers who have resided in a country, where English is the primary language, for less than 10 years, UNLESS the applicant has earned or is degree pending (will have earned by anticipated matriculation date) a bachelor's degree or graduate degree following three or more years of campus-based post-secondary instruction in the United States. Applicants can use any of the following standardized tests to meet our English language requirement:
- TOEFL—80 IBT
- IELTS—6.5
- PTE Academic—56
- STEP Eiken—1
- iTEP—4.5
- Duolingo—105 DET

Countries in which English language testing would be waived because it is the primary language: Antigua and Barbuda, Australia, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Ireland, Jamaica, New Zealand, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and the United Kingdom

Qualified candidates may be invited to participate in an interview and complete a writing sample.

Course Sequence

First Year - Fall Semester

PHAR 513	Biochemistry	3 cr.
PHAR 516	Pharmacy Ethics	3 cr.
PHAR 611	Principles of Pharmacology	3 cr.
PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHRSC 551	Introduction to Genetics and Genetic Counseling	3 cr.

Subtotal: 16

First Year - Spring Semester

PHAR 522	Pathophysiology	3 cr.
PHAR 523	Basic Principles of Genetics & Genomics	2 cr.
PHAR 526	Pharmacy Outcomes	2 cr.
PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 552	Advanced Genetics and Genomics	1 cr.
PHRSC 553	Genetic Data Analysis - Bioinformatics	3 cr.

Subtotal: 13

First Year - Summer Semester

PHRSC 554	Applied Pharmacogenomics Experience	6 cr.
PHRSC 555	Clinical Pharmacogenomics Experience	6 cr.

Subtotal: 12

Total Credit Hours: 41

Degree completion requirements:

1. All courses passed ("C" or better), with no more than two courses with a grade of "C" or "C+'" and
2. Attain an overall grade point average of 3.000 or higher.

PHAR.PHRSC.MS - MS in Pharmaceutical Sciences

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
MS in Pharmaceutical Sciences

Program Code ~
PHAR.PHRSC.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
PHAR - Pharmacy

Program Short Description

The MS in Pharmaceutical Sciences is the ideal degree for students and professionals exploring careers in the pharmaceutical industry or looking to enhance their competitiveness for medical/doctoral studies with a thesis based research experience.

Requirements

Free Form Requirements
MS in Pharmaceutical Sciences

Overview

A 38-credit MS in Pharmaceutical Sciences degree(known as the "MSPS" program), offered by the Department of Pharmaceutical and Administrative Sciences in the College of Pharmacy and Health Sciences, can be completed in five full-time semesters (fall, spring, summer, fall, spring). Students can customize the focus area of their research degree through available elective courses and by the selection of a thesis advisor in a specific field of medicinal chemistry, pharmacology, pharmaceutics, neuropharmacology, pharmacogenomics, biomedical sciences, or cosmeceutical sciences. The available elective research sequences for the MSPS program are: Pharmacology or Neuropharmacology; Medicinal Chemistry and Drug Development; Pharmaceutics and Drug Delivery; Pharmacogenomics; Biomedical Sciences; and Pharmacoeconomics and Healthcare Data Analytics.

Program Outcomes

Students will be expected to achieve the following primary outcomes prior to graduation, which will demonstrate competency in core knowledge areas and relevant skill sets:
1. To comprehend and have a thorough understanding of fundamental biological systems, processes and core principles that are critical to proficiency in the pharmaceutical sciences.
2. To comprehend and have a thorough understanding of pharmaceutical sciences and focus areas critical to developing proficiency in this field, including pathophysiology, pharmacology, medicinal chemistry and drug development, pharmaceutics and drug delivery, pharmacoeconomics and health care delivery.

3. To gain an understanding and proficiency in basic pharmaceutical techniques.
4. To achieve proficiency in understanding and applying biologically relevant statistical analysis to research methodology and experimental data interpretation.
5. To be abreast of current scientific advances in the pharmaceutical sciences.
6. To develop proficiency in skills such as hypothesis testing in a focus area of the program.
7. To develop proficiency in executing aims of a research project based on specifically developed hypotheses.
8. To develop proficiency in the analysis of experimental data and its interpretation acquired in fulfillment of a hypothesis-driven research project.
9. To develop proficiency in presentation of research data acquired in fulfillment of a hypothesis-driven research project.
10. To develop proficiency in synthesizing experimental data from a research project and utilizing it to draw conclusions about the original hypothesis.

MSPS Admissions Requirements

Application Requirements:

- Bachelor's degree: A bachelor's degree from a regionally accredited college or university.
- Preferred minimum GPA: Undergraduate GPA of 3.00 or foreign equivalent is preferred.
- Transcripts: Transcripts from all colleges attended must be submitted to PharmGrad. Students already enrolled at WNE must request their WNE transcript be submitted to PharmGrad to complete their application.
- A current résumé or Curriculum Vitae must be uploaded to the Documents section within PharmGrad.
- Recommendations: A minimum of two evaluator names must be submitted within your PharmGrad application; one recommendation must be from a professor.
- English-language test scores are required for all applicants who are non-native English speakers who have resided in a country, where English is the primary language, for less than 10 years unless the applicant has earned or is degree pending (will have earned by anticipated matriculation date) a bachelor's degree or graduate degree following three or more years of campus-based post-secondary instruction in the United States. PharmD applicants can use any of the following standardized tests to meet our English language requirement:
  - TOEFL—80 IBT
  - IELTS—6.5
  - PTE Academic—56
  - STEP Eiken—1
  - iTEP—4.5
  - Duolingo—105 DET

  Countries in which English language testing would be waived because it is the primary language: Antigua and Barbuda, Australia, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Ireland, Jamaica, New Zealand, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, United Kingdom

  Qualified candidates may be invited to participate in an interview and complete a writing sample.

Core Course Requirements

- Seminar and Journal Club 1, 2 (2 credits, 1 per semester in first year)
- Principles of Pharmacology (3 credits)
- Responsible Conduct of Research (3 credits)
- Data Analysis and Biostatistics (3 credits)
- Analytical Techniques (1 credit)
- Advanced Pharmacology & Drug Action (3 credits)
- Scientific Communications (3 credits)
- Thesis Research 1, 2, 3 (3 courses, 8 credits total)

Subtotal: 26

Electives

* Electives selected based on elective sequence and consultation with thesis advisor.

Subtotal: 12

Total Credit Hours: 38

Course Sequence

First Year - Fall Semester

PHRSC 510	Seminar & Journal Club 1	1 cr.
PHRSC 515	Principles of Pharmacology	3 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHRSC 529	Responsible Conduct of Research	3 cr.
XXX xxx	Sequence Elective(s)	2-4 cr.

Subtotal: 12-14

First Year - Spring Semester

PHRSC 520	Seminar & Journal Club 2	1 cr.
PHRSC 526	Analytical Techniques Lab	1 cr.
PHRSC 557	Advanced Pharmacology & Drug Action	3 cr.
XXX xxx	Sequence Elective(s)	5-6 cr.

Subtotal: 10-11

Second Year - Summer Semester

PHRSC 528	Thesis Research 1	2 cr.

Subtotal: 2

Second Year - Fall Semester

PHRSC 618	Thesis Research 2	3 cr.
PHRSC 630	Scientific Communication	3 cr.
XXX xxx	Sequence Elective(s)	3-4 cr.

Subtotal: 9-10

Second Year - Spring Semester

PHRSC 628	Thesis Research 3	3 cr.

Subtotal: 3

Total Credit Hours: 38

MS in Pharmaceutical Sciences Sequence Electives

In both years of the MSPS program, there are a series of four to five "sequence elective" courses for which the students may choose one of the following sequences of courses, based on their research interests. Additional sequences are possible but must be made in consultation with the student's thesis advisor and committee.

Sequence Electives (F1=Fall, 1st year; S1=Spring, 1st year; F2=Fall, 2nd year)

Pharmacology/Neuropharmacology Sequence

F1-PHAR 612	Principles of Medicinal Chemistry or Elective	3 cr.
S1-PHAR 522	Pathophysiology	3 cr.
S1-PHAR 656	Drug Discovery & Development	3 cr.
F2-PHAR/PHRSC xxx	Thesis Advisor-Approved Elective	3 cr.

Medicinal Chemistry and Drug Development

F1-PHAR 612	Principles of Medicinal Chemistry	3 cr.
S1-PHAR 522	Pathophysiology or Elective	3 cr.
S1-PHAR 656	Drug Discovery & Development	3 cr.
F2-PHAR 513	Biochemistry	3 cr.

Pharmaceutics and Drug Delivery

F1-PHAR 514	Pharmaceutics I	2 cr.
S1-PHAR 524	Pharmaceutics II	2 cr.
S1-PHAR 525	Pharmaceutics II Laboratory	1 cr.
S1-PHAR 656	Drug Discovery & Development	3 cr.
F2-PHAR 610	Principles of Pharmacokinetics	4 cr.

Pharmacogenomics

F1-PHAR 513	Biochemistry	3 cr.
S1-PHRSC 553	Genetic Data Analysis – Bioinformatics	3 cr.
S1-PHAR 523	Principles of Genetics and Genomics	2 cr.
S1-PHRSC 552	Advanced Genetics and Genomics	1 cr.
F2-PHRSC 551	Intro to Genetics and Genetic Counseling	3 cr.

Biomedical Sciences

F1-PHAR 512	Immunology	3 cr.
S1-PHAR 522	Pathophysiology	3 cr.
S1-PHAR 523	Principles of Genetics and Genomics	2 cr.
S1-PHRSC 552	Advanced Genetics and Genomics	1 cr.
F2-PHAR/PHRSC xxx	Thesis Advisor-Approved Elective	3 cr.

Pharmacoeconomics and Healthcare Data Analytics

F1-PHAR 511	Drug Information and Informatics	2 cr.
F1-PHAR 517	Health Care Policy & Delivery	2 cr.
S1-PHAR 526	Pharmacy Outcomes	2 cr.
S1-PHAR 628	Literature Evaluation/Evidence Based Practice	3 cr.
F2-PHAR/PHRSC xxx	Thesis Advisor-Approved Elective	3 cr.

PHAR.PHRST.BS - BS in Pharmacy Studies

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci, Pharmacy Practice

Program Title ~
BS in Pharmacy Studies

Program Code ~
PHAR.PHRST.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The Pharmacy Studies program prepares students for pharmacy-related careers and gives students a strong foundation in the biomedical, pharmaceutical, administrative/ social/ behavioral, and clinical sciences .The program prepares students for other health-related fields, as well as graduate programs in biomedical or pharmaceutical sciences.

Requirements

Free Form Requirements
Pharmacy Studies Major

General Information

The Pharmacy Studies curriculum prepares students for pharmacy-related careers and enables a strong foundation in the biomedical, pharmaceutical, administrative/ social/ behavioral, and clinical sciences required in pharmacy. In addition, the curriculum prepares students for other health-related fields, as well as graduate programs in biomedical or pharmaceutical sciences.

Career Opportunities

Students who receive an undergraduate degree in Pharmacy Studies typically continue their studies at the doctoral level in Pharmacy (PharmD) or other advanced degrees in health-related professions or biomedical/pharmaceutical sciences. Graduates with this undergraduate degree may directly enter careers as pharmacy technicians or other pharmaceutical fields.

Program Outcomes

The competent graduate:

- Can obtain, understand, analyze, evaluate, and synthesize information in order to problem-solve and make informed, rational, and responsible decisions.
- Will have an awareness and understanding of the differences present in a pluralistic society in order to work effectively and collaboratively to produce better outcomes.
- Understands their role as a member of the civic and professional community, taking steps to actively contribute and lead to produce betterments.
- Recognizes the ethical and legal dimensions of pharmacy practice and health policy and makes decisions and actions based on integrity, responsibility, compassion, empathy, and respect.
- Listens attentively and communicates clearly, utilizing situation appropriate verbal, nonverbal, and written methods, with patients, caregivers, families, and healthcare team members.
- Has a solid foundation of scientific knowledge and is able to apply basic science in the practice of pharmacy, especially with regard to safe medication usage.
- Assists in providing patient-centered care in collaboration with a pharmacist and other interprofessional healthcare providers as well as the patient and their caregivers in order to produce optimal medication therapy outcomes.
- Assists in the provision of population-based care as part of an interprofessional collaboration. The competent graduate assists in the implementation of population-specific programs and protocols.
- Uses health care resources, including dispensing systems, under the supervision of a pharmacist and in cooperation with patients, health care providers, and administrative and support personnel, with the goal of improving patient outcomes.
- Assists in the promotion of good health and disease prevention in cooperation with patients, communities, at-risk populations, and other healthcare professionals for the public welfare.
- Has the ability to actively participate as a healthcare team member to assist in the provision of patient care and population care. The graduate demonstrates mutual respect and understanding and values the roles of the healthcare team in the provision of patient care.

  The healthcare resources a graduate may use include: human, physical, medical, informational, and technological resources as well as medical use systems.

  Program of Study

  The College of Pharmacy and Health Sciences recognizes a curriculum leading to the degree of Bachelor of Science in Pharmacy Studies.

  This degree opportunity allows those who have completed their pre-professional coursework at Western New England University to earn an undergraduate degree after 4 years of study.

Minors

The course work for a degree may include one or more of the minors offered by the University. A minor may not be completed in the same discipline as the major. Descriptions of the requirements for the minors (p. 156) are listed. Students wishing to take a minor must complete a form in the Office of the Dean, College of Arts and Sciences, no later than the beginning of the final semester.

Degree Requirements

The BS in Pharmacy Studies will be awarded following completion of the following coursework and curricular requirements:

1. 120 total semester credit hours.

2. Meet the residency requirement. Note the residency requirement is waived for individuals completing their first and second year course requirements at an institution with an articulation agreement with the doctor of pharmacy program.
3. Successful completion of all freshman and sophomore coursework (70 semester credit hours).
4. Successful completion of 50 credits of professional pharmacy coursework.
5. Completion of all General University Requirements.
6. Attain a minimum cumulative GPA of 2.000.

Required Pre-Professional and Suggested Sequence of Courses

Freshman Year - Fall Semester

PHAR 100	First Year Seminar	1 cr.
PSY 101	Introduction to Psychology	3 cr.
CHEM 105	General Chemistry I	4 cr.
BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.

Subtotal: 18

Freshman Year - Spring Semester

PH XXX	Ethical Perspective	3 cr.
CHEM 106	General Chemistry II	4 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 121	Introductory Probability and Statistics	3 cr.
ENGL 133	English Composition II	3 cr.

Subtotal: 17

Sophomore Year - Fall Semester

PHYS 123	Physics of the Life Sciences I	4 cr.
or CS 131	Computing Arts & Sciences	3 cr.
or CS 132	Principles of Computing	3 cr.
or BAIM 102	Problem Solving w/Business Tools	3 cr.
PHAR 2XX	Medical Terminology	2 cr.
CUL XXX	Global Cultural Perspective (CA)	3 cr.
PHAR 510	Intro to Pharm and Health Prof	1 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
BIO 215	Anatomy and Physiology I	4 cr.

Subtotal: 17-18

Sophomore Year - Spring Semester

EC 111	Principles of Microeconomics	3 cr.
BIO 203	Microbiology	4 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
BIO 216	Anatomy and Physiology II	4 cr.
HIST xxx	History Elective	3 cr.

Subtotal: 18

Junior Year

Offered within the first and second professional years of the Doctor of Pharmacy program and suggested sequence (50 credit hours)*

First Professional Year—Fall Semester

PHAR 511*	Drug Information & Informatics	2 cr.
PHAR 512	Immunology	3 cr.
PHAR 513	Biochemistry	3 cr.
PHAR 514*	Pharmaceutics I	2 cr.
PHAR 516*	Pharmacy Ethics	3 cr.
PHAR 517*	Health Care Policy & Delivery	2 cr.
PHAR 518*	Pharmaceutical Calculations	2 cr.
PHAR 580*	Professional Development I	0 cr.

Subtotal: 17

First Professional Year—Spring Semester

PHAR 520*	Healthcare Communication	3 cr.
PHAR 522*	Pathophysiology	3 cr.
PHAR 523	Genetics & Genomics	2 cr.
PHAR 524*	Pharmaceutics II	2 cr.
PHAR 525*	Pharmaceutics II Lab	1 cr.
PHAR 526*	Pharmacy Outcomes	2 cr.
PHAR 527*	Self Care Therapeutics	3 cr.
PHAR 528*	Intro to Pharmacy & Health Prof II	1 cr.
PHAR 540* or PHAR 541* or PHAR 380*	IPPE Health Services IPPE Community Pharmacy Externship	2 cr. 2 cr. 2 cr.
PHAR 580	Professional Development I	0 cr.

Subtotal: 19

Second Professional Year—Fall Semester

PHAR 610	Principles of Pharmacokinetics	4 cr.
PHAR 611*	Principles of Pharmacology	3 cr.
PHAR 612	Principles of Medicinal Chemistry	3 cr.
PHAR 614*	Patient Assessment Skills Lab	1 cr.
PHAR 615*	Professional Pharmacy Practice Lab	1 cr.
PHAR 616*	Practice Management	2 cr.
PHAR 642* or PHAR 643* or PHAR 480*	IPPE Community IPPE Health System Pharmacy Externship	2 cr. 2 cr. 2 cr.
PHAR ELEC*	Pharmacy Elective	3 cr.
PHAR 680*	Professional Development II	0 cr.

Subtotal: 19

Second Professional Year—Spring Semester

PHAR 621	Integrated Pharmacy Care-Renal	2 cr.
PHAR 622	Integrated Pharmacy Care-Respitory	2 cr.
PHAR 623	Integrated Pharmacy Care-CVS I	2 cr.
PHAR 624	Integrated Pharmacy Care-CVS II	2 cr.
PHAR 625*	Applied Pharmacy Care I	1 cr.
PHAR 626*	Practice Management II	2 cr.
PHAR 627*	Sterile Products Lab	1 cr.
PHAR 628*	Drug Lit Eval & Evidence-Based Practice	3 cr.
PHAR ELEC*	Pharmacy Elective	3 cr.
PHAR 680*	Professional Development II	0 cr.

Subtotal: 18

Total Credit Hours: 120

PHARB.BSBA - BSBA in Pharmaceutical Business

General

College/School
College of Business

Department(s) ~
Marketing

Program Title ~
BSBA in Pharmaceutical Business

Program Code ~
PHARB.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This major integrates the fields of pharmacy, healthcare and business while delivering a firm foundation in the sciences. You will develop the knowledge-base necessary for entry into the pharmaceutical, biotechnology, and medical diagnostic device industries.

PHCR.CERT - Grad Certificate in Pharmacy Clinical Research

General

College/School
College of Pharmacy & Health Sciences

Department(s) ~
Pharmaceutical & Admin Sci

Program Title ~
Grad Certificate in Pharmacy Clinical Research

Program Code ~
PHCR.CERT

Degree Designation ~
CERT - Certificate

Academic Level ~
PHAR - Pharmacy

Program Short Description

This 12-credit graduate Certificate in Clinical Research is offered by the Department of Pharmaceutical and Administrative Sciences in the College of Pharmacy and Health Sciences. The certificate assists PharmD students enter the world of clinical research, with two didactic courses and an Advanced Pharmacy Practice Experience ("APPE") rotation working directly with clinical researchers. The certificate explores clinical trial design and the related regulatory requirements, preparing students for an eventual career such as a clinical research coordinator, clinical trials manager, or clinical research administrator.

Requirements

Free Form Requirements
Graduate Certificate in Clinical Research

Overview

A 12-credit Certificate in Clinical Research is being offered by the Department of Pharmaceutical and Administrative Sciences ("DPAS") in the College of Pharmacy and Health Sciences. The Clinical Research Certificate will assist PharmD students enter the world of clinical research, with 2 didactic courses and an Advanced Pharmacy Practice Experience ("APPE") rotation working directly with clinical researchers. The certificate will explore the clinical trial design and the related regulatory requirements, preparing one for an eventual career such as a clinical research coordinator, clinical trials manager, or clinical research administrator.

Program Outcomes

Students will be expected to fulfill the following primary goals and objectives prior to Certificate completion, which will demonstrate competency in core knowledge areas and relevant skill sets:

1. To comprehend and have a thorough understanding of fundamental regulations (IRB, Informed consent and inclusion) of clinical research and clinical research participants.
2. To comprehend and have a thorough understanding of clinical study design, including statistical analysis necessary to make appropriate conclusions.
3. To gain experience working within a clinical research setting.

Certificate Admissions Requirements

Applicants must be enrolled in the PharmD program.

Applicants must submit an essay stating why they are interested in the certificate and be approved by the Chair of the DPAS and the Director/Dean of Professional Affairs to enroll in the rotation.

Certificate Program Requirements

PHRSC 529	Responsible Conduct of Research	3 cr.
PHRSC 527	Data Analysis & Biostatistics	3 cr.
PHAR 807	APPE Non-Patient Care Elective	6 cr.

Total Credit Hours: 12

Certificate completion requirements:

1) All didactic courses passed with a B- or higher.
2) Passing grade for experiential coursework.
3) Certificate will be conferred concomitantly with PharmD degree.

POSC.BA - BA in Political Science

General

College/School
College of Arts & Sciences

Department(s) ~
Hstry, Phlsphy, Pol Sci & Econ

Program Title ~
BA in Political Science

Program Code ~
POSC.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The Political Science major is firmly grounded in a commitment to the values of democracy, liberty, social justice and human rights. It is designed to equip students with essential information about how governments function at the local, state, national, and international levels, who is involved in political systems both within and outside government institutions, and the policy outcomes that are the result of the political process. Majors are encouraged to pursue experiential learning through internships that place students in a variety of governmental, nonprofit, and legal settings of their own choosing.

Requirements

Free Form Requirements
Political Science Major

General Information

The Political Science major is firmly grounded in a commitment to the values of democracy, liberty, social justice and human rights. It is designed to equip students with essential information about how governments function at the local, state, national, and international levels, who is involved in political systems both within and outside government institutions, and the policy outcomes that are the result of the political process. Over the course of four years, students will develop a critical mindset that is needed to evaluate diverse sources of political information as well as formulating and communicating their own opinions. Majors are encouraged to pursue experiential learning through internships that place students in a variety of governmental, nonprofit, and legal settings of their own choosing.

Career Opportunities

Graduates of our program enter government service or pursue careers in diverse areas ranging from education to business and nonprofit organizations. Many go on to pursue post-graduate degrees in law, public administration, and business.

Program Objectives

1. Demonstrate an understanding of the American political system, including its history, philosophical, constitutional and legal foundations, social justice, diversity, leading political values and ideas, governing institutions and public policy.
2. Demonstrate knowledge of political systems outside of the United States at the regional and national scales, utilizing a comparative framework of political institutions and processes.
3. Demonstrate an ability to evaluate political processes at work among states and nonstate actors in the context of the wide political and economic world community.
4. Demonstrate knowledge of normative political theory from the perspective of dominant and marginalized voices, evaluating political issues, conflicts, and tradeoffs.
5. Demonstrate an understanding of current events and policies confronting contemporary political systems in the context of societal diversity and inequality.
6. Demonstrate an understanding of political science research and analytical methods that include the ability to analyze and interpret quantitative and qualitative data, and to formulate reasoned conclusions.
7. Demonstrate the acquisition of citizenship skills through opportunities to link theory and practice to actual problem-solving and community service.
8. Demonstrate the ability to think critically, construct logical arguments and express those arguments through both writing and oral presentations.

Degree Requirements

Required Political Science courses (27 credit hours)

POSC 101/INST 101	Introduction to Contemporary Global Issues	3 cr.
POSC 102	American National Government	3 cr.
POSC 201	Comparative Politics	3 cr.
POSC 203	International Relations	3 cr.
POSC 207/LSOC 207/PH 207	Introduction to Political Theory	3 cr.
POSC 212	Political Analysis	3 cr.
POSC 490	Seminar in Political Science	4 cr.
POSC 205	Public Administration	3 cr.
	or	
POSC 210	State and Local Politics	3 cr.
	or	
POSC 218	Public Policy in America	3 cr.
	or	
POSC 225/LSOC 225	Law and Judicial Politics	3 cr.
GEOG 1XX	Geography Requirement	3 cr.

Subtotal: 27

Eighteen additional credit hours of upper-level political science courses (POSC 300-400)

The 18 upper-level credit hours must include a minimum of three credit hours each of comparative government, international relations, and American government.

Subtotal: 18

Students must take MATH 120 to fulfill one of the two required MATH courses to satisfy the Mathematical Perspective General University Requirement. POSC 212 fulfills the Computer Competence Perspective General University Requirement. The Political Science major provides 33 credit hours of general electives. Students are encouraged to choose a minor program in Public Administration, Economics, History, International Studies, Philosophy or another field of study to supplement their major coursework with these elective credit hours. For students who have been accepted by the WNE Law School into the 3+3 program in their Junior year, 30 credit hours of general electives will be fulfilled during the first year of law school.

The 2.0 required grade point average in the major is based upon all POSC courses pursued as a part of the student's degree program.

Political Science Suggested Sequence of Courses

The schedule of courses below is a sample sequence for a Political Science major. Many students become Political Science majors in their sophomore year and fulfill the major requirements without academic sacrifice.

Freshman Year- Fall Semester

HIST XXX	History Perspective	3 cr.
POSC 102	American National Government	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

POSC 101/INST 101	Introduction to Contemporary Global Issues	3 cr.
GEOG 1XX	Geography Requirement	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
GEN XXX	General Elective	3 cr.
ENGL 133	English Composition II	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

POSC 201	Comparative Politics	3 cr.
POSC 207/LSOC 207	Introduction to Political Theory	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
WIC 2XX-4XX	Writing Intensive Course	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

POSC 203	International Relations	3 cr.
POSC 212	Political Analysis	3 cr.
GEN XXX	General Elective	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

POSC 2XX	POSC 205 or 210 or 218 or 225	3 cr.
POSC 3XX	Upper-level Political Science Elective	3 cr.
POSC 3XX	Upper-level Political Science Elective	3 cr.
GEN XXX	General Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

POSC 3XX	Upper Level Political Science Elective	3 cr.
POSC 3XX	Upper Level Political Science Elective	3 cr.
WIC 3XX-4XX	Writing Intensive Requirement	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

POSC 3XX	Upper Level Political Science Elective	3 cr.
POSC 3XX	Upper Level Political Science Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

POSC 490	Seminar in Political Science	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

PRE.POPT - BS in Health Sciences/Pre-Optometry Conc

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Health Sciences/Pre-Optometry Conc

Program Code ~
PRE.POPT

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

This 3-year program provides an opportunity for qualified students to prepare for admission to the Doctor of Optometry degree program at the New England College of Optometry (NECO).

Requirements

Free Form Requirements
Pre-optometry Concentration in Health Sciences

General Information

The Pre-optometry program offered by the College of Arts and Sciences is an accelerated track of the Health Sciences major that provides an opportunity for qualified students to prepare for early admission to the New England College of Optometry (NECO) in Boston through our articulation agreement. In addition, students who successfully complete their first year at NECO will have the option of receiving a BS in Health Sciences from Western New England University.

To successfully satisfy the requirements of the Western New England University Pre-optometry program, a student must:

- Complete the required 100 credits within three academic years as listed below for each fall and spring semester.
- Transfer in no credits (including AP credits) of science coursework completed prior to matriculation at Western New England University and, following matriculation, transfer in no credits for any science or mathematics courses satisfying a requirement for the Pre-optometry program.
- Maintain a sufficiently high GPA for all Pre-optometry course work with no grade in any course less than a "C". (See below for the specific GPA requirements for NECO.) Entry points into the program:

1. Qualified students can be admitted into the Pre-optometry program as freshmen by WNE Admissions for the fall semester of a given year.
2. Students that have followed the course sequence of the Pre-optometry program at WNE during their freshman year can apply to the WNE Pre-optometry advisor prior to October 1 in the fall semester of the sophomore year for official admittance into the program. To be eligible:

1. A student must have shadowed the Pre-optometry program during their first year at WNE and earned a 3.300 overall GPA with a Science/Math GPA of 3.100 for all course work with no grade in any course less than a "C".

2. A student must not have transferred in credits (including AP credits) of science coursework completed prior to matriculation at Western New England University and, following matriculation, transferred in no credits for any science or mathematics courses satisfying a requirement for the Pre-optometry program.
3. If accepted into the program, a student has to complete the required 101 credits of the Pre-optometry program during their second and third year at WNE while maintaining a sufficiently high GPA for all Pre-optometry course work with no grade in any course less than a "C".

Agreement with NECO:

Students who have successfully completed the Western New England University Pre-optometry program requirements can be considered for early admission to the four-year optometry program (OD04) of the New England College of Optometry in Boston, which leads to the Doctor of Optometry degree.

Third-year students (juniors) of Western New England University will receive early admissions status to NECO's OD04 program under the agreement once they have:

1. Completed at least three (3) years of coursework as outlined below.
2. Met the academic prerequisites for NECO admission in place at the time of their formal admission into this WNE Pre-optometry program.
3. Adhered to the current admission standards of NECO (refer to the NECO web site for current standards).
4. Earned an overall cumulative undergraduate GPA of 3.300 and a science/math undergraduate GPA of 3.100 at the time of matriculation at NECO.
5. Completed the Optometry Centralized Application Service (OptomCAS) application by October 15 prior to the intended fall entrance date.
6. Taken the Optometry Admission Test (OAT) by September prior to the intended fall entrance date.
7. Received a 320 or above for the Academic Average on the Optometry Admission Test (OAT) with no OAT sub-score below 290.
8. Demonstrated strong evidence of commitment to the field of optometry through a shadowing experience with a practicing optometrist (details provided on the NECO's website and related literature).
9. Obtained three letters of recommendation from faculty and the optometrist who was shadowed.
10. Interviewed successfully (by NECO standards, as detailed on the NECO websites) with NECO faculty prior to receiving a final admissions decision.

Note: NECO reserves the right, at their sole discretion, to withdraw or reverse an admit status for any Western New England University 3+4 student who, subsequent to the offer of admissions, fails to remain in good academic and disciplinary standing.

Students will receive the BS in Health Sciences from Western New England University after providing WNE with the NECO transcript after successful completion of the first year of the OD04 program.

If a student has been admitted into the WNE Pre-optometry program, and then decides to first complete the BS in Health Sciences at WNE before moving on to NECO, NECO will still give that student's application special consideration.

Degree Requirements

Required biology and health science courses

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 203	Microbiology	4 cr.
BIO 215	Anatomy and Physiology I	4 cr.
BIO 216	Anatomy and Physiology II	4 cr.
BIO 306	Genetics	4 cr.
HS 470	Seminar in Health Sciences	1 cr.

Subtotal: 25

Required chemistry courses

CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.

Subtotal: 20

Required math and physics courses

MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 17

Other required courses

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 326	Abnormal Psychology	3 cr.
PH 208	Ethics	3 cr.
POSC 102	American National Government	3 cr.
CS 131	Computing for the Arts and Sciences	3 cr.
	or	
CS 132	Principles of Computing	3 cr.

Subtotal: 18

Total Credit Hours: 80

Pre-Optometry Suggested Sequence of Courses

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 17

Sophomore Year - Fall

PSY 201	Developmental Psychology	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
CS 131	Computing for the Arts and Sciences	3 cr.
	or	
CS 132	Principles of Computing	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.

Subtotal: 17

Sophomore Year - Spring

CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CUL 2XX	Cultural Studies Perspective	3 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.
PH 208	Ethics	3 cr.
POSC 102	American National Government	3 cr.

Subtotal: 17

Junior Year - Fall

BIO 306	Genetics	4 cr.
BIO 215	Anatomy and Physiology I	4 cr.
ART XXX	Aesthetic Perspective	3 cr.
HIST XXX	Historical Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.

Subtotal: 17

Junior Year - Spring

BIO 216	Anatomy and Physiology II	4 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
PSY 326	Abnormal Psychology	3 cr.
BIO 203	Microbiology	4 cr.
HS 470	Seminar in Health Sciences	1 cr.

Subtotal: 16

*Two of the above courses must meet WIC requirement.

Total Credit Hours at WNE: 100

Total Minimum Credit Hours for BS: 120

PRE.POTD - 3+3 BS in Health Studies/OTD

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
3+3 BS in Health Studies/OTD

Program Code ~
PRE.POTD

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

The 3+3 BS in Health Studies/OTD program is an accelerated track of the Health Studies major that provides a pathway for qualified students to be admitted to the WNE Doctor of Occupational Therapy (OTD) program. The program guarantees OTD admission for qualified students who remain in "good standing" following three years of undergraduate study. Students who successfully complete their first year in the WNE OTD program will receive a BS in Health Studies.

Requirements

Free Form Requirements
Pre-occupational Therapy Concentration in Health Studies

1. **General Information**

   The The 3+3 BS in Health Studies/OTD program is an accelerated track of the Health Studies major that provides a pathway for qualified students to be admitted to the WNE Doctor of Occupational Therapy (OTD) program. The program guarantees OTD admission for qualified students who remain in "good standing" following three years of undergraduate study. Students who successfully complete their first year in the WNE OTD program will receive a BS in Health Studies.

   To be considered “in good standing” in the 3+3 program and maintain their guarantee for admission into the OTD program, a student must

   1. Complete the required 92 credits listed below within three academic years.
   2. Complete at least 15 credits of undergraduate course work counting towards the major course requirements of the B.S. in Health Studies at WNE.
   3. Maintain (a) a minimum cumulative GPA of 3.200 at the end of each academic year, (b) a minimum GPA of 3.20 in the required prerequisite coursework for the Doctor of Occupational Therapy program (see WNE OTD Admissions webpage for the list of courses), and (c) earned no course grade less than “C” in any required pre-requisite coursework for the OTD program.

   Students who fall below the minimum cumulative GPA of 3.200 will no longer have guaranteed admission, but may remain in the 3+3 program and apply to the Doctor of Occupational Therapy program during their third year.

   Students in good standing in the 3+3 program are eligible to apply for admission to the Doctor of Occupational Therapy Degree program during their junior year after December 1. Candidates must also successfully complete an admissions interview and writing sample.

   In addition to fulfilling all of the requirements of the Health Studies program, all candidates for admission to the OTD program must successfully complete all other OTD admission requirements as listed on the OTD Admissions webpage. Students applying through the 3+3 pathway are not required to apply through the OTCAS system.

   After successfully completing the first year of the OTD program, students will be awarded a Bachelor of Science degree in Health Studies assuming all degree

requirements have been met.

Students in the Pre-OT program that either
(a) do not meet the Doctor of Occupational Therapy Degree program admission requirements outlined above, or
(b) elect not to apply for admission to the Doctor of Occupational Therapy Degree program at that time,
remain eligible to apply for admission to the Doctor of Occupational Therapy Degree as part of the general applicant pool following four years of University study and completion of a bachelor's degree. These students would follow the standard OTD Admissions Requirements as listed on the OTD Admissions Requirements webpage.

Degree Requirements

Required biology courses and chemistry courses (24 credit hours)

BIO 107	General Biology I	3 cr.
BIO 108	General Biology II	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 215	Anatomy and Physiology I	4 cr.
BIO 216	Anatomy and Physiology II	4 cr.
CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.

Subtotal: 24

Required health sciences courses (6 credit hours)

HS 2xx-4xx	Six additional semester hours of HS 2xx-4xx courses	6 cr.

Subtotal: 6

Additional courses that fulfill the HS 2xx-HS 4xx requirements: BIO 203, BIO 310, BIO 312, BIO 320, NSCI 212, NSCI 248, NSCI 348 (Note: BIO 310 and BIO 320 have a CHEM 210 prerequisite.)

Other required courses (27 credit hours)

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 326	Abnormal Psychology	3 cr.
PSY 3XX	Psychology Elective	3 cr.
PHYS 110	Physics of the Human Body	3 cr.
SO 101	Introduction to Sociology	3 cr.
	or	
PSY 214	Social Psychology	3 cr.
MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 121	Introductory Probability and Statistics	3 cr.
PH 208	Ethics	3 cr.
	or	
PH 231	Biomedical Ethics	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.

Subtotal: 27

Suggested Sequence of Courses

Notes:
The suggested sequence of courses is an example only. Some offerings for these years will alternate and the exact sequence will require consultation with the faculty and deans.

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
CS XXX	Computer Competence Requirement	3 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
COMM 102	Introduction to Public Speaking	3 cr.

Subtotal: 14

Sophomore Year - Fall

MATH 1XX	Mathematical Analysis	3 cr.
PSY 101	Introduction to Psychology	3 cr.
BIO 215	Anatomy and Physiology I	4 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 16

Sophomore Year - Spring

MATH 120	Intro Statistics for the Arts & Sciences	3 cr.
	or	
MATH 121	Introductory Probability and Statistics	3 cr.
PSY 201	Developmental Psychology	3 cr.
BIO 216	Anatomy and Physiology II	4 cr.
CUL XXX	Global Cultures Perspective	3 cr.
SO 101	Introduction to Sociology	3 cr.
	or	
PSY 214	Social Psychology	3 cr.

Subtotal: 16

Junior Year - Fall

PH 208	Ethics	3 cr.
	or	
PH 231	Biomedical Ethics	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
HS 2XX	HS Elective	3 cr.
PHYS 110	Physics of the Human Body	3 cr.
PSY 3XX	Psychology Elective	3 cr.

Subtotal: 15

Junior Year - Spring

HS 2XX	HS Elective	3 cr.
WIC 3XX	Writing Intensive Course	3 cr.
HIST XXX	Historical Perspective	3 cr.
PSY 326	Abnormal Psychology	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 92, plus:

Senior Year = First year of Professional OTD program

PRE.PPA - BS in Health Sciences/Pre-Phys Asst Conc

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
BS in Health Sciences/Pre-Phys Asst Conc

Program Code ~
PRE.PPA

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

This 3-year program provides an opportunity for qualified students to prepare for admission to the Physician Assistant Studies master's degree program at Salus University.

Requirements

Free Form Requirements
Pre-physician Assistant Concentration in Health Sciences

General Information

1. The Pre-physician Assistant program offered by the College of Arts and Sciences is an accelerated track of the Health Sciences major that provides an opportunity for qualified students to prepare for early admission to the Master of Medical Sciences (MMS) Degree Program at Salus University in Elkins Park, PA, through our articulation agreement. In addition, students who successfully complete their first year at Salus University will have the option of receiving a BS in Health Sciences from Western New England University (WNE).

   To successfully satisfy the requirements of the Western New England University Pre-PA program, a student must:

   1. Complete the required 100 credits within three academic years as listed below.
   2. Transfer in no credits (including AP credits) of science coursework completed prior to matriculation at WNE and, following matriculation, transfer in no credits for any science or mathematics course satisfying a requirement for the Pre-physician Assistant program.
   3. Maintain an overall GPA of 3.700 or above with no grade in any course less than a “C”. Students may not withdraw from or retake any course that would have satisfied any of the Pre-physician Assistant program requirements.

Agreement with Salus University:

Students who have successfully completed the Western New England University Pre-physician Assistant Program as described above can be considered for early admission into the Master of Medical Sciences (MMS) Degree Program at Salus University.

Students must apply to the Salus University Master of Medical Sciences Degree Program by following the application procedures described on the Salus University website. These admissions procedures include completion of:

1. All prerequisites and requirements as published by Salus University.

2. The Centralized Application Service for Physician Assistant (CASPA) process and requirements, including required letters of recommendation and GRE scores, by August 1 of the year prior to anticipated enrollment

3. An on-campus interview.

Under the articulation agreement, Salus will provide up to four seats for qualified Western New England University Pre-PA Program students annually who apply for admission and are accepted into the Salus MMS Degree Program.

If there are more than four equally qualified Western New England University Pre-PA applicants, they will be considered in the order of the timing of their completed CASPA applications. If Western New England University Pre-PA applicants are not accepted, they will be encouraged to reapply for the following cycle and given consideration for admission to the Salus University Physician Assistant Studies Program along with other applicants in the Salus University applicant pool contingent upon successful student completion of a bachelor's degree program at Western New England University.

Degree Requirements

Required biology and health science courses

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
BIO 203	Microbiology	4 cr.
BIO 215	Anatomy and Physiology I	4 cr.
BIO 216	Anatomy and Physiology II	4 cr.
BIO 306	Genetics	4 cr.
HS 470	Seminar in Health Sciences	1 cr.

Subtotal: 25

Required chemistry courses

CHEM 105	General Chemistry I	4 cr.
CHEM 106	General Chemistry II	4 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.

Subtotal: 20

Required math and physics courses

MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 17

Other required courses

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 326	Abnormal Psychology	3 cr.
PH 208	Ethics	3 cr.
POSC 102	American National Government	3 cr.
CS 131	Computing for the Arts and Sciences	3 cr.
	or	
CS 132	Principles of Computing	3 cr.

Subtotal: 18

Total Credit Hours: 80

Pre-Physician Assistant Suggested Sequence of Courses

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar	2 cr.
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 124	Calculus II For Management, Life, and Social Sciences	3 cr.
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 17

Sophomore Year - Fall

PSY 201	Developmental Psychology	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
CS 131	Computing for the Arts and Sciences	3 cr.
	or	
CS 132	Principles of Computing	3 cr.
BIO 215	Anatomy and Physiology I	4 cr.

Subtotal: 17

Sophomore Year - Spring

CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CUL XXX	Global Cultures Perspective	3 cr.
BIO 216	Anatomy and Physiology II	4 cr.
PH 208	Ethics	3 cr.
POSC 102	American National Government	3 cr.

Subtotal: 17

Junior Year - Fall

BIO 306	Genetics	4 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.
ART XXX	Aesthetic Perspective	3 cr.
HIST XXX	Historical Perspective	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.

Subtotal: 17

Junior Year - Spring

PHYS 124	Physics of the Life Sciences II	4 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
PSY 326	Abnormal Psychology	3 cr.
BIO 203	Microbiology	4 cr.
HS 470	Seminar in Health Sciences	1 cr.

Subtotal: 16

Total Credit Hours: 100

NOTE:
Students interested in applying to other PA programs should check with those schools for their particular admission requirements, which may require applicants to have a bachelor's degree.

1. **Agreement with Physician Assistant Program at Bryant University**

   Students who have successfully completed the requirements listed below for the application to the Master of Science in Physician Assistant Studies ("PA") program offered through the School of Health Sciences at Bryant University are eligible for a guaranteed interview and consideration for acceptance should they be a competitive candidate.

Qualified WNE applicants must meet or exceed all Bryant PA Program prerequisites as outlined on the Bryant website (www.bryant.edu/mspas) which include, but are not limited to:
1. A baccalaureate degree.
2. An overall undergraduate GPA of at least 3.000.

3. 2000 hours of direct patient care experience completed before December 1 of the year prior to matriculation. Examples of direct patient care experience include, but are not necessarily limited to: military medics, corpsmen, health service technicians, and medical technicians; nurses, emergency medical technicians and paramedics; emergency department technicians; medical scribes; physical and occupational therapists; respiratory therapists; medical assistants.
4. A GRE Score within 5 years of matriculation.
5. A completed CASPA Application.
6. Completion of the following prerequisite courses with a minimum GPA of 3.000 overall for these prerequisite courses and a "C" or better in each class:

- Biology with lab: 8SH
- Chemistry with lab: 8SH
- Human Anatomy and Physiology: 8SH
- Microbiology: 3SH
- Organic Chemistry (4 SH) or Biochemistry (3 SH)
- Psychology: 3SH
- Statistics: 3SH• NOTE: Advanced Placement (AP)/CLEP coursework may be accepted for Psychology (3SH) and Statistics (3SH). No Advanced Placement (AP)/CLEP coursework or transfer credits to fulfill science prerequisite requirements will be accepted.

  Potential applicants with questions about the PA Program should refer to the PA Program webpage (ww.bryant.edu/mspas) or may contact the program by e-mail (pa_program@bryant.edu) or phone 401-232-6556.

PRE.PSCI - Pre-Science

General

College/School
College of Arts & Sciences

Department(s) ~
Physical & Biological Sciences

Program Title ~
Pre-Science

Program Code ~
PRE.PSCI

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Requirements

Free Form Requirements
Pre-science

The Pre-science program offered by the College of Arts and Sciences is a one-year program that provides an opportunity for students to work towards acceptance into one the College's science majors (Biology, Chemistry, Forensic Biology, Forensic Chemistry, Health Sciences, and Health Studies) offered by the Department of Physical and Biological Sciences.

Qualified students can be admitted into the Pre-science program as freshmen by WNE Admissions for the fall semester of a given year.

The program is designed to prepare students for the rigor of major-level science courses, while at same time working on completing courses that will fulfill major and/or general University requirements.

The course sequence of the Pre-science program is outlined below:

1. The lab science courses are designed to introduce students to basic concepts in physics and chemistry with an emphasis on quantitative methods and laboratory investigations.

2. The choice of the English and Math courses in the fall semester will be determined by the student's prior education and the student's performance on the WNE Math and English placement tests.

3. The courses in the spring semester will be determined in conference with the Pre-science advisor and will depend on the science major the student is interested in pursuing and on which Math and English courses were completed during the fall semester.

During the spring semester, students interested in:

• Biology should consider taking a PHYS 15X course, which (together with PHYS 103) will complete their physics requirements.

• Forensic Biology or Forensic Chemistry should consider taking CJ 101, which is a required course for these majors.

- Health Sciences or Health Studies should consider taking PSY 101, which is a required course for the major.

Students wishing to petition for a change of major to a science major after completing the Pre-science program have to:

1. Complete the Pre-science course sequence as listed below.
2. Consult with their Pre-science advisor with regards to their spring semester and sophomore year course choices.
3. Maintain an Overall GPA of 2.5 and a Science GPA of 3.0.
4. Apply to their Pre-science advisor at the end of the freshman year for acceptance into the desired science major.

After successfully completing the Pre-science program, students should expect to spend at the minimum an additional:

- Three years of courses to obtain a BS in Biology, a BS in Health Sciences, or BS in Health Studies.
- Four years of courses to obtain a BS in Chemistry, BS in Forensic Biology, or a BS in Forensic Chemistry.

Suggested sequence of courses:

First Year - Fall

PHYS 103 or PHYS 101	Elementary Physics Elements of Physics	4 cr. 3 cr.
CHEM 103 or CHEM 101	Elementary Chemistry Modern Chemistry I	3 cr. 3 cr.
LA 100	First Year Seminar	2 cr.
ENGL 132	English Composition I	3 cr.
MATH 109 MATH 123	Pre-Calculus Calculus I	3 cr. 3 cr.

Subtotal: 14-15 cr.

First Year - Spring

PHYS 15x or CHEM 105 or GEN XXX	Natural Science Perspective General Chemistry I General Elective	3 cr. 4 cr. 3 cr.
ENGL 133	English Composition II	3 cr.
MATH 121 or MATH 123 or MATH 124	Stats & Probability Calculus I Calculus II	3 cr. 3 cr. 3 cr.
PSY 101 or CJ 101	Introduction to Psychology Introduction to Criminal Justice	3 cr. 3 cr.
GEN XXX	General Elective	3 cr.

Subtotal 15-16 cr.

Total Credit Hours: 30

Pre-Medical and Pre-Dental

Pre-medical and pre-dental students are not restricted to a specified major, but are encouraged to select a major that is most consistent with their interests and that offers as many alternatives for postgraduate study or employment as possible. Students in Arts and Sciences, Business, and Engineering are able to pursue a pre-med program. Students should consult with their Deans in selecting appropriate courses.

The suggested sequence of courses: BIO 107, BIO 108, BIO 117, BIO 118; CHEM 105, CHEM 106, CHEM 209, CHEM 210, CHEM 219, CHEM 220; PHYS 123, PHYS 124; MATH 123, MATH 121.

Additional suggested courses would include: sociology, psychology, and biochemistry.

As early as possible, all pre-medical and pre-dental students should consult the Dean of the College of Arts and Sciences, who will arrange for proper advising prior to the selection of courses. The recommended course sequence is designed to meet the requirements for entrance into most American medical and dental schools; it is the responsibility of the student to ensure that they take all requirements of a particular program. Students are cautioned, however, that admission to such schools is highly competitive.

PSY.BA - BA in Psychology

General

College/School
College of Arts & Sciences

Department(s) ~
Psychology

Program Title ~
BA in Psychology

Program Code ~
PSY.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

In Psychology you will gain a scientific perspective on how we think, feel, and behave. Whether you are interested in clinical, counseling, forensic, sports psychology or other specific areas, you may tailor your program with elective courses grounded in systematic research to enable you to pursue your career goals.

Requirements

Free Form Requirements
Psychology Major

General Information

Psychology is the scientific study of thoughts, feelings, and behavior. In addition to helping students understand themselves and others, the research findings of psychology have wide application to many professional fields, from human services to medical, industrial, and educational settings. Within the major there is flexibility to select courses that meet individual career objectives including Sports Psychology, School Psychology, Forensic Psychology, Health Psychology, Organizational Psychology, Clinical Psychology, Neuropsychology, Applied Behavior Analysis, Special Education, Autism Treatment, Cognitive Psychology, Developmental Psychology, Social Psychology, Gender Studies, Conservation Psychology, and Community Psychology, among others.

The Department of Psychology offers students the opportunity to receive either the BA or the BS Degree. The BS degree includes all of the requirements of the BA degree, along with a combination of 18 credits of courses in psychology research, neuroscience, and other sciences. The 18 credits must include at least one psychology research course of at least 3 credits. The remaining credits may be any combination of psychology research, neuroscience, or other science courses (not including those meeting the General University Requirements).

It is recommended that students interested in graduate school should take one or more of our advanced research courses.

Students may also pursue teacher certification at the elementary level by concurrently majoring in Elementary Education, or training in special education, which is available through Education. Applied Behavior Analysis is available through participation in the New England Center for Children internship program.

Career Opportunities

Students are prepared to enter the world of work in counseling, research, autism treatment, personnel administration, human service agencies, special education, elementary school teaching or other child life work; to continue their studies at the graduate level; or to enter related fields such as medicine, law, criminal justice, and social work.

Program Goals in Learning Objectives

Our psychology program is based on five comprehensive learning goals. Each goal encapsulates a series of learning objectives composed of skills and knowledge that our graduates have acquired. Our students develop an understanding of thoughts and behavior and learn to adapt to changing circumstances through understanding others, open communication and critical thought.

GOAL 1. Knowledge base in Psychology
1.1 Describe key concepts, principles, and overarching themes in psychology
1.2 Develop a working knowledge of psychology's content domains
1.3 Describe applications of psychology

GOAL 2: Scientific Inquiry and Critical Thinking
2.1 Apply the scientific method
2.2 Critically consume and evaluate psychological research

GOAL 3: Ethical and Social Responsibility in a Diverse World
3.1 Apply ethical standards to evaluate psychological science and practice

3.2 Build and enhance personal relationships
3.3 Adopt values that build community at local, national, and global levels

GOAL 4: Effective Communication
4.1 Demonstrate effective writing for different purposes
4.2 Exhibit effective presentation skills for different purposes
4.3 Interact effectively with others

GOAL 5: Personal and Professional Development
5.1 Personal Development
5.2 Professional Development

Student Assessment

Students' progress in Psychology is assessed in a variety of ways and may include: objective and essay quizzes and examinations, class attendance and participation, journals, individual and group projects, oral presentations, poster sessions, research papers, critical review papers, video recording, and simulations.

Students are encouraged to keep a portfolio of their work as a means of tracking their own development, as well as to demonstrate their abilities and accomplishments when applying to graduate school and/or for positions in the field of psychology.

The Department of Psychology has a multiyear assessment plan to monitor progress in accomplishing articulated goals and to promote ongoing improvement and innovation.

Degree Requirements

Required courses (24 credit hours):

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
PSY 214	Social Psychology	3 cr.
PSY 309	Research Methods	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
PSY 313	Learning	3 cr.
PSY 326	Abnormal Psychology	3 cr.
PSY 340	Professional Development & Communication in Psychology	3 cr.

Subtotal: 27

Six credit hours required in upper-level psychology (PSY 300-400) courses.

Subtotal: 6

Note that for the BS degree these credit hours may include research courses in psychology.

Three additional credit hours in a multicultural perspectives course or an approved equivalent.

Subtotal: 3

The Psychology department maintains an active list of courses that fulfill this requirement. Additional courses may be approved by department chairperson.

Three credit psychology capstone experience

Subtotal: 3

The Psychology Capstone Experience can be met through a variety of options including advanced research courses, independent research with faculty, internships and senior seminars. The department maintains a list of the courses available that meet the capstone experience requirement.

Total Credit Hours: 39

The 2.000 required grade point average in the major is based on all PSY courses pursued as a part of the student's degree program.

Psychology Suggested Sequence of Courses

Freshman Year - Fall Semester

PSY 101	Introduction to Psychology	3 cr.
ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
GUR xxx	General University Requirement	3 cr.
MATH XXX	Mathematical Analysis	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

PSY 201	Developmental Psychology	3 cr.
ENGL 133	English Composition II	3 cr.
GEN XXX	General Elective	3 cr.
PSY 214	Social Psychology	3 cr.
MATH XXX	Mathematical Analysis	3 cr.

Subtotal: 15

First Year: Students interested in Study Abroad should discuss with their advisor to evaluate the best options so they can meet all requirements for the degree.

Note: MATH 120 is recommended but not required.

Note: Order of the General University requirement courses can be altered (HIST, NSP, CUL, ARTS, PH)

Note: The Computer Competence GUR is met through taking PSY 207; Social Behavioral Sciences GUR is met through any PSY course.

Sophomore Year - Fall Semester

PSY 207	Statistics for the Behavioral Sciences	3 cr.
PSY 313	Learning	3 cr.
GUR xxx	General University Requirement	3 cr.
PSY 340	Professional Development & Communication in Psychology	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

PSY 309	Research Methods	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GEN XXX	General Elective	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

PSY 3XX/4XX	Psychology Required Elective	3 cr.
PSY 326	Abnormal Psychology	3 cr.
GUR xxx	General University Requirement	3 cr
SBMP XXX	Multicultural Perspectives	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Junior & Senior Year: Students should consider what type of Capstone experience they might like to engage in. Enrolling in Advanced Research courses (e.g., PSY35x, PSY 332, PSY414), and/or Senior Seminar courses (e.g., 416, 418), and/or PSY 480 Internship in Psychology during this year and their senior year. Please see the staff in the Career Development Center to learn more about the process of engaging in an internship.

Junior Year - Spring Semester

PSY 3XX/4XX	Psychology Required Elective	3 cr.
GEN XXX	General Elective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
GUR xxx	General University Requirement	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

PSY 3XX/4XX	Psychology Capstone Requirement	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year: Students intending to become certified as teachers in elementary education or intending to enroll in the New England Center for Children program, may need to take all of their major requirements by the end of their junior year so that one semester of their senior year would be free to engage in Student Teaching, or participate in the NECC program. Student Teaching Practicum students should refer to the elementary education program requirements that list the necessary prerequisites for Teacher Certification, including the specific requirements necessary for teacher certification in Massachusetts.

Total Credit Hours: 120

PSY.BS - BS in Psychology

General

College/School
College of Arts & Sciences

Department(s) ~
Psychology

Program Title ~
BS in Psychology

Program Code ~
PSY.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

In Psychology you will gain a scientific perspective on how we think, feel, and behave. Whether you are interested in clinical, counseling, forensic, sports psychology or other specific areas, you may tailor your program with elective courses grounded in systematic research to enable you to pursue your career goals.

Requirements

Free Form Requirements
Psychology Major

General Information

Psychology is the scientific study of thoughts, feelings, and behavior. In addition to helping students understand themselves and others, the research findings of psychology have wide application to many professional fields, from human services to medical, industrial, and educational settings. Within the major there is flexibility to select courses that meet individual career objectives including Sports Psychology, School Psychology, Forensic Psychology, Health Psychology, Organizational Psychology, Clinical Psychology, Neuropsychology, Applied Behavior Analysis, Special Education, Autism Treatment, Cognitive Psychology, Developmental Psychology, Social Psychology, Gender Studies, Conservation Psychology, and Community Psychology, among others.

The Department of Psychology offers students the opportunity to receive either the BA or the BS Degree. The BS degree includes all of the requirements of the BA degree, along with a combination of 18 credits of courses in psychology research, neuroscience, and other sciences. The 18 credits must include at least one psychology research course of at least 3 credits. The remaining credits may be any combination of psychology research, neuroscience, or other science courses (not including those meeting the General University Requirements).

It is recommended that students interested in graduate school should take one or more of our advanced research courses.

Students may also pursue teacher certification at the elementary level by concurrently majoring in Elementary Education, or training in special education, which is available through Education. Applied Behavior Analysis is available through participation in the New England Center for Children internship program.

Career Opportunities

Students are prepared to enter the world of work in counseling, research, autism treatment, personnel administration, human service agencies, special education, elementary school teaching or other child life work; to continue their studies at the graduate level; or to enter related fields such as medicine, law, criminal justice, and social work.

Program Goals in Learning Objectives

Our psychology program is based on five comprehensive learning goals. Each goal encapsulates a series of learning objectives composed of skills and knowledge that our graduates have acquired. Our students develop an understanding of thoughts and behavior and learn to adapt to changing circumstances through understanding others, open communication and critical thought.

GOAL 1. Knowledge base in Psychology
1.1 Describe key concepts, principles, and overarching themes in psychology
1.2 Develop a working knowledge of psychology's content domains
1.3 Describe applications of psychology

GOAL 2: Scientific Inquiry and Critical Thinking
2.1 Apply the scientific method
2.2 Critically consume and evaluate psychological research

GOAL 3: Ethical and Social Responsibility in a Diverse World
3.1 Apply ethical standards to evaluate psychological science and practice
3.2 Build and enhance personal relationships
3.3 Adopt values that build community at local, national, and global levels

GOAL 4: Effective Communication
4.1 Demonstrate effective writing for different purposes
4.2 Exhibit effective presentation skills for different purposes
4.3 Interact effectively with others

GOAL 5: Personal and Professional Development
5.1 Personal Development
5.2 Professional Development

Student Assessment

Students' progress in Psychology is assessed in a variety of ways and may include: objective and essay quizzes and examinations, class attendance and participation, journals, individual and group projects, oral presentations, poster sessions, research papers, critical review papers, video recording, and simulations.

Students are encouraged to keep a portfolio of their work as a means of tracking their own development, as well as to demonstrate their abilities and accomplishments when applying to graduate school and/or for positions in the field of psychology.

The Department of Psychology has a multiyear assessment plan to monitor progress in accomplishing articulated goals and to promote ongoing improvement and innovation.

Degree Requirements

Required courses (24 credit hours):

PSY 101	Introduction to Psychology	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 207	Statistics for the Behavioral Sciences	3 cr.
PSY 214	Social Psychology	3 cr.
PSY 309	Research Methods	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
PSY 313	Learning	3 cr.
PSY 326	Abnormal Psychology	3 cr.
PSY 340	Professional Development & Communication in Psychology	3 cr.

Subtotal: 27 cr.

Six credit hours required in upper-level psychology (PSY 300-400) courses.

Subtotal: 6 cr.

Three credits of PSY Research

Fifteen credits of PSY Research or Sciences from PSY, NSCI (except NSCI-212), or any Science courses (BIO, CHEM, PHYS, GEOL, METR, HS)

Subtotal 18 cr.

Note that for the BS degree these credit hours may include research courses in psychology.

Three additional credit hours in a multicultural perspectives course or an approved equivalent.

Subtotal: 3 cr.

The Psychology department maintains an active list of courses that fulfill this requirement. Additional courses may be approved by department chairperson.

Three credit psychology capstone experience

Subtotal: 3 cr.

The Psychology Capstone Experience can be met through a variety of options including advanced research courses, independent research with faculty, internships and senior seminars. The department maintains a list of the courses available that meet the capstone experience requirement.

Total Credit Hours: 57

The 2.000 required grade point average in the major is based on all PSY courses pursued as a part of the student's degree program.

Psychology Suggested Sequence of Courses

Freshman Year - Fall Semester

PSY 101	Introduction to Psychology	3 cr.
ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
GUR xxx	General University Requirement	3 cr.
MATH XXX	Mathematical Analysis	3 cr.

Subtotal: 15

Freshman Year - Spring Semester

PSY 201	Developmental Psychology	3 cr.
ENGL 133	English Composition II	3 cr.
GEN XXX	General Elective	3 cr.
PSY 214	Social Psychology	3 cr.
MATH XXX	Mathematical Analysis	3 cr.

Subtotal: 15

First Year: Students interested in Study Abroad should discuss with their advisor to evaluate the best options so they can meet all requirements for the degree.

Note: MATH 120 is recommended but not required.

Note: Order of the General University requirement courses can be altered (HIST, NSP, CUL, ARTS, PH)

Note: The Computer Competence GUR is met through taking PSY 207; Social Behavioral Sciences GUR is met through any PSY course.

Sophomore Year - Fall Semester

PSY 207	Statistics for the Behavioral Sciences	3 cr.
PSY 313	Learning	3 cr.
GUR xxx	General University Requirement	3 cr.
PSY 340	Professional Development & Communication in Psychology	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

PSY 309	Research Methods	3 cr.
NSCI 212	Introduction to Behavioral Neuroscience	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
PSY XXX	PSY Research Course	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 15

Junior Year - Fall Semester

PSY 3XX/4XX	Psychology Required Elective	3 cr.
PSY 326	Abnormal Psychology	3 cr.
GUR xxx	General University Requirement	3 cr
SBMP XXX	Multicultural Perspectives	3 cr.
PSY XXX	PSY Research/Sci Elec	3 cr.

Subtotal: 15

Junior & Senior Year: Students should consider what type of Capstone experience they might like to engage in. Enrolling in Advanced Research courses (e.g., PSY35x, PSY 332, PSY414), and/or Senior Seminar courses (e.g., 416, 418), and/or PSY 480 Internship in Psychology during this year and their senior year. Please see the staff in the Career Development Center to learn more about the process of engaging in an internship.

Junior Year - Spring Semester

PSY 3XX/4XX	Psychology Required Elective	3 cr.
GEN XXX	General Elective	3 cr.
WIC 3xx-4xx	Writing Intensive Course	3 cr.
GUR xxx	General University Requirement	3 cr.
PSY XXX	PSY Research/Sci Elec	3 cr.

Subtotal: 15

Senior Year - Fall Semester

PSY 3XX/4XX	Psychology Capstone Requirement	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
GEN 3XX/4XX	Upper Level General Elective	3 cr.
PSY XXX	PSY Research/Sci Elec	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

PSY XXX	PSY Research/Sci Elec	3 cr.
PSY XXX	PSY Research/Sci Elec	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year: Students intending to become certified as teachers in elementary education or intending to enroll in the New England Center for Children program, may need to take all of their major requirements by the end of their junior year so that one semester of their senior year would be free to engage in Student Teaching, or participate in the NECC program. Student Teaching Practicum students should refer to the elementary education program requirements that list the necessary prerequisites for Teacher Certification, including the specific requirements necessary for teacher certification in Massachusetts.

Total Credit Hours: 120

PSYO.BA - 3+3 BA in Psychology/OTD

General

College/School
College of Arts & Sciences

Department(s) ~
Psychology

Program Title ~
3+3 BA in Psychology/OTD

Program Code ~
PSYO.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

The 3+3 BA in Psychology/OTD program is a collaborative effort between the Department of Psychology in the College of Arts and Sciences and the Doctor of Occupational Therapy program in the College of Pharmacy and Health Sciences. It provides an accelerated pathway to the WNE Doctor of Occupational Therapy (OTD) degree with guaranteed OTD admission for qualified students who remain in "good standing" following three years of undergraduate study. Students who successfully complete their first year in the WNE OTD program will receive a BA in Psychology.

Requirements

Free Form Requirements
3+3 BA in Psychology/OTD

This program is a collaborative effort between the Department of Psychology in the College of Arts and Sciences and the Doctor of Occupational Therapy program in the College of Pharmacy and Health Sciences. It provides an accelerated pathway to the WNE Doctor of Occupational Therapy degree with guaranteed OTD admission for qualified students who remain “in good standing” following three years of undergraduate study (3+3).

The pathway consists of two phases:

1. The three-year Psychology Major incorporating prerequisites for the OTD program.
2. The three-year OTD program housed in the Division of Occupational Therapy.

Students who are accepted into the 3+3 BA in Psychology/OTD program and remain in good standing (as defined below) automatically transition to Phase 2, requiring only a successful interview. In addition, students who successfully complete their first year in the WNE OTD program will receive a BA in Psychology.

Admission into Phase 1:

Qualified students can be admitted into the Psychology to Doctor of Occupational Therapy 3+3 program through several pathways:

· As First Year Students. WNE Admissions may accept a student directly into the major for the fall semester of a given year. The admission criteria for the combined degree program mirrors the admission criteria of the general BA in Psychology program with one exception. Students must have a minimum incoming High School GPA of 3.200 (out of 4.000).

· As existing WNE students. Acceptance into the 3+3 program is possible if at the point of acceptance, the student qualifies for "good standing" in the Direct-entry 3+3 BA in Psychology/OTD program as defined further below based on their WNE course grades, and assuming it remains feasible for the students to complete the psychology requirements prior to the end of their junior year and remain in good standing in OTD pre-requisite course work.

· As transfer students from outside of WNE. Acceptance into the 3+3 program is possible if at the point of admission to WNE, the student has a minimum overall GPA of 3.200 and a minimum GPA of 3.200 in the required prerequisite coursework for the Doctor of Occupational Therapy program based on the course grades attained outside of WNE.

During Phase 1, students are undergraduate students in the Department of Psychology and are advised by the department's faculty. In addition, they will be assigned a mentor from the faculty in the Division of Occupational Therapy.

To be considered "in good standing" in the Direct-entry Pre-OT program and maintain their guarantee for admission into the OTD program, a student must:

1. Complete the 90 credits listed below within three academic years
2. Complete at least 12 credits of the Psychology major at WNE
3. Achieve a minimum cumulative GPA of 3.200 at the end of each academic year
4. Complete all required prerequisite coursework for the Doctor of Occupational Therapy program and achieve a minimum GPA of 3.200 in these courses (see OTD Admissions webpage for the list of courses)
5. Earn course grades of at least a "C" in any required prerequisite coursework for the OTD program

A student who no longer maintains "good standing" for any reason will no longer have guaranteed admission into Phase 2. They may remain in the Psychology program and apply to the Doctor of Occupational Therapy program during their third year.

Transition to Phase 2 – PSY to OTD

Students in good standing in the 3+3 BA in Psychology/OTD program are eligible for admission to the Doctor of Occupational Therapy Degree program during their junior year after December 1. Candidates must also successfully complete an admissions interview and writing sample. Select candidates may have the admission interview and/or writing sample waived by the Doctor of Occupational Therapy program admissions committee.

In addition to fulfilling all of the requirements of the 3+3 BA in Psychology/OTD program, all candidates applying to OTD degree program (including direct-entry) must successfully complete all other OTD admission requirements as listed on the OTD admissions. Students applying through any 3+3 pathway are not required to apply through the OTCAS system.

Students who either (a) do not meet the Doctor of Occupational Therapy Degree program admission requirements outlined above, or (b) elect not to apply for admission to the Doctor of Occupational Therapy Degree program at that time, remain eligible to apply for admission to the Doctor of Occupational Therapy Degree as part of the general applicant pool following completion of a bachelor's degree.

Phase 2 – OTD program

Once a student enrolls into the OTD program after completing the three-year Psychology program, they will move into the College of Pharmacy and Health Sciences (COPH), and they will be advised by COPH faculty. Students will be held to the same standards as outlined in the OTD Student Handbook. After successfully completing the first year of the OTD program, students will be awarded a BA in Psychology assuming all degree requirements have been met. Students who fail to fulfill these requirements in their first year of the OTD program will be disenrolled from the OTD program and given the option to return to the College of Arts and Sciences to complete the degree requirements of the BA in Psychology.

Students are eligible to request reinstatement to the OTD program following completion of their BA in Psychology; reinstatement will be determined by the College of Pharmacy and Health Sciences' Academic Standards Committee and the OTD Admissions Committee, and reinstatement is not guaranteed.

3+3 BA in Psychology/OTD - Suggested Sequence of Courses

First Year - Fall Semester

MATH XXX	Any Math	3 cr.
ENGL 132	English Composition	3 cr.
PSY 101	Intro to Psychology	3 cr.
LA 110	First Year Seminar	3 cr.
GUR XXX	Arts, Cultures, Philosophy or History	3 cr.

Subtotal: 15

First Year - Spring Semester

MATH XXX	Any Math (recommend MATH 120)	3 cr.
ENGL 133	Introduction to Literature	3 cr.
PSY 201	Developmental Psychology	3 cr.
PSY 214	Social Psychology	3 cr.
GUR XXX	Arts, Cultures, Philosophy or History	3 cr.

Subtotal: 15

Sophomore Year - Fall Semester

PSY 313	Learning	3 cr.
PSY 207	Statistics in Behavioral Sciences	3 cr.
PHYS 110	Physics of Human Body (ideally) or other Science with Lab	3 cr.
WIC 2XX	Writing Intensive Course	3 cr.
GUR XXX	Arts, Cultures, Philosophy or History	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

PSY 309	Research Methods	3 cr.
NSCI 212	Intro to Behavioral Neuroscience	3 cr.
PSY 340	Professional Skills in Psychology	3 cr.
WIC 3XX-4XX	Writing Intensive Course #2	3 cr.
GUR XXX	Arts, Cultures, Philosophy or History	3 cr.

Subtotal: 15

Junior Year - Fall Semester

PSY 326	Abnormal Psychology	3 cr.
PSY 3XX	Psychology Elective #1	3 cr.
PSY 3XX	Psychology Elective #2	3 cr.
OTD pre-req	Anatomy & Physiology I	3 cr.
GEN ELEC	General Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

PSY 3XX	Psychology Elective #3	3 cr.
SBMP	Multicultural Requirement	3 cr.
NSP XXX	Natural Science #2	3 cr.
OTD pre-req	Anatomy & Physiology II	3 cr.
GEN ELEC	General Elective	3 cr.

Subtotal: 15

Senior Year = 1st Year of OTD program

GEN XXX	OTD Coursework transferred to PSY	30 cr.

Subtotal: 30

Total Credit Hours: 120

RWS.CERT - Certificate in Remote Work Skills

General

College/School
College of Business

Department(s) ~
Management

Program Title ~
Certificate in Remote Work Skills

Program Code ~
RWS.CERT

Degree Designation ~
CERT - Certificate, RWS - Cert in Remote Working Skills

Academic Level ~
UG - Undergraduate

Program Short Description

The Remote Work Certificate is a great complement for students in any major who expect to interact and work with others at a distance or in "virtual workplaces". Courses in the certificate help develop technical, interpersonal, and managerial skill for persons who may work remotely themselves or need to interact with co-workers, customers, subject-matter-experts, and others who may not work in the same physical space.

Requirements

Free Form Requirements
Remote Work Skills Certificate

Degree seeking students can earn a Remote Work Skill certificate by completing three courses with a grade of "C" or higher. These three courses may also meet College of Business electives or major requirements.

Requirements

BUS 350	Business Etiquette and Professionalism	3 cr.
MAN 353	Leadership and Team Skills	3 cr.
MAN 370	Project Management	3 cr.

Total Credit Hours: 9

Certificate must be declared prior to graduation and appears on official transcript.

SAP2.CERT - Certificate of SAP Student Recognition Award

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
Certificate of SAP Student Recognition Award

Program Code ~
SAP2.CERT

Degree Designation ~
CERT - Certificate

Academic Level ~
UG - Undergraduate

Program Short Description

Degree-seeking students who complete a minimum of three SAP approved courses with a B average, or better, receive a WNE certificate toward the SAP University Alliances (UA) Student Recognition Award in recognition of the “SAP Skillset.” This award offers students enhanced career options with businesses that use SAP software.

Requirements

Free Form Requirements
Certificate of SAP Student Recognition Award

Degree seeking students who complete a minimum of three SAP approved courses receive SAP University Alliances (UA) student Recognition Award in recognition of the “SAP Skillset.” The Award certificate is signed by the UA Director and the Dean of College of Business. Previously the award was named SAP Certificate. Students must complete SAP courses with a B or better average. Receiving this award offers enhanced career options with businesses that use SAP software.

The most common path is to take BAIM 202, BUS 312 & BAIM 312 which are required courses in the College of Business Core, meaning credits earned also count towards the College of Business Core credits requirement. Students can opt to take BAIM 412 in lieu of BAIM 312. If a students’ chosen major does not require BAIM 412, it can be counted as a general elective. The award certificate is conferred at graduation.

Certificate requirements

BAIM 202	Intro to Business Info Systems	3 cr.
BUS 312 / HONB 312	Bus Proc & Enterprise SAP	3 cr.
BAIM 312	Quality & Operations Mgmt w/SAP	3 cr.

Total Credit Hours: 9

SAS.CERT - Certificate in SAS

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
Certificate in SAS

Program Code ~
SAS.CERT

Degree Designation ~
CERT - Certificate, SAS - Certificate in SAS

Academic Level ~
UG - Undergraduate

Program Short Description

Students can earn the SAS certificate by completing as few as four courses with a grade of "C" or higher, which include substantial hands-on component working with SAS Enterprise Miner software for Business Analytics, Business Intelligence, and Data Management.

The certificate is issued at graduation and is sanctioned by the SAS Institute Academic Programs.

SAS certificate is not available to non-degree seeking students.

Requirements

Free Form Requirements
SAS Certificate

Degree-seeking students can earn SAS certificate by completing as few as four College of Business courses, with a grade of "C" or higher, which include substantial hands-on component working with SAS Enterprise Miner software for Business Analytics, Business Intelligence, and Data Management.

Requirements

BAIM 230	Business Analytics Theory & Practice	3 cr.
BAIM 330	Applied Data Mining	3 cr.
BAIM 445	Business Analytics Project	3 cr.
BAIM 450	Multivariate & Big Data Analysis	3 cr.

Total Credit Hours: 12

Certificate must be declared prior to graduation and appears on official transcript.

SECBI.BS - BS in Secondary Ed/Biology

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BS in Secondary Ed/Biology

Program Code ~
SECBI.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Secondary Education coursework will immerse you in the theories, skills and professional standards needed to be a successful secondary school teacher. This integrated major ensures you will have the content knowledge for classroom teaching and the opportunity to develop other career opportunities in your chosen field upon graduation. Education majors complete several experiences in local high schools to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Secondary Teacher Education Majors

After successful completion of all Education department requirements, students may be endorsed for an initial license in Massachusetts in grades 5-12 for English and history, and grades 8-12 in biology, chemistry and mathematics.

Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the Secondary Education requirements in four years with the following content majors: Biology, Chemistry, English, History, or Mathematics. Secondary majors begin their educator preparation in ED 120.

A student should file an application with the Education Department by the end of their first year (application available in EG 101) or immediately upon transfer to an ED major. A student will be fully accepted during the spring semester of junior year if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing Secondary Education requirements.

Minimum eligibility requirements for completing a Secondary Education major are listed below, and in advising handouts available from ED faculty.

Students are required to meet individually at least once a semester with an Education faculty member to review prepracticum feedback and participation, progress in meeting gateway assessments, major coursework assignments, and confirm passed MTEL status before a student teaching placement will be assigned. Students may be counseled out of an ED major for not meeting all criteria, academic performance, or demonstrated lack of professional dispositions. All ED majors complete a minimum of eighty-five hours of prepracticum experiences, and a minimum of three hundred hours as a student teacher in local schools.

Students meeting all stated criteria are automatically eligible for the practicum semester (fall of senior year). The practicum semester includes a methods course, secondary classroom participation, and a student teaching seminar. The Candidate Assessment of Performance (CAP) system is used throughout the practicum semester. CAP is designed around the PSTs as outlined by DESE. Working collaboratively, the student teacher (candidate), the supervising practitioner (cooperating teacher), and University supervisor (WNE ED faculty) gather data, and analyze evidence of ability to implement the PSTs. We work as a team mentoring students to become professional, effective teachers.

Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involves completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in a Secondary Education major: ED 120, ED 201, ED 202, ED 275, ED 361/ED 362 or ED 363, ED 365, ED 366, ED 403, ED 409, and ED 410.

Students should plan on taking only ED 403, ED 409, and ED 410 in fall of their senior year (total of 15 credits). ED 409 requires full-time student teaching off campus.

Secondary Education Biology Major Suggested Sequence of Courses

First Year - Fall

BIO 107	General Biology I	3 cr.
BIO 117	General Biology Laboratory I	1 cr.
CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar Arts & Sciences	2 cr.
MATH 109	Precalculus Mathematics	3 cr.
	or	
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.

Subtotal: 16

First Year - Spring

BIO 108	General Biology II	3 cr.
BIO 118	General Biology Laboratory II	1 cr.
CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 121	Introductory Probability and Statistics	3 cr.
ED 120	Introduction to Education	2 cr.

Subtotal: 16

Sophomore Year - Fall

BIO 213	Ecology	3 cr.
CHEM 209	Organic Chemistry I	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
WIC 2XX	Writing Intensive Course	3 cr.
PSY 101	Introduction to Psychology	3 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 16

Sophomore Year - Spring

ED 201	Principles and Problems of Education	3 cr.
ED 202	Secondary Prepracticum I	1 cr.
BIO 201	Plant Biology	4 cr.
CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
ED 275	Teaching English Language Learners	3 cr.

Subtotal: 15

Junior Year - Fall

BIO 306	Genetics	4 cr.
CUL XXX	Global Cultures Perspective	3 cr.
BIO 2XX	Biology Elective	4 cr.
ART/FILM/MUS/THTR XXX	Aesthetic Perspective	3 cr.
PHYS 101	Elements of Physics	3 cr.
	or	
PHYS 123	Physics of the Life Sciences I	4 cr.

Subtotal: 17-18

Junior Year - Spring

ED 363	Methods for Sciences 5-12	1 cr.
ED 365	Special Education: Principles & Practices	3 cr.
BIO 310	Cell Biology	4 cr.
ED 366	Secondary Prepracticum II	1 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
CS 132	Principles of Computing	3 cr.

Subtotal: 15

Senior Year - Fall

ED 403	Methods of Teaching in Secondary Schools	3 cr.
ED 409	Practicum in Secondary Teaching	9 cr.
ED 410	Secondary Practicum Seminar	3 cr.

Subtotal: 15

Senior Year - Spring

BIO 470	Seminar in Biology	1 cr.
BIO 2XX	Biology Elective	4 cr.
PH XXX	Ethical Perspective	3 cr.
BIO 455	Evolution	3 cr.
	And	
PHYS 15X	PHYS 15X Elective	3 cr.
	or	
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 14-15

Total Credit Hours: 124-125

SECCH.BS - BS in Secondary Ed/Chemistry

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BS in Secondary Ed/Chemistry

Program Code ~
SECCH.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Secondary Education coursework will immerse you in the theories, skills and professional standards needed to be a successful secondary school teacher. This integrated major ensures you will have the content knowledge for classroom teaching and the opportunity to develop other career opportunities in your chosen field upon graduation. Education majors complete several experiences in local high schools to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Secondary Teacher Education Majors

After successful completion of all Education department requirements, students may be endorsed for an initial license in Massachusetts in grades 5-12 for English and history, and grades 8-12 in biology, chemistry and mathematics.

Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the Secondary Education requirements in four years with the following content majors: Biology, Chemistry, English, History, or Mathematics. Secondary majors begin their educator preparation in ED 120.

A student should file an application with the Education Department by the end of their first year (application available in EG 101) or immediately upon transfer to an ED major. A student will be fully accepted during the spring semester of junior year if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing Secondary Education requirements.

Minimum eligibility requirements for completing a Secondary Education major are listed below, and in advising handouts available from ED faculty.

Students are required to meet individually at least once a semester with an Education faculty member to review prepracticum feedback and participation, progress in meeting gateway assessments, major coursework assignments, and confirm passed MTEL status before a student teaching placement will be assigned. Students may be counseled out of an ED major for not meeting all criteria, academic performance, or demonstrated lack of professional dispositions. All ED majors complete a minimum of eighty-five hours of prepracticum experiences, and a minimum of three hundred hours as a student teacher in local schools.

Students meeting all stated criteria are automatically eligible for the practicum semester (fall of senior year). The practicum semester includes a methods course, secondary classroom participation, and a student teaching seminar. The Candidate Assessment of Performance (CAP) system is used throughout the practicum semester. CAP is designed around the PSTs as outlined by DESE. Working collaboratively, the student teacher (candidate), the supervising practitioner (cooperating teacher), and University supervisor (WNE ED faculty) gather data, and analyze evidence of ability to implement the PSTs. We work as a team mentoring students to become professional, effective teachers.

Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involves completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in a Secondary Education major: ED 120, ED 201, ED 202, ED 275, ED 361/ED 362 or ED 363, ED 365, ED 366, ED 403, ED 409, and ED 410.

Students should plan on taking only ED 403, ED 409, and ED 410 in fall of their senior year (total of 15 credits). ED 409 requires full-time student teaching off campus.

Secondary Education Chemistry Major Suggested Sequence of Courses

First Year- Fall

CHEM 105	General Chemistry I	4 cr.
ENGL 132	English Composition I	3 cr.
LA 100	First Year Seminar Arts & Sciences	2 cr.
MATH 133 or MATH 127	Calculus I Calculus I with Precalculus Review	4 cr. 5 cr.
CS 132	Principles of Computing	3 cr.

Subtotal: 16-17

First Year - Spring

CHEM 106	General Chemistry II	4 cr.
ENGL 133	English Composition II	3 cr.
MATH 134	Calculus II	4 cr.
ED 120	Introduction to Education	2 cr.
HIST XXX	Historical Perspective	3 cr.

Subtotal: 16

Sophomore Year - Fall

CHEM 209	Organic Chemistry I	3 cr.
CHEM 211	Analytical Methods	3 cr.
CHEM 219	Organic Chemistry Laboratory I	1 cr.
CHEM 221	Analytical Methods Laboratory	1 cr.
MATH 235	Calculus III	3 cr.
PHYS 123	Physics of the Life Sciences I	4 cr.

Subtotal: 15

Sophomore Year - Spring

CHEM 210	Organic Chemistry II	3 cr.
CHEM 220	Organic Chemistry Laboratory II	1 cr.
CHEM 312	Instrumental Analysis	3 cr.
CHEM 322	Instrumental Analysis Laboratory	1 cr.
ED 202	Secondary Prepracticum I	1 cr.
ED 275	Teaching English Language Learners	3 cr.
PHYS 124	Physics of the Life Sciences II	4 cr.

Subtotal: 16

Junior Year - Fall

CHEM 317	Physical Chemistry I	3 cr.
CHEM 327	Physical Chemistry Laboratory I	1 cr.
PH XXX	Ethical Perspective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 13

Junior Year - Spring

CHEM 318	Physical Chemistry II	3 cr.
CHEM 328	Physical Chemistry Laboratory II	1 cr.
CHEM 314	Biochemistry	3 cr.
CHEM 324	Biochemistry Laboratory	1 cr.
ED 365	Special Education: Principles & Practices	3 cr.
ED 366	Secondary Prepracticum II	1 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
ED 363	Methods for Sciences 5-12	1 cr.

Subtotal: 16

Senior Year - Fall

ED 403	Methods of Teaching in Secondary Schools	3 cr.
ED 409	Practicum in Secondary Teaching	9 cr.
ED 410	Secondary Practicum Seminar	3 cr.

Subtotal: 15

Senior Year - Spring

GEN XXX	General Elective	3 cr.
ART/FILM/MUS/THTR XXX	Aesthetic Perspective	3 cr.
CHEM 421	Inorganic Chemistry	3 cr.
CHEM 431	Inorganic Chemistry Laboratory	1 cr.
CHEM 470	Seminar in Chemistry	1 cr.
ED 201	Principles and Problems of Education	3 cr.

Subtotal: 14

Total Credit Hours: 121

SECEN.BA - BA in Secondary Ed/English

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BA in Secondary Ed/English

Program Code ~
SECEN.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Secondary Education coursework will immerse you in the theories, skills and professional standards needed to be a successful secondary school teacher. This integrated major ensures you will have the content knowledge for classroom teaching and the opportunity to develop other career opportunities in your chosen field upon graduation. Education majors complete several experiences in local high schools to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Secondary Teacher Education Majors

After successful completion of all Education department requirements, students may be endorsed for an initial license in Massachusetts in grades 5-12 for English and history, and grades 8-12 in biology, chemistry and mathematics.

Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the Secondary Education requirements in four years with the following content majors: Biology, Chemistry, English, History, or Mathematics. Secondary majors begin their educator preparation in ED 120.

A student should file an application with the Education Department by the end of their first year (application available in EG 101) or immediately upon transfer to an ED major. A student will be fully accepted during the spring semester of junior year if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing Secondary Education requirements.

Minimum eligibility requirements for completing a Secondary Education major are listed below, and in advising handouts available from ED faculty.

Students are required to meet individually at least once a semester with an Education faculty member to review prepracticum feedback and participation, progress in meeting gateway assessments, major coursework assignments, and confirm passed MTEL status before a student teaching placement will be assigned. Students may be counseled out of an ED major for not meeting all criteria, academic performance, or demonstrated lack of professional dispositions. All ED majors complete a minimum of eighty-five hours of prepracticum experiences, and a minimum of three hundred hours as a student teacher in local schools.

Students meeting all stated criteria are automatically eligible for the practicum semester (fall of senior year). The practicum semester includes a methods course, secondary classroom participation, and a student teaching seminar. The Candidate Assessment of Performance (CAP) system is used throughout the practicum semester. CAP is designed around the PSTs as outlined by DESE. Working collaboratively, the student teacher (candidate), the supervising practitioner (cooperating teacher), and University supervisor (WNE ED faculty) gather data, and analyze evidence of ability to implement the PSTs. We work as a team mentoring students to become professional, effective teachers.

Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involves completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in a Secondary Education major: ED 120, ED 201, ED 202, ED 275, ED 361/ED 362 or ED 363, ED 365, ED 366, ED 403, ED 409, and ED 410.

Students should plan on taking only ED 403, ED 409, and ED 410 in fall of their senior year (total of 15 credits). ED 409 requires full-time student teaching off campus.

Secondary Education English Major Suggested Sequence of Courses

First Year - Fall Semester

ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PSY 101	Introduction to Psychology	3 cr.
CS 132	Principles of Computing	3 cr.

Subtotal: 15 cr.

First Year - Spring Semester

ENGL 133	English Composition II	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PH XXX	Ethical Perspective	3 cr.
HIST XXX	Historical Perspective	3 cr.
ED 120	Introduction to Education	2 cr.

Subtotal: 14 cr.

Sophomore Year - Fall Semester

ENGL 232	British Literature II	3 cr.
ENGL 252	American Literature II	3 cr.
ENGL 240	Editing	3 cr.
ART XXX	Aesthetic Perspective	3 cr.
ENGL 214 or ENGL 215	World Literature I World Literature II	3 cr. 3 cr.

Subtotal: 15 cr.

Sophomore Year - Spring Semester

ENGL 231	British Literature I	3 cr.
ENGL 251	American Literature I	3 cr.
ED 201	Principles and Problems of Education	3 cr.
ED 275	Teaching English Language Learners	3 cr.
LAB XXX	Laboratory Science Requirement	3 cr.
ED 202	Secondary Prepracticum I	1 cr.

Subtotal: 16 cr.

Junior Year - Fall Semester

ENGL XXX	Historically Underrepresented Literature	3 cr.
ENGL 3XX/4XX	English Elective	3 cr.
ENGL 354	Creative Non-Fiction Workshop	3 cr.
ENGL 302	Approaches to the Study of Literature	3 cr.
ENGL 270	Writing for the Web	3 cr.
	or	
ENGL 370	Writing about TV and Film	3 cr.
	or	
ENGL 371	Narrative and Digital Media	3 cr.

Subtotal: 15 cr.

Junior Year - Spring Semester

ENGL 339	Children's and Young Adult Literature	3 cr.
ED 361	Methods for Humanities 5-12	1 cr.
ED 365	Special Education: Principles & Practices	3 cr.
ENGL 411/338	Major Authors	3 cr.
ENGL 270	Writing for the Web	3 cr.
	or	
ENGL 370	Writing about TV and Film	3 cr.
	or	
ENGL 371	Narrative and Digital Media	3 cr.
ENGL 3XX/4XX	Focus Literature Period	3 cr.
ED 366	Secondary Prepracticum II	1 cr.

Subtotal: 17 cr.

Senior Year - Fall Semester

ED 403	Methods of Teaching in Secondary Schools	3 cr.
ED 409	Practicum in Secondary Teaching	9 cr.
ED 410	Secondary Practicum Seminar	3 cr.

Subtotal: 15 cr.

Senior Year - Spring Semester

ENGL 410	English Seminar	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15 cr.

Total Credit Hours: 122

Courses taken to complete the major fulfill the A & S Writing Intensive Requirement.

SECHI.BA - BA in Secondary Ed/History

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BA in Secondary Ed/History

Program Code ~
SECHI.BA

Degree Designation ~
BA - Bachelor of Arts

Academic Level ~
UG - Undergraduate

Program Short Description

Secondary Education coursework will immerse you in the theories, skills and professional standards needed to be a successful secondary school teacher. This integrated major ensures you will have the content knowledge for classroom teaching and the opportunity to develop other career opportunities in your chosen field upon graduation. Education majors complete several experiences in local high schools to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Secondary Teacher Education Majors

After successful completion of all Education department requirements, students may be endorsed for an initial license in Massachusetts in grades 5-12 for English and history, and grades 8-12 in biology, chemistry and mathematics.

Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the Secondary Education requirements in four years with the following content majors: Biology, Chemistry, English, History, or Mathematics. Secondary majors begin their educator preparation in ED 120.

A student should file an application with the Education Department by the end of their first year (application available in EG 101) or immediately upon transfer to an ED major. A student will be fully accepted during the spring semester of junior year if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing Secondary Education requirements.

Minimum eligibility requirements for completing a Secondary Education major are listed below, and in advising handouts available from ED faculty.

Students are required to meet individually at least once a semester with an Education faculty member to review prepracticum feedback and participation, progress in meeting gateway assessments, major coursework assignments, and confirm passed MTEL status before a student teaching placement will be assigned. Students may be counseled out of an ED major for not meeting all criteria, academic performance, or demonstrated lack of professional dispositions. All ED majors complete a minimum of eighty-five hours of prepracticum experiences, and a minimum of three hundred hours as a student teacher in local schools.

Students meeting all stated criteria are automatically eligible for the practicum semester (fall of senior year). The practicum semester includes a methods course, secondary classroom participation, and a student teaching seminar. The Candidate Assessment of Performance (CAP) system is used throughout the practicum semester. CAP is designed around the PSTs as outlined by DESE. Working collaboratively, the student teacher (candidate), the supervising practitioner (cooperating teacher), and University supervisor (WNE ED faculty) gather data, and analyze evidence of ability to implement the PSTs. We work as a team mentoring students to become professional, effective teachers.

Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involves completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in a Secondary Education major: ED 120, ED 201, ED 202, ED 275, ED 361/ED 362 or ED 363, ED 365, ED 366, ED 403, ED 409, and ED 410.

Students should plan on taking only ED 403, ED 409, and ED 410 in fall of their senior year (total of 15 credits). ED 409 requires full-time student teaching off campus.

Secondary Education History Major Suggested Sequence of Courses

First Year - Fall Semester

HIST 105	World Civilization I	3 cr.
HIST 111	United States History to 1877	3 cr.
MATH XXX	Mathematical Analysis	3 cr.
ENGL 132	English Composition I	3 cr.
LA 110	First Year Seminar Arts & Sciences	3 cr.

Subtotal: 15 cr.

First Year - Spring Semester

HIST 106	World Civilization II	3 cr.
HIST 112	United States History, 1878 to the Present	3 cr.
MATH 1XX	Mathematical Analysis	3 cr.
PSY 101	Introduction to Psychology	3 cr.
ENGL 133	English Composition II	3 cr.
ED 120	Introduction to Education	2 cr.

Subtotal: 17 cr.

Sophomore Year - Fall Semester

POSC 1XX	Political Science Elective	3 cr.
EC 1XX	Economics Elective	3 cr.
HIST XXX	History Elective	3 cr.
CS 132	Principles of Computing	3 cr.

Subtotal: 12 cr.

Sophomore Year - Spring Semester

GEOG 1XX	World Geography Elective	3 cr.
HIST 289	Methods Seminar in History	3 cr.
ED 201	Principles and Problems of Education	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
ED 275	Teaching English Language Learners	3 cr.
ED 202	Secondary Prepracticum I	1 cr.

Subtotal: 16 cr.

Junior Year - Fall Semester

PH XXX	Ethical Perspective	3 cr.
HIST XXX	History Elective	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
ART/FILM/MUS/THTR XXX	Aesthetic Perspective	3 cr.
POSC 2XX/3XX	Political Science Elective	3 cr.

Subtotal: 15 cr.

Junior Year - Spring Semester

HIST XXX	History Elective	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
ED 361	Methods for Humanities 5-12	1 cr.
ED 365	Special Education: Principles & Practices	3 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.
ED 366	Secondary Prepracticum II	1 cr.

Subtotal: 17 cr.

Senior Year - Fall Semester

ED 403	Methods of Teaching in Secondary Schools	3 cr.
ED 409	Practicum in Secondary Teaching	9 cr.
ED 410	Secondary Practicum Seminar	3 cr.

Subtotal: 15 cr.

Senior Year - Spring Semester

LAB XXX	Laboratory Science Requirement	3 cr.
HIST 3XX	Upper Level History Elective	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
HIST 490	Research Seminar in History	4 cr.
Total Credit Hours:		**13**

Subtotal: 13 cr.

Total Credit Hours: 120

** Two courses must be designated as writing intensive.*

SECMS.BS - BS in Secondary Ed/Math Sci

General

College/School
College of Arts & Sciences

Department(s) ~
Education

Program Title ~
BS in Secondary Ed/Math Sci

Program Code ~
SECMS.BS

Degree Designation ~
BS - Bachelor of Science

Academic Level ~
UG - Undergraduate

Program Short Description

Secondary Education coursework will immerse you in the theories, skills and professional standards needed to be a successful secondary school teacher. This integrated major ensures you will have the content knowledge for classroom teaching and the opportunity to develop other career opportunities in your chosen field upon graduation. Education majors complete several experiences in local high schools to demonstrate implementation of all teaching skills and dispositions needed for licensure.

Requirements

Free Form Requirements
Secondary Teacher Education Majors - **Secondary Education Mathematical Sciences Major**

After successful completion of all Education department requirements, students may be endorsed for an initial license in Massachusetts in grades 5-12 for English and history, and grades 8-12 in biology, chemistry and mathematics.

Students can complete the University's General University requirements, the College of Arts and Sciences requirements, and the Secondary Education requirements in four years with the following content majors: Biology, Chemistry, English, History, or Mathematics. Secondary majors begin their educator preparation in ED 120.

A student should file an application with the Education Department by the end of their first year (application available in EG 101) or immediately upon transfer to an ED major. A student will be fully accepted during the spring semester of junior year if all criteria listed above are successfully met. Students may be counseled out of the major at any advising meeting due to low GPA, lack of progress on MTELS, or demonstrated lack of professional dispositions. Credits earned toward the Education major (leads to licensure) may be applied to the Education minor (not a path to licensure) if a student is unable to meet all requirements for completing Secondary Education requirements.

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Currently the University's Education Program offers students the opportunity to prepare for the Massachusetts Initial License, which is valid for five years of employment. The Massachusetts Professional License is then required of graduates and involves completion of a Performance Assessment Program or an appropriate master's degree program, and three years of employment under the license.

Required courses for students enrolled in a Secondary Education major: ED 120, ED 201, ED 202, ED 275, ED 361/ED 362 or ED 363, ED 365, ED 366, ED 403, ED 409, and ED 410.

Students should plan on taking only ED 403, ED 409, and ED 410 in fall of their senior year (total of 15 credits). ED 409 requires full-time student teaching off campus.

Secondary Education Mathematical Sciences Major Suggested Sequence of Courses

Freshman Year - Fall Semester

MATH 127 - MATH 133	Calculus I with Pre-Calculus Review or Calculus 1	5 cr. - 4 cr.
ENGL 132	English Composition I	3 cr.
HIST XXX	Historical Perspective	3 cr.
LA 100	First Year Seminar Arts & Sciences	2 cr.
LAB XXX	Laboratory Science Requirement	3 cr.

Subtotal: 15-16

Freshman Year - Spring Semester

MATH 134	Calculus II	4 cr.
ENGL 133	English Composition II	3 cr.
CS 170	Technology in Mathematics	3 cr.
ED 120	Introduction to Education	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.

Subtotal: 16

Sophomore Year - Fall Semester

MATH 235	Calculus III	3 cr.
MATH 281	Foundations of Mathematics I	3 cr.
PSY 101	Introduction to Psychology	3 cr.
ART/FILM/MUS/THTR XXX	Aesthetic Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Sophomore Year - Spring Semester

MATH 121	Introductory Probability & Statistics I	3 cr.
GEN XXX	General Elective	3 cr.
CS 171	Programming for Mathematics	4 cr.
ED 275	Teaching English Language Learners	3 cr.
ED 202	Secondary Prepracticum I	1 cr.

Subtotal: 14

Junior Year - Fall Semester

MATH 306	Linear Algebra	3 cr.
MATH 418	Introduction to Modern Algebra	3 cr.
MATH XXX	Mathematics Elective	3 cr.
PH XXX	Ethical Perspective	3 cr.
MATH XXX	Mathematics Elective	3 cr.

Subtotal: 15

Junior Year - Spring Semester

MATH 421	Real Analysis	3 cr.
MATH 371	Modern Aspects of Geometry	3 cr.
ED 201	Principles and Problems of Education	3 cr.
ED 362	Methods for Mathematics 5-12	1 cr.
ED 365	Special Education: Principles & Practices	3 cr.
ED 366	Secondary Prepracticum II	1 cr.
ENGL 339	Children's and Young Adult Literature	3 cr.

Subtotal: 17

Senior Year - Fall Semester

MATH 451	Senior Project I	1 cr.
ED 403	Methods of Teaching in Secondary Schools	3 cr.
ED 409	Practicum in Secondary Teaching	9 cr.
ED 410	Secondary Practicum Seminar	3 cr.

Subtotal: 16

Senior Year - Spring Semester

MATH 452	Senior Project II	2 cr.
MATH 377	Elementary Number Theory	3 cr.
MATH 375	Creative Problem Solving	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 14

Total Credit Hours: 121-122

MATH 375 and MATH 377 are typically offered together in alternate spring semesters, and MATH 371 is offered in the other alternate spring semester. They can be taken in either order.

SLC.MS - MS in Sport Leadership & Coaching

General

College/School
College of Business

Department(s) ~
Sport Management & Bus Law

Program Title ~
MS in Sport Leadership & Coaching

Program Code ~
SLC.MS

Degree Designation ~
MS - Master of Science

Academic Level ~
GR - Graduate

Program Short Description

The MS in Sport Leadership & Coaching program is designed for students interested in pursuing a position of leadership in sport organizations. The program emphasizes core leadership skills and mindsets coupled with an introduction to critical managerial tasks needed to oversee a successful sport organzation or program. Students are introduced to key principles of staff and player personnel development and management, revenue development including fundraising skills and sponsorship, organizational governance and structure in the sport industry and sport analytics and research. The program prepares students for entry into leadership positions in sport programs and organizations including coaching, program leadership, professional and amateur sport administration and other sectors of the sport industry.

Requirements

Free Form Requirements
MS in Sport Leadership and Coaching

Purpose

The low-residency MS in Sport Leadership and Coaching provides advanced sport management education to individuals seeking managerial and/or athletic coaching positions in sport organizations. The sport leadership graduate degree provides students not only an in-depth understanding of the core concepts necessary to run critical program functional areas like marketing, fundraising, player evaluation, and team leadership but also facilitates the development of analytical abilities required to make sound business decisions. It fosters a deeper understanding of leadership theory, organizational dynamics, and team performance while exploring how individuals can motivate, build, and inspire a high performing team.

The MS in Sport Leadership features two one-week residencies, one offered at the beginning of the program, and the other, at the end of the program. Each residency will be facilitated by a series of graduate courses that will be offered online, with in-class sessions.

Program Learning Goals

A student will be able to:

1. Understand theoretical foundations of leadership in the sport environment
2. Identify leadership style including strengths and challenges for the purpose of developing individualized leadership development plan
3. Understand the leader's role in creating and managing a high performing team both on the field and in the administrative offices
4. Develop understanding of sport governance, compliance, and legal issues related to sport organizations
5. Understand the sport organization as a business enterprise while learning effective approaches and techniques for developing and managing

1. human resources—evaluating and recruiting both player and administrative personnel

2. financial resources —fundraising, corporate sponsorship, and other revenue streams

6. Develop strategies to apply sport analytics principles in problem-solving and decision-making within the sport organization
7. Develop and apply sport research skills
8. Apply and practice sport leadership skills in mentored field experience either in a sport coaching or sport administrative setting

Structure

Degree Requirements

Two Residency Courses: SPMN 631 and SPMN 635
The residency consists of online delivery combined with a 6-day residency. Students may take no more than two courses per residency and must complete two separate residencies.

Graduate Management Electives – 2 courses - 6 credits

2 Courses (6 credits) of the following leadership foundations graduate courses currently offered through the College of Business in support of the MBA and MS. in Organizational Leadership degrees.

MAN 6XX	Management Elective	3 cr.
MAN 6XX	Management Elective	3 cr.

Subtotal: 6

Mentored Field Experience and Research–Sport Industry Placement

SPMN 681	Athletic Focus Profession Issues and Research Project	3 cr.
SPMN 682	Coaching/Athletic Administration Mentored Field Experience	3 cr.

Subtotal: 6

Sport Sequence

SPMN 631	Sport Leadership and Maximizing Team Performance	3 cr.
SPMN 632	Sport Analytics and Data Driven Decision Making	3 cr.
SPMN 633	Compliance and Governance of Sport and Athletic Organizations	3 cr.
SPMN 634	Sport Agency, Player Personnel Evaluation and Management	3 cr.
SPMN 635	Resource Development and Program Promotion for Sport and Athletic Organizations	3 cr.
SPMN 6XX	Elective	3 cr.

Subtotal: 18

Total Credit Hours: 30

SLEAD.CERT - Grad Certificate in Sport Leadership

General

College/School
College of Business

Department(s) ~
Business General

Program Title ~
Grad Certificate in Sport Leadership

Program Code ~
SLEAD.CERT

Degree Designation ~
CERT - Certificate, SLEAD - Cert Sport Leadership/Grad

Academic Level ~
GR - Graduate

Program Short Description

The graduate-level Sport Leadership certificate is designed for students seeking to enhance their leadership abilities within sport organizations.

Requirements

Free Form Requirements
Graduate Sport Leadership Certificate

Entry requirements

- Undergraduate degree with GPA of 3.000 or undergraduate degree with evidence of ability to do graduate-level work. No more than three credits approved transfer allowed.
- Personal statement of purpose.

Academic Performance

The academic standards apply to students in the Sport Leadership Certificate program with the following exception: Any student who receives one or more grades of "C" or lower, will be dismissed from the program.

Certificate must be declared prior to graduation and appears on official transcript.

Certificate Requirements

SPMN 631	Sport Leadership and Maximizing Team Performance	3 cr.
SPMN 633	Compliance and Governance of Sport and Athletic Organizations	3 cr.
SPMN 681	Athletic Focus Profession Issues and Research Project	3 cr.

Total Credit Hours: 9

SPAN.CERT - Certificate in Spanish

General

College/School
College of Arts & Sciences

Department(s) ~
English & Cultural Studies

Program Title ~
Certificate in Spanish

Program Code ~
SPAN.CERT

Degree Designation ~
CERT - Certificate

Academic Level ~
UG - Undergraduate

Program Short Description

The Certificate in Spanish benefits students interested in improving their Spanish skills for personal or professional reasons without having to commit to the full 18 credits of the minor. This certificate is geared toward students majoring in Health Sciences, Pharmacy, Criminal Justice, and other public-facing fields. This certificate also benefits Latinx and Heritage speakers who want to continue refining their language skills beyond beginner levels of Spanish.

Requirements

Free Form Requirements
Certificate in Spanish

The Certificate in Spanish offered through the Dept. of English and Cultural Studies benefits students interested in improving their Spanish skills for personal or professional reasons. The target populations for such a certificate are students who are in intensive programs who want to build their language skills in Spanish. This certificate is geared towards students majoring in Health Sciences, Pharmacy, Criminal Justice, and other public-facing fields. This certificate would also benefit Latinx and Heritage speakers who want to continue refining their language skills but are too advanced for the beginner levels of Spanish. Ultimately, the condensed program would allow students to continue building their Intercultural communication skills and learn about other but are unable to commit to the full 18 credits of the minor.

Students would be required to take 12 credits of Spanish in total (in addition to any pre-requisites) and at least two of these Spanish courses must be at the 300 level.

Certificate Requirements

SPAN 203	Intermediate Spanish I	3 cr.
SPAN 204	Intermediate Spanish II	3 cr.
SPAN 305	Advanced Conversational Spanish I	3 cr.
SPAN 306	Advanced Conversational Spanish II	3 cr.

Total Credit Hours: 12

Students are unlikely to be placed higher than at the Spanish 305 level. However, if a student places at the Advanced level the sequence will include Span. 305 and 306 above and would include:

SPAN 325 Goya to Almodóvar: Hispanic Culture 3cr.

SPAN 333 Independent Study in Spanish 3cr.

SPAN 390 Special Topics in Spanish 3cr.

SPMN.BSBA - BSBA in Sport Management

General

College/School
College of Business

Department(s) ~
Sport Management & Bus Law

Program Title ~
BSBA in Sport Management

Program Code ~
SPMN.BSBA

Degree Designation ~
BSBA - BS Business Administration

Academic Level ~
UG - Undergraduate

Program Short Description

This program provides students with the in-depth understanding of the core concepts necessary to run critical program functional areas like marketing, fund raising, player evaluation, and corporate sponsorship. It also facilitates the development of analytical abilities required to make sound business decisions.

Requirements

Free Form Requirements
Sport Management Major

General Information

The Sport Management program emphasizes the business side of sports. Students majoring in Sport Management engage in a course of academic study that prepares them for a rewarding career in sport-related organizations. The Sport Management major understands the unique dynamics of the sport industry and is able to mobilize the resources available to meet the mission, goals, and objectives of both the sport organization and its stakeholders. The Sport Management program provides students with the opportunity to develop the knowledge and skills they need to manage within the sport industry. Students are also provided with industry-based learning opportunities and are actively involved in industry-based projects both in the classroom and beyond.

Career Preparation

In order to help students understand careers available to Sport Management majors, faculty in the Department of Sport Management designed activities to guide students from career exploration through career implementation. Examples of some of these include:

1. Career Exploration in the freshman year is accomplished through a speaker series, an alumni panel, and Sport Management Association activities;
2. Career Investigation in the sophomore year includes classroom assignments in SPMN 250 which look at opportunities in sport industry segments;

3. Career Determination in the junior year is accomplished using projects in SPMN 355 and SPMN 366; and

4. Career Implementation in the senior year is addressed through instruction in networking and sport job search skills in SPMN 465 combined with internships and field experiences.

Career Preparation

The Sport Management major is prepared to assume positions of responsibility in a wide variety of sport organizations in the private and public sectors. Graduates work in the following settings: professional sport, sport facility management, collegiate sport, sports clubs, health and fitness clubs, sports media, and the sporting goods industry, etc.

Program Learning Goals

Having completed a major in Sport Management, the student will have the ability to:

1. Develop an understanding of and ability to apply managerial competencies to domestic and international sport organizations.
2. Achieve competency in sport marketing including fundamental aspects of sport products, markets, consumer research, sponsorship, promotion, and digital/social media.
3. Achieve competency in the finance of sport organizations including key elements of budgeting, accounting, public/private joint financing, fundraising, and revenue development.
4. Achieve competency in legal aspects of sport including state/federal legislation, liability, risk management, contracts, and collective bargaining.
5. Achieve competency in the economics of sport including fundamental concepts of supply and demand, economic forecasting, and economic impact assessment.
6. Achieve competency in the management of sport facilities including fundamental concepts of planning, design, construction, and both front of house and back of house operations

Practicum, Internship, and Advanced Field Experience Options

Students majoring in Sport Management are afforded opportunities to apply their classroom learning to field experiences. All Sport Management majors must complete sport-industry based experiences as part of their curriculum.

Sport Management majors may complete a three-credit collegiate athletics course which provides students with the opportunity to plan, organize, and lead various elements of sport-related programming which may include intercollegiate athletic teams, intramurals, recreation, and health and wellness. Students gain hands-on experience in game operations, event management, sport promotion, and athletic communications while working directly under the supervision of Western New England University Department of Athletics staff. The course combines classroom instruction with on-site sport industry experience.

Sport Management majors who meet the University's academic requirements for internships (junior standing and grade point average of 2.5 or above overall and in the major) are eligible for the 3 credit Internship in Sport Management.

Sport Management majors with a grade point average of 3.0 and above are eligible to apply for the Advanced Field Experience (SPMN 460/SPMN 461) program. This program places students in semester-long, full-time intern positions within a sport organization. In place of the 6 credit hours of electives, students in this program, earn 6 credit hours through a combination of the work they do at their placement site and a series of papers and presentations relating their field experience to the concepts and principles learned in their courses.

Degree Requirements

SPMN 250	Managing Sport Organizations	3 cr.
SPMN 355	Sport Facility Planning and Management	3 cr.
SPMN 366	Sport Marketing	3 cr.
BL 360	Business Law for Sport Management	3 cr.
BL 388	Labor Management Relations in Sport	3 cr.
SPMN 465	Seminar in Sport Management	3 cr.
SPMN XXX	Sport Management Elective	6cr.
SPMN 480	Internship in Sport Management	3 cr.
	or	
SPMN 3XX	Sport Management Elective	3 cr.

Subtotal: 24

*BL 360 is a Sport Management requirement. It is considered a Business Core course and an equivalent to BL 201 Business Law. BL 360 is included in the major GPA calculation for Sport Management students. Note that BL 360 is counted toward total credits in the Business Core so the total credits above reflect all required Sport Management courses except BL 360.

GEN XXX	General Electives	15 cr.
GEN 3XX	General Electives	3 cr.

Subtotal: 18

Total Credit Hours: 42

Sport Management Suggested Sequence of Courses

First Year – Fall Semester

BUS 110/HONB 110	Introduction to Business Seminar	3 cr.
BAIM 102	Problem Solving with Business Tools	3 cr.
MATH 111	Analysis for Business and Economics	3 cr.
Or		
MATH 123	Calculus I for Management, Life, and Social Sciences	3 cr.
ENGL 132	English Composition I	3 cr.
SO 101	Introduction to Sociology	3 cr.
Or		
PSY 101	Introduction to Psychology	3 cr.

Subtotal: 15

First Year – Spring Semester

HIST XXX	Historical Perspective	3 cr.
QR 112	Quantitative Reasoning for Business	3 cr.
EC 111	Principles of Microeconomics	3 cr.
ENGL 133	English Composition II	3 cr.
AC 101/HONB 203	Financial Reporting I	3 cr.

Subtotal: 15

Sophomore Year – Fall Semester

MAN 204/HONB 204	Management and Organizational Behavior	3 cr.
AC 202	Managerial Accounting	3 cr.
EC 112	Principles of Macroeconomics	3 cr.
BAIM 221	Statistics for Business Analytics	3 cr.
BAIM 202	Introduction to Business Information Systems	3 cr.

Subtotal: 15

Sophomore Year – Spring Semester

COMM 233	Business Writing and Communication	3 cr.
MK 200/HONB 200	Principles of Marketing	3 cr.
SPMN 250	Managing Sport Organizations	3 cr.
FIN 214	Introduction to Finance	3 cr.
BL 201/HONB 201	Introduction to Business Law	3 cr.

Subtotal: 15

Junior Year - Fall Semester

BUS 326	Business Planning for New Ventures	3 cr.
	or	
BUS 312/HONB 312	Business Processes and Enterprise Resource Planning with SAP	3 cr.
GEN XXX	General Elective	3 cr.
SPMN 355	Sport Facility Planning and Management	3 cr.
LAB XXX	Laboratory Science	3 cr.
MAN 240/HONB 240	Business and Society	3 cr.
	or	
PH 211	Business Ethics	3 cr.

Subtotal: 15

Junior Year - Spring Semester

BL 360	Business Law for Sport Management	3 cr.
CUL XXX	Global Cultures Perspective	3 cr.
SPMN XXX	Sport Management Elective	3 cr.
SPMN 366	Sport Marketing	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Fall Semester

BAIM 310	Quality and Operations Management	3 cr.
	or	
BAIM 312	Quality and Operations Management with SAP	3 cr.
LAB/NSP XXX	Laboratory Science or Natural Science Perspective	3 cr.
SPMN XXX	Sport Management Elective	3 cr.
GEN XXX	General Elective	3 cr.
GEN XXX	General Elective	3 cr.

Subtotal: 15

Senior Year - Spring Semester

BL 388	Labor Management Relations in Sport	3 cr.
BUS 423/BME 423/ME 423	Product Development and Innovation	3 cr.
	or	
BUS 450/HONB 450	Business Strategy	3 cr.
SPMN 465	Seminar in Sport Management	3 cr.
SPMN 3XX	Sport Management Elective	3 cr.
	Or	
SPMN 480	Internship in Sport Management	3 cr.
GEN 3XX	General Elective	3 cr.

Subtotal: 15

Total Credit Hours: 120

This major offers the option of 6six credits of advanced field experience (using electives above).

Students must take 30 credit hours of coursework in 300-400 level courses. All students must take 12 hours of upper level (300-400) courses in their major at Western New England University.

General electives must be selected in such a way to ensure that all “perspectives of understanding” requirements have been satisfied.

Courses to be included in computing the 2.000 minimum average in the major are as follows: All SPMN courses and BL 388

All Courses

AC101 - Financial Reporting I

General

Subject Code ~
AC

Course Number ~
101

Course Name (appears on the transcript) ~
Financial Reporting I

Content

Description
This course provides an introduction to the basic concepts and framework of financial accounting with an emphasis placed on the interpretation and use of the information contained in the primary financial statements. Key outcomes include an understanding of underlying accounting concepts and principles, the accounting information process, and the elements of the balance sheet, income statement, and the statement of cash flows.

Students cannot take both AC 101 and HONB 203.

Offered: Fall and Spring

Credit Hours

Min
3

AC190 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This course is designed to introduce students to elements of culture and behavior in a professional accounting atmosphere that contribute to personal and professional success. Students will examine a variety of professional customs including communication norms, behavioral expectations, and professional appearance. In addition, students will be introduced to resume writing, cover letters, interviewing techniques, accounting firms, and CPA licensure requirements.

Credit Hours

Min
1

Requisites

Free Form Requirements
For Freshmen AC Majors Only

AC191 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This course is designed to introduce students to elements of culture and behavior in a professional accounting atmosphere that contribute to personal and professional success. Students will examine a variety of professional customs including communication norms, behavioral expectations, and professional appearance. In addition, students will be introduced to resume writing, cover letters, interviewing techniques, accounting firms, and CPA licensure requirements.

Billing Hours

Min
3

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
For Freshmen AC Majors Only

AC201 - Financial Reporting I

General

Subject Code ~
AC

Course Number ~
201

Course Name (appears on the transcript) ~
Intro to Accounting I

Content

Description
This course provides an introduction to the basic concepts and framework of financial accounting with an emphasis placed on the interpretation and use of the information contained in the primary financial statements. Key outcomes include an understanding of underlying accounting concepts and principles, the accounting information process, and the elements of the balance sheet, income statement, and the statement of cash flows.

Students cannot receive credit for both AC 201 and HONB 203.

Credit Hours

Min
3

Requisites

Free Form Requirements
Take MATH 111, 115, 123, 127, or 133 and Sophomore standing

AC202 - Managerial Accounting

General

Subject Code ~
AC

Course Number ~
202

Course Name (appears on the transcript) ~
Managerial Accounting

Content

Description
This course provides an introduction to managerial accounting, with an emphasis on the planning, control, and decision-making functions of management. Key outcomes include an understanding of cost behavior, product costing, cost-volume-profit analysis, budgeting, and identification of relevant costs for decision-making purposes.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC201/HONB 203, and MATH 111, 123, 127, or 133

AC204 - Tools and Concepts in Accounting

General

Subject Code ~
AC

Course Number ~
204

Course Name (appears on the transcript) ~
Tools & Concepts in Accounting

Content

Description
The primary objective of this course is to provide a foundational understanding of accounting concepts and tools. This course takes students from double-entry accounting through an elementary understanding of how to construct financial statements. Key outcomes include an ability to apply the conceptual framework to journalizing transactions, adjusting and closing entries, the accounting information process (cycles), and creating the balance sheet, income statement, and the statement of cash flows.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC201/HONB 203

AC291 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors, but not carried in the catalog on a regular basis. The course may be repeated for credit if the topic varies.

Billing Hours

Min
3

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
For AC Majors Only

AC305 - Financial Reporting II

General

Subject Code ~
AC

Course Number ~
305

Course Name (appears on the transcript) ~
Financial Reporting II

Content

Description
This second course in financial reporting is the first of a three-course sequence that offers an in-depth examination of the financial reporting process. Emphasis is placed on the application of theory to the preparation and use of financial accounting information. Key outcomes include an understanding of the flow of information through the accounting cycle and the measurement and reporting requirements for cash, receivables, inventories, plant and equipment, intangible assets and investments and stockholders' equity.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 204 with minimum grade of C

AC306 - Financial Reporting III

General

Subject Code ~
AC

Course Number ~
306

Course Name (appears on the transcript) ~
Financial Reporting III

Content

Description
This is the third in a three-course sequence offering an in-depth examination of the financial reporting process. Similar to AC 305, emphasis is placed on the application of theory to the preparation and use of financial accounting information. Key outcomes include an understanding of the measurement and reporting requirements for bonds, leases, pensions, investments, current and deferred income taxes, owners' equity, and earnings per share.Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 305 with minimum grade of C

AC311 - Municipal & Fund Accounting

General

Subject Code ~
AC

Course Number ~
311

Course Name (appears on the transcript) ~
Municipal & Fund Accounting

Content

Description
This course examines accounting concepts for nonprofit organizations. Key outcomes include an understanding of generally accepted accounting principles as they apply to governmental and municipal organizations, educational institutions, hospitals, and social organizations. Resource budgets will also be examined. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
AC 204

AC313 - Taxation of Individuals

General

Subject Code ~
AC

Course Number ~
313

Course Name (appears on the transcript) ~
Taxation of Individuals

Content

Description
This course provides an introduction to the federal tax system, with an emphasis on the federal income taxation of individuals. Key outcomes include an understanding of the fundamental concepts of income, deductions, and the determination of tax liability.Offered: Fall and Spring

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 202

AC330 - Accounting Information Systems

General

Subject Code ~
AC

Course Number ~
330

Course Name (appears on the transcript) ~
Accounting Information Systems

Content

Description
This course is designed to examine the relationship between a company's information system and its accounting information system (AIS). Key outcomes include an understanding of database management systems, the objectives and procedures of internal control, typical business documents and reports, proper system documentation, the general ledger and business reporting, and systems development.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 305, or permission of the instructor

AC333 - Indep Study in Accounting

General

Subject Code ~
AC

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Accounting

Content

Description
See "Independent Study"

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

AC334 - Indep Study in Accounting

General

Subject Code ~
AC

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Accounting

Content

Description
See "Independent Study"

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

AC340 - Accounting Analytics

General

Subject Code ~
AC

Course Number ~
340

Course Name (appears on the transcript) ~
Accounting Analytics

Content

Description
This course explores how financial statement data and non-financial metrics can be linked to financial performance through data analytics. Topics include analytic techniques for decision-making and the examination of "big data" involving accounting information. Hands-on experiences will develop skills with select software tools used in data analytics for accounting professionals. . This course will help students make better business decisions through the use of financial data and accounting analytics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 305

AC414 - Taxation of Entities

General

Subject Code ~
AC

Course Number ~
414

Course Name (appears on the transcript) ~
Taxation of Entities

Content

Description
This course provides an introduction to the federal taxation of business entities. Key outcomes include an understanding of the fundamental concepts of the federal income taxation of corporate formations, earnings, and distributions, as well as the federal taxation of partnerships, S corporations, and other pass-through entities.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 313 or take concurrently

AC419 - Auditing & Assurance Services

General

Subject Code ~
AC

Course Number ~
419

Course Name (appears on the transcript) ~
Auditing & Assurance Services

Content

Description
This course introduces students to the role of financial statement audits and other assurance services in enhancing the relevance and reliability of information. Key outcomes include basic knowledge of risk analysis, internal controls, information technology, sampling, legal liability, and professional conduct.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete AC 305 or take concurrently

AC440 - Accounting Analytics

General

Subject Code ~
AC

Course Number ~
440

Course Name (appears on the transcript) ~
Accounting Analytics

Content

Description
This course explores how financial statement data and non-financial metrics can be linked to financial performance through data analytics. Topics include analytic techniques for decision-making and the examination of "big data" involving accounting information. Hands-on experiences will develop skills with select software tools used in data analytics for accounting professionals. While many accounting and financial organizations deliver data, accounting analytics deploys that data to deliver insight, and this course will explore the many areas in which accounting data provides insight into other business areas. This course will help students make better business decisions

through the use of financial data and accounting analytics.

Credit Hours

Offered: Fall and Spring

Min
3

Requisites

Free Form Requirements
Complete AC 306

AC480 - Internship in Accounting

General

Subject Code ~
AC

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Accounting

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

AC481 - Internship in Accounting

General

Subject Code ~
AC

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Accounting

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

AC491 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors. This is not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 201 or its equivalent

AC610 - Cost-Based Decision Making

General

Subject Code ~
AC

Course Number ~
610

Course Name (appears on the transcript) ~
Cost-Based Decision Making

Content

Description
The objective of this course is to provide an Introduction to the aggregation of product costs, managerial control, performance evaluation, pricing, and contemporary topics such as the balanced scorecard. It builds on the technical skills developed in cost and managerial accounting courses, providing a real-world decision-making focus on the use of that information in a strategic business context. Outcomes include identification and application of cost allocation; target cost and cost-plus pricing; preparation and analysis of capital budgets; and an understanding of the issues associated with transfer pricing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

AC621 - Advanced Financial Accounting

General

Subject Code ~
AC

Course Number ~
621

Course Name (appears on the transcript) ~
Advanced Financial Accounting

Content

Description
This course is the third in a three-course sequence offering an in-depth examination of financial reporting issues. The focus of this course is on accounting principles and practice related to business combinations as well as multinational accounting. Key outcomes include an understanding of intercorporate investments, business combinations, consolidated financial statements, intercompany transfers of assets, foreign currency transactions, and translation of foreign entity financial statements.

Billing Hours

Min
3

Credit Hours

Min
3

AC630 - Accounting for Decision Makers

General

Subject Code ~
AC

Course Number ~
630

Course Name (appears on the transcript) ~
Accounting for Decision Makers

Content

Description
This course is directed to the general MBA student and focuses on the accounting information needed to operate effectively in a competitive business environment. It explores the use of such information for planning, controlling, decision-making, and evaluating performance. It integrates the traditionally separate functions of accounting and management for the successful operation of the business entity. Key outcomes include the ability to identify relevant costs for decision making, and to apply standard costing, cost-volume-profit analysis, budgeting, activity-based cost/management, transfer pricing, and performance measurement in decentralized organizations. Quantitative tools, such as regression, are utilized for analysis.

This course cannot be taken by Master of Science in Accounting students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

AC633 - Indep Study in Accounting

General

Subject Code ~
AC

Course Number ~
633

Course Name (appears on the transcript) ~
Indep Study in Accounting

Content

Description
This course provides an opportunity to conduct research in an area of a student's own specific interest. An independent study must be taken under a graduate faculty member's guidance with the approval of the the Master of Science in Accounting Program Director. Submission of a formal proposal is required before such approval will be granted. The expected outcome of an independent study is a paper of a quality that could be presented at a professional conference or submitted for journal publication. This course will carry three credits and may not be repeated.

Credit Hours

Min
3

Requisites

Free Form Requirements
Permission of the instructor

AC646 - Selected Topics Taxation

General

Subject Code ~
AC

Course Number ~
646

Course Name (appears on the transcript) ~
Selected Topics Taxation

Content

Description
This course provides a continuation of taxation concepts beyond the core. Key outcomes include an understanding of selected topics pertaining to taxation and tax planning for individuals, entities, trusts, estates, and tax-exempt organizations, as well as assets transactions, accounting methods, multijurisdictional issues, and personal financial advisory services.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

AC660 - Advanced Accounting Analytics

General

Subject Code ~
AC

Course Number ~
660

Course Name (appears on the transcript) ~
Adv. Accounting Analytics

Content

Description
This course continues the relationship between financial statement data, including non-financial metrics, and financial performance through data analytics. Topics include the extract-transform-load (ETL) process, data mining, the risks and ethics involving accounting information, data visualization techniques, data analysis models, and the communication of data analysis results. Hands-on experiences will develop skills with select software tools used in data analytics for accounting professionals. While many accounting and financial organizations deliver data, accounting analytics deploys that data to deliver financial insight, and this course will explore the many areas in which accounting data provides insight into other business areas. This course will help students make better business decisions using financial data and accounting analytics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

AC680 - Internship in Accounting

General

Subject Code ~
AC

Course Number ~
680

Course Name (appears on the transcript) ~
Internship in Accounting

Content

Description
The accounting internship is an opportunity for students to apply accounting theory in real-world situations. Research is an integral part of this experience. Expected outcomes include the ability to identify and define a problem, undertake research to determine the context of the problem, and select and apply the appropriate theory toward its resolution.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete two graduate level accounting courses

AC690 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors. This course is not carried in the catalog on a regular basis and the course may be repeated for credit if the topic varies.

Billing Hours

Min
3

Credit Hours

Min
3

AC691 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors. This course is not carried in the catalog on a regular basis and the course may be repeated for credit if the topic varies.

Credit Hours

Min
3

AC692 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors. This course is not carried in the catalog on a regular basis and the course may be repeated for credit if the topic varies.

Credit Hours

Min
3

AC693 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors. This course is not carried in the catalog on a regular basis and the course may be repeated for credit if the topic varies.

Credit Hours

Min
3

AC694 - Special Topics in Accounting

General

Subject Code ~
AC

Course Number ~
694

Course Name (appears on the transcript) ~
Special Topics in Accounting

Content

Description
This is a study of advanced topics in accounting of special interest to accounting majors. This course is not carried in the catalog on a regular basis and the course may be repeated for credit if the topic varies.

Credit Hours

Min
3

AEM250 - Intro to Arts & Entertainment Org

General

Subject Code ~
AEM

Course Number ~
250

Course Name (appears on the transcript) ~
Intro to Arts & Entertain Org

Content

Description
This course introduces the field of arts and entertainment management with a focus on the essential nature of creative organizations and projects, including those that are nonprofit. Key learning outcomes focus on an understanding and recognition of the history and evolution of the arts and entertainment industry, the internal culture and structure of creative organizations, external influences on the arts and entertainment industry, vocabulary and themes unique to arts and entertainment concerns, research skills including data collection and analysis, and arts and entertainment career exploration and investigation.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101 or SO 101

AEM333 - Indep Study in Arts & Entertainment Man

General

Subject Code ~
AEM

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Arts & Ent Man

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

AEM334 - Indep Study in Arts & Entertainment Man

General

Subject Code ~
AEM

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Arts & Ent Man

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

AEM350 - Practicum in Arts & Entertainment Man

General

Subject Code ~
AEM

Course Number ~
350

Course Name (appears on the transcript) ~
Practicum in Arts & Ent Man

Content

Description
Open to Arts & Entertainment Management students only. This course focuses on the management process involved in producing events within the arts & entertainment domain. During the course, students will produce an arts & entertainment event on campus or in the local community. Key learning outcomes focus on the role that managers fulfill in the project management process including establishing project feasibility, planning, organizing, and leading artists and other technical personnel, scheduling, budgeting and post-event assessment, and the use of technology to support event management processes.

Students cannot receive credit for both AEM 350 and MAN 370.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AEM 250

AEM355 - Arts & Entertainment Venue Ops

General

Subject Code ~
AEM

Course Number ~
355

Course Name (appears on the transcript) ~
Arts & Entertain Venue Ops

Content

Description
The course provides an overview of arts & entertainment venue operations. Key learning outcomes focus on understanding managerial issues related to various arts/ entertainment facilities including muse-ums and performance venues, venue finance. project feasibility, economic impact of venues and events, outsourcing of operational services, application of management principles including budgeting, promotion, public relations, security and risk management, event planning, and operations.

Students cannot receive credit for both AEM-355 and SPMN-355.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete AEM 250

AEM465 - Seminar in Arts & Entertainment Man

General

Subject Code ~
AEM

Course Number ~
465

Course Name (appears on the transcript) ~
Seminar in Arts & Ent Man

Content

Description
This capstone course examines contemporary issues and challenges for managers in the arts & entertainment industry. Key learning outcomes focus on understanding environmental forces shaping current practices in arts & entertainment organizations, and maximization of arts & entertainment organization revenue streams including fundraising, grant writing, and membership development. and the nature and purpose of boards of directors. Strategies for arts & entertainment industry career determination and implementation are emphasized.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing, and Arts & Entertainment Management major

AEM480 - Internship in Arts & Entertainment Man

General

Subject Code ~
AEM

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Arts & Ent Man

Content

Description
See "Internships"

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

AEM481 - Internship in Arts & Entertainment Man

General

Subject Code ~
AEM

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Arts & Ent Man

Content

Description
See "Internships"

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

AMST190 - Special Topics in American Studies

General

Subject Code ~
AMST

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Am Studies

Content

Credit Hours

Min
1

AMST290 - Special Topics in American Studies

General

Subject Code ~
AMST

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Am Studies

Content

Credit Hours

Min
1

AMST480 - Internship in American Studies

General

Subject Code ~
AMST

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in American Studies

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

AMST481 - Internship in American Studies

General

Subject Code ~
AMST

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in American Studies

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

AMST490 - Seminar in American Studies

General

Subject Code ~
AMST

Course Number ~
490

Course Name (appears on the transcript) ~
Seminar in American Studies

Content

Credit Hours

Min
3

APPE800 - Ambulatory Care

General

Subject Code ~
APPE

Course Number ~
800

Course Name (appears on the transcript) ~
Ambulatory Care

Content

Credit Hours

Min
6

APPE801 - Acute Care

General

Subject Code ~
APPE

Course Number ~
801

Course Name (appears on the transcript) ~
Acute Care

Content

Credit Hours

Min
6

APPE802 - Community Care

General

Subject Code ~
APPE

Course Number ~
802

Course Name (appears on the transcript) ~
Community Care

Content

Credit Hours

Min
6

Session Cycle ~
FLO - Fall Only

APPE803 - Institutional

General

Subject Code ~
APPE

Course Number ~
803

Course Name (appears on the transcript) ~
Institutional

Content

Credit Hours

Min
6

Session Cycle ~
FLO - Fall Only

APPE804 - Elective I

General

Subject Code ~
APPE

Course Number ~
804

Course Name (appears on the transcript) ~
Elective I

Content

Credit Hours

Min
6

Session Cycle ~
SPO - Spring Only

APPE805 - Elective II

General

Subject Code ~
APPE

Course Number ~
805

Course Name (appears on the transcript) ~
Elective II

Content

Credit Hours

Min
6

Session Cycle ~
SPO - Spring Only

APPE806 - Research Project

General

Subject Code ~
APPE

Course Number ~
806

Course Name (appears on the transcript) ~
Research Project

Content

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

ART101 - Intro to Art

General

Subject Code ~
ART

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Art

Content

Description
An introduction to the "Art" of appreciating art, this course is designed to help students feel more confident viewing and discussing the visual arts. In addition to traditional learning tools, students will be challenged with hands-on creative projects, two museum visits, DVD viewings, oral presentations, Western New England University art gallery visits, and ongoing online discussion questions. Exploring the various ways art has been created from pre-history up to the present will assist students in engaging their minds and imaginations to better understand the multiplicity of art movements that comprise the history of Western visual arts.

Credit Hours

Min
3

ART105 - Drawing I

General

Subject Code ~
ART

Course Number ~
105

Course Name (appears on the transcript) ~
Drawing I

Content

Description
This course is an introduction to drawing using a variety of mediums that could include pencil, charcoal, conte crayon, ink, and oil pastel. As drawing entails direct communication from the eye to the hand, students work mainly from life, such as nature, the model and/or still life, as well as possible assignments using the imagination. The primary focus will be on building drawing skills with an emphasis on composition, so that volume, proportion, placement, value, and developing a strong inner color sense will be realized. Sketchbook evaluation during the semester and a museum visit may be offered in some courses.

Credit Hours

Min
3

ART116 - Painting I

General

Subject Code ~
ART

Course Number ~
116

Course Name (appears on the transcript) ~
Painting I

Content

Description
This studio art course introduces the basic elements of acrylic painting. Students learn how to manipulate paint, mix pigments, and explore the many ways paint can be handled. Instruction is given on preparation and effective use of materials. Inspired by both still life and landscape, specific lessons encourage exploration of color, light, texture, transparency, impasto, and composition.

Credit Hours

Min
3

ART117 - Painting II

General

Subject Code ~
ART

Course Number ~
117

Course Name (appears on the transcript) ~
Painting II

Content

Description
This studio art course continues to develop the skills introduced in ART 116.

Students further explore elements of painting through increasingly complex exercises translating concepts into visual images. Abstraction is introduced and explored.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ART 116

ART118 - Intro to Jewelry Making

General

Subject Code ~
ART

Course Number ~
118

Course Name (appears on the transcript) ~
Intro to Jewelry Making

Content

Description
This course will provide students with the fundamental knowledge of jewelry-making through multiple hands-on projects. This course will provide the skills of basic beading techniques with various materials into wearable pieces of art: necklaces, earrings, and bracelets.

Credit Hours

Min
3

ART120 - Art of Hand Papermaking I

General

Subject Code ~
ART

Course Number ~
120

Course Name (appears on the transcript) ~
Art of Hand Papermaking I

Content

Description
Students learn about preparation of the pulp; dip, pour, and paint methods of sheet formation; and pressing and dying of formed sheets. Students will explore decorative sheet formation techniques such as laminating, embedding, and surface embellishment. Finally, students will learn ways to use this paper as a medium for constructing works in paper, such as collage assemblage, casting, weaving, or 2- and 3-D cards.

Credit Hours

Min
3

ART130 - Color in Art & Design

General

Subject Code ~
ART

Course Number ~
130

Course Name (appears on the transcript) ~
Color in Art & Design

Content

Description
This course explores the topic of color with approaches based on both theory and experience, while also introducing fundamentals of water-based paint and digital media. Classroom lectures will introduce painting materials and methods as well as the scientific, historical, and contemporary context of color. Much of the class will be dedicated to experimentation with materials, in-class studio time, group collaboration, and critique.

Credit Hours

Min
3

ART140 - Design Principles Through Photography

General

Subject Code ~
ART

Course Number ~
140

Course Name (appears on the transcript) ~
Design Prin Through Photograph

Content

Description
Using basic photography (no special camera/equipment required), this introductory art course introduces the concepts of two-dimensional art and design: visual elements, formal principles of design, and the creative process. Students will strengthen creativity, problem-solving skills, and communication through creative exercises, visual analysis, and discussion.

As an introductory course, all levels of experience are welcome.

Credit Hours

Min
3

ART144 - Alternative Photography

General

Subject Code ~
ART

Course Number ~
144

Course Name (appears on the transcript) ~
Alternative Photography

Content

Description
Students will explore the history of photography. This course is designed to support students as they experiment with various techniques in artmaking the 19th century photographic printmaking technique of the cyanotypes. Students will learn to create their own negatives, turn any space into a darkroom, hand-coat paper with emulsions, time sun and UV exposures, and create visually pleasing pieces of artwork.

Credit Hours

Min
3

ART190 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

ART191 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART192 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART193 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
193

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART201 - Survey of Western Art I

General

Subject Code ~
ART

Course Number ~
201

Course Name (appears on the transcript) ~
Survey of Western Art I

Content

Description
A historical survey of Western art and architecture from ancient times to the beginning of the Renaissance.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

ART202 - Survey of Western Art II

General

Subject Code ~
ART

Course Number ~
202

Course Name (appears on the transcript) ~
Survey of Western Art II

Content

Description
A historical survey of Western art and architecture from the middle of the Renaissance to the twentieth century.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

ART205 - American Art

General

Subject Code ~
ART

Course Number ~
205

Course Name (appears on the transcript) ~
American Art

Content

Description
American art both reflects and influences the culture in which it is created. This course will analyze the evolution of major American artists, art movements, styles, and artistic elements from the 18th century to the present and their connections to the cultural ideas of the time. Iconic works of American painting, sculpture, photography and architecture will be visually "read," analyzed, and discussed. In addition to contextual analysis, this class will incorporate formal visual analysis techniques using standard methods of analysis and art terminology. Selected readings, and required museum visit, and WNE art gallery talks will highlight the connection to the cultural context of the period. Upon completion of the course, students will be able to identify key art genres, movements, and artists in American culture, discern the stylistic characteristics of various periods, and explain the cultural context for a variety of iconic images that continue to shape our world today.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

ART212 - London Through the Ages

General

Subject Code ~
ART

Course Number ~
212

Course Name (appears on the transcript) ~
London Through the Ages

Content

Description
This two-week summer course taught in London covers the history and culture of the city from the Roman period to the present day, and features extensive exploration of the city and its historic sites. Note: This course is also equivalent to HIST 212 and satisfies both the cultural studies perspective and historical perspective requirements.

Credit Hours

Min
3

ART215 - Drawing II

General

Subject Code ~
ART

Course Number ~
215

Course Name (appears on the transcript) ~
Drawing II

Content

Description
This rigorous course enables students to develop their personal vision further, and explore the medium of drawing more deeply, based on the foundation acquired in ART 105. Students expand drawing skills through confrontation with the formal visual problems, using imagination, new ideas, new materials, and new techniques. One goal is to bring out the expressive qualities.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete ART 105

ART240 - 2-D Art

General

Subject Code ~
ART

Course Number ~
240

Course Name (appears on the transcript) ~
2-D Art

Content

Description
This is a foundation-level studio art course that explores different methods of solving two-dimensional visual problems based on the elements & principles of design. Hands-on projects involving a variety of mediums and materials encourage students to creatively strengthen their problem-solving skills while building communication skills through written and group critiques as well as a paper based on a museum visit.

This course will satisfy the aesthetics perspectives requirement of the GCR.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

ART250 - 3-D Art

General

Subject Code ~
ART

Course Number ~
250

Course Name (appears on the transcript) ~
3-D Art

Content

Description
This is a foundation-level studio art course that explores the manipulation of various 2-D and 3-D materials to create 3-D artworks through use of the elements and principles of design. There may also be a museum visit, as well as visits to WNEC's art gallery to view original 3-D artwork in a public, professional setting. Students will test and strengthen their problem-solving and communication skills through a series of hands-on projects involving wire, plaster casting, found objects, and multiple recyclables, as well as through written and group critiques.

Credit Hours

Min
3

ART290 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

ART291 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART292 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART293 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART294 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART295 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
295

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART310 - Medieval Architecture & Society

General

Subject Code ~
ART

Course Number ~
310

Course Name (appears on the transcript) ~
Medieval Architecture & Soc

Content

Description
This course examines the monuments of Medieval Mediterranean architecture in their historical context. Students will study military fortifications such as the castle and misr (garrison town), administrative projects such as the funduq (merchant hotel) and the earliest university campuses, and the development of new buildings for religious worship, such as mosques, churches and synagogues, monasteries, ribats and zawiyyas, to learn about the buildings themselves and the societies that created them. Note: this course is equivalent to HIST 310 and may be used to satisfy the historical perspective.

Credit Hours

Min
3

ART333 - Independent Study in Art

General

Subject Code ~
ART

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Art

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

ART334 - Indep Study in Art

General

Subject Code ~
ART

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Art

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field 60 credits;

ART390 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

ART391 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART392 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ART396 - Special Topics in Art

General

Subject Code ~
ART

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in Art

Content

Description
Topics in art that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

AS111 - Air Force Heritage & Values I

General

Subject Code ~
AS

Course Number ~
111

Course Name (appears on the transcript) ~
Air Force Heritage & Values I

Content

Description
This course provides an introduction to the Air Force, encouraging students to pursue an AF career or seek additional information to be better informed about the role of the USAF. The course allows students to examine general aspects of the Department of the Air Force, Air Force Leadership, Air Force benefits, and opportunities for Air Force officers. The course also lays the foundation for becoming an Airman by outlining AF heritage and values. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
1

AS112 - Air Force Heritage & Values II

General

Subject Code ~
AS

Course Number ~
112

Course Name (appears on the transcript) ~
Air Force Heritage & Values II

Content

Description
This course is a continuation of AS 111. It builds on the heritage and values that are the foundation of the Air Force while preparing students for more in-depth studies the following year. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
1

AS191 - Advanced Physical Conditioning

General

Subject Code ~
AS

Course Number ~
191

Course Name (appears on the transcript) ~
Advanced Physical Conditioning

Content

Description
AFROTC Cadets will take the Air Force Physical Fitness Assessment in accordance with Air Force Instruction 36-2905. Physical Fitness Gear (clothing) will be worn in accordance with Air Force Instruction 36-2903.

Student must have a sports physical on file to participate in this class. Visit UMass Dickinson Hall, Room 207 for additional information or call (413) 545-2437.

Credit Hours

Min
1

AS223 - Team & Leadership Fundamentals I

General

Subject Code ~
AS

Course Number ~
223

Course Name (appears on the transcript) ~
Team & Leadership Fundament I

Content

Description
This course provides the foundation for both leadership and team building. Sample topics include listening, followership, and problem solving efficiently. All of the concepts will be applied in team building activities. Though the theme of this course is "Team and Leadership Fundamentals," students are also expected to demonstrate basic verbal and written communication skills at the end of this course. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
1

AS224 - Team & Leadership Fundamentals II

General

Subject Code ~
AS

Course Number ~
224

Course Name (appears on the transcript) ~
Team & Leadership Fundament II

Content

Description
This course is a continuation of AS 223 and provides a solid foundation of leadership and team building competencies. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
1

AS335 - Leading People & Effective Communicat I

General

Subject Code ~
AS

Course Number ~
335

Course Name (appears on the transcript) ~
Leading People & Effect Comm I

Content

Description
The goal is for cadets to have a more in-depth understanding of how to effectively lead people, and to provide cadets with the tools to use throughout their detachment leadership roles. Secondly, cadets will hone their writing and briefing skills. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
3

AS336 - Leading People & Effective Communicat II

General

Subject Code ~
AS

Course Number ~
336

Course Name (appears on the transcript) ~
Leading People & Effect Com II

Content

Description
This course builds on content mastered in AS 335 with a focus on leadership and ethics. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AS 335

AS441 - Natl Sec, Leadership Resp, Comm Prep I

General

Subject Code ~
AS

Course Number ~
441

Course Name (appears on the transcript) ~
Natl Sec, Leader Resp, Comm I

Content

Description
Students comprehend the basic elements of national security policy and processes. The student should know basic Air Force domain operations as well as understand selected roles of the military in society and current domestic and international issues affecting the military profession. Cadets should understand the responsibility, authority, and functions of an Air Force commander and selected provisions of the military justice system. This course will further develop the ability to communicate both written and orally. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
3

AS442 - Natl Sec, Leadership Resp, Comm Prep II

General

Subject Code ~
AS

Course Number ~
442

Course Name (appears on the transcript) ~
Natl Sec, Leade Resp, Comm II

Content

Description
This course is a continuation of AS 441 and focuses on preparing students to transition to commissioned officers in the United States Air Force. All textbooks and special reference materials are supplied by the department.

Credit Hours

Min
3

AS496 - Indep Study in Aerospace Study

General

Subject Code ~
AS

Course Number ~
496

Course Name (appears on the transcript) ~
Indep Study in Aerospace Study

Content

Description
This course examines security issues, international institutions, foreign policy decision making, and military power. During this course, students will research and analyze how security policies are developed, how leaders make use of force decisions, and how unilateral and multilateral military operations are executed. Specific emphasis will be placed on understanding the role and function of the North Atlantic Treaty Organization (NATO) with the capstone being a summer research project internship at the NATO Strategic Communications Centre of Excellence in Riga, Latvia (internship is available only to military cadets).

Credit Hours

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

BAIM102 - Problem Solving w/Business Tools

General

Subject Code ~
BAIM

Course Number ~
102

Course Name (appears on the transcript) ~
Prob Solving w/Bus Tools

Content

Description
This is a hands-on course on business problem solving. The tools used are a spreadsheet (MS Excel) and a database software (MS Access). The objective of the first part of the course is to practice creating spreadsheet models. Applications are designed using built-in functions with special emphasis on financial functions. Charting concepts are introduced as presentation tools. Other skills include: working with Pivot tables, goal-seeking and what-if modeling. The second part of the course is an introduction to DBMS with emphasis on using and developing database applications for a business context. Topics include: Table design, Query design, Reports and Forms design. This course also includes the basics of Business Analytics. Offered: Fall and Spring

Credit Hours

Min
3

BAIM202 - Intro to Business Info Systems

General

Subject Code ~
BAIM

Course Number ~
202

Course Name (appears on the transcript) ~
Intro to Business Info Syst

Content

Description
This course is an introduction to Information Systems as a discipline including a survey and overview of the role and functions of IS in a business organization, IS job functions and career paths, and the nature and vocabulary of major information technologies. The course explores the role of IS in advancing the digital economy and as a competitive tool for business. The course includes hands-on work with SAP software to show the relationships between the different business functions. Hands-on work includes: navigation with SAP GUI, MD, ORG elements and transactions. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 102 or CS 131 and minimum of Sophomore Standing

BAIM221 - Statistics for Business Analytics

General

Subject Code ~
BAIM

Course Number ~
221

Course Name (appears on the transcript) ~
Stats for Business Analytics

Content

Description
This course will focus on the business analytics process. Topics will include problem definition, data preparation and statistical analysis. Students will learn how to design and conduct a statistical study, how to analyze collected data, as well as how to interpret and communicate the outcomes. Specific statistical methods taught include: estimation of population parameters, hypothesis testing for single and multiple parameters, regression analysis, nonparametric statistics, decision analysis, and forecasting methods. A spreadsheet program and a professional statistical package are utilized. Sophomore standing and working knowledge of MS Excel. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

BAIM230 - Business Analytics Theory & Practic

General

Subject Code ~
BAIM

Course Number ~
230

Course Name (appears on the transcript) ~
Bus Analytic Theory & Pract

Content

Description
This course introduces the complete business analytics cycle, from framing problems to communicating actionable insights gathered from data analysis to support decision making. It explores a range of essential analytics tools and processes, while also considering vital issues like data quality, ethics, and real-world impact.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Take BAIM-221

BAIM310 - Quality & Operations Management

General

Subject Code ~
BAIM

Course Number ~
310

Course Name (appears on the transcript) ~
Quality & Operations Mgmt

Content

Description
This is the second quantitative methods course. Topics covered include: supply chain management, benchmarking, forecasting methods, inventory management, MRP, SPC, design of experiments, project management, Six Sigma methodology and linear programming. These topics are covered from the perspective of quality management and process improvement. Students cannot take both BAIM 310 and BAIM 312 for credit. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Take MAN-101 HONB-101 MAN-204 or HONB-204; # Take MK-200 or HONB-200; # Take AC-202 BAIM-202; # Take BAIM-221; # Take FIN-214 or HONB-214;

BAIM312 - Quality & Operations Mgmt w/SAP

General

Subject Code ~
BAIM

Course Number ~
312

Course Name (appears on the transcript) ~
Qual & Oper Mgmt w/SAP

Content

Description
This is the second quantitative methods course. Topics covered include: supply chain management, benchmarking, forecasting methods, inventory management, MRP, SPC, project management, six sigma methodology and linear programming. This course includes introductory hands-on implementation of supply chain and project management in SAP. These topics are covered from the perspective of qualitative management and process improvement.Offered: Fall and SpringThis course satisfies the SAP University Alliance Student Recognition Award requirement.Students cannot take both BAIM 310 and BAIM 312 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAN 101/HONB 101 or MAN 204/HONB 204, MK 200/HONB 200, AC 202, BAIM 202, BAIM 221, and FIN 214

BAIM315 - Data Science W/Python

General

Subject Code ~
BAIM

Course Number ~
315

Course Name (appears on the transcript) ~
Data Science W/Python

Content

Description
This course starts with learning fundamentals of programming in Python. Students learn how to develop data processing applications, using standard data and control structures, input/output procedures, as well as built and user-defined functions. Next, the students learn how to solve business analytics problems with open-source Python packages. Learning cases are selected from Statistics and Management Science, including Big Data scenarios. They incorporate techniques applied to data visualization, inferences about statistical measures, predictive analytics, machine learning and optimization. The students develop projects in team settings.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Take BAIM-221

BAIM321 - Database Management Systems

General

Subject Code ~
BAIM

Course Number ~
321

Course Name (appears on the transcript) ~
Database Management Syst

Content

Description
Organizations increasingly rely on computerized database management as databases are an essential component of major information systems. This course provides students with an introduction to the analysis, design and implementation of relational databases. Students are introduced to the fundamental concepts and principles of database management, and gain practical experience by designing and deploying a database using a major DBMS.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Take BAIM 202 and BAIM 221 or IT 102 or CS 102

BAIM325 - Data Analysis With R

General

Subject Code ~
BAIM

Course Number ~
325

Course Name (appears on the transcript) ~
Data Analysis With R

Content

Description
This course starts with an introduction to language R. Students learn basic data and object types, programming statements and control structures, as well as the use of R libraries. Next, the students learn how to apply exploratory data analysis tools, using frequency and contingency tables, charts, summary measures, and dealing with data quality assurance. Finally, the students delve into the real power of R. They develop applications, using hypothesis testing, and model based methods-both analytic and simulation driven. The students will work in teams on data analysis projects, one of which will deal with Big Data, utilizing R and an SQL database system.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BAIM 321

BAIM330 - Applied Data Mining

General

Subject Code ~
BAIM

Course Number ~
330

Course Name (appears on the transcript) ~
Applied Data Mining

Content

Description
This course focuses on utilizing the power of ML - machine learning, for real-world applications. It covers the complete ML lifecycle - from data preparation and model selection to implementation and deployment, using industry-leading tools and platforms. The primary objective is to understand how to leverage analytics to drive informed, strategic decisions.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BAIM 230

BAIM334 - Indep Study Bus Analytic/Info Management

General

Subject Code ~
BAIM

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Bus Ana/Info Mgmt

Content

Description
See Independent Study. Laboratory fee may be required.

Credit Hours

Max
3

Min
1

BAIM336 - Supply Chain Management Systems

General

Subject Code ~
BAIM

Course Number ~
336

Course Name (appears on the transcript) ~
Supply Chain Management System

Content

Description
This is a study of physical distribution functions and their relationships within an organization. Case studies and readings are utilized to study elements of distribution other than transportation: inventory control, warehousing and distribution centers, customer service, materials handling, industrial packaging, and international distribution. A quantitative analysis approach is emphasized.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MK 200/HONB 200, BAIM 202 and BAIM 221

BAIM340 - Enterprise Resources Planning Syst

General

Subject Code ~
BAIM

Course Number ~
340

Course Name (appears on the transcript) ~
Enterprise Res Plan Syst

Content

Description
This course explores the interaction between operational processes and information systems in the context of Enterprise Resource Systems such as SAP. The course provides a system selection-to-implementation view of ERP systems. Upon completion of this course, students will have a deeper understanding of the evolution of ERP systems, software design, software selection and implementation issues.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 202

BAIM350 - Information Security

General

Subject Code ~
BAIM

Course Number ~
350

Course Name (appears on the transcript) ~
Information Security

Content

Description
This course provides an overview of the concepts, principles and practice for information security as well as the threats to the security of information systems. Topics include encryption and decryption, public key infrastructure, digital signature, authentication, access control, network security, e-commerce security.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 321

BAIM390 - Special Topics in Bus Analytics Info Mgt

General

Subject Code ~
BAIM

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in BAIM

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing or permission of the instructor

BAIM391 - Special Topics in Bus Analytics Info Mgt

General

Subject Code ~
BAIM

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in BAIM

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Min
3

BAIM412 - Business Analytics w/SAP

General

Subject Code ~
BAIM

Course Number ~
412

Course Name (appears on the transcript) ~
Business Analytics SAP

Content

Description
This course introduces the language of Business Analytics (BA) and Business Information Warehousing. Students gain hands-on experience working with BW in SAP. Students create a Data Warehousing solution using major building blocks of SAP BW. Students execute a complete ETL cycle. Queries are designed in Eclipse/BW Modelling Tools which are used for analysis and reporting. Several stand-alone SAP tools, such as SAP Business Objects Analysis for MS Excel, Crystal reports, SAP Dashboard Designer and SAP Lumira, and SAP Predictive Analytics are introduced for reporting, visual analytics and predictive analytics. This course satisfies the SAP University Alliance Student Recognition Award requirement. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 202

BAIM413 - Data Communications & Networks

General

Subject Code ~
BAIM

Course Number ~
413

Course Name (appears on the transcript) ~
Data Commun & Networks

Content

Description
This course provides an overview of the concepts and principles of telecommunications systems and networks, blending technical with managerial topics. It also provides coverage of major operating systems including Microsoft Windows, Linux. Students will examine network architectures, data communications software and hardware, as well as the array of facilities and resources available on the Internet. Students will complete a series of hands-on network projects, and will analyze network design cases throughout the semester. Students may sit for network certification following completion of the course.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 202 or IT/CS 102

BAIM417 - Systems Analysis & Design

General

Subject Code ~
BAIM

Course Number ~
417

Course Name (appears on the transcript) ~
Systems Analysis & Design

Content

Description
This is an introduction to the systems development life cycle with emphasis on the analysis and design phases. Structured methodologies utilizing CASE tools, as well as prototyping techniques, are covered. A substantial analysis and design project is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 202
Corequisite - BAIM 321

BAIM445 - Business Analytics Project

General

Subject Code ~
BAIM

Course Number ~
445

Course Name (appears on the transcript) ~
Business Analytics Project

Content

Description
This course provides students with an integrated environment for predictive and descriptive modeling, experimental design, data mining, forecasting, optimization, and text analytics. Students are provided with a range of techniques and processes for the collection, classification, analysis and interpretation of data to reveal anomalies, behavior patterns and trends, new insights, and key variables and relationships.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

BAIM450 - Multivariate & Big Data Analysis

General

Subject Code ~
BAIM

Course Number ~
450

Course Name (appears on the transcript) ~
Multivariate/Big Data Ana

Content

Description
This course introduces students to a set of techniques, tools, and models designed to analyze data sets with more than one variable. Student will be able to analyze both categorical and quantitative data sets with multiple factors to predict outcomes based on prior information.Some multivariate analyses methods employed in this course include Analysis of Covariance (ANCOVA), Multivariate Analysis of Variance (MANOVA); Discriminant Function Analysis (DFA), Multiple Regression (MR), Principal Components/Factor Analysis (PCA/FA), and Reliability and internal consistency Analysis.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BAIM 230

BAIM480 - Internship in Bus Analytics Info Mgmt

General

Subject Code ~
BAIM

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in BAIM

Content

Description
See "Internships"

Credit Hours

Min
3

BAIM481 - Internship in Bus Analytics Info Mgmt

General

Subject Code ~
BAIM

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in BAIM

Content

Description
See "Internships"

Credit Hours

Min
3

BAIM490 - ST in Business Analytics Info Management

General

Subject Code ~
BAIM

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in BAIM

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs. Laboratory fees may be required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Senior Standing in BAIM or permission of the instructor

BAIM601 - Foundations of Business Analytics

General

Subject Code ~
BAIM

Course Number ~
601

Course Name (appears on the transcript) ~
Foundations of Bus Analytics

Content

Description
This course provides fundamentals concepts of algebra and introductory statistics with emphasis on applications for business analytics. Topics include applications of linear equations, basic functions, descriptive statistics and fundamental probability concepts. Instruction and practice in MS Excel for data capturing, data analysis using Math, Statistical, Logical and Lookup & Reference functions and presentation will be provided. Students will practice manipulation of data using Pivot Tables.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM610 - Information Technology Mgt & Applic

General

Subject Code ~
BAIM

Course Number ~
610

Course Name (appears on the transcript) ~
Info Tech Manage & Applic

Content

Description
This course presents current issues and development trends in utilization and management of information systems in organizations. It examines and explores new paradigms for computer application development and systems design. This course also discusses the impact of information systems and technology on organization structure, strategy, and operations. A variety of computer applications will be introduced. Topics will be selected from spreadsheet modeling, database management, knowledge acquisition and management, data modeling, and E-commerce.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM615 - Statistical Foundations of Bus Analytics

General

Subject Code ~
BAIM

Course Number ~
615

Course Name (appears on the transcript) ~
Stats Fnds of Bus Analytics

Content

Description
This course provides students with the principles and methods of applied statistics in business decision making. Topics include discrete and continuous probability distributions, sampling, hypothesis testing, significance tests, correlation, regression, analysis of variance, and time series analysis with an emphasis on business applications. Computer-based statistical analysis tools are used extensively so that students better appreciate the importance of using modern technological tools for effective model building and decision-making. The course emphasizes the effective communication of quantitative results through written, visual, and oral means.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM620 - Decision Modeling for Analytics

General

Subject Code ~
BAIM

Course Number ~
620

Course Name (appears on the transcript) ~
Decision Modeling Analyti

Content

Description
This course introduces spreadsheet-based management science models for business analytics. Key learning outcomes include enhanced skills in spreadsheet applications, business problem interpretation, mathematical nature of models, model building and application in spreadsheets, interpretation of model results, and decision making. Data Mining Algorithms covered include: Regression Modeling, Decision trees, Time Series, Cluster Analysis and Association Analysis.

Credit Hours

Min
3

BAIM625 - Fundamentals of Database Technologies

General

Subject Code ~
BAIM

Course Number ~
625

Course Name (appears on the transcript) ~
Fundam of Database Tech

Content

Description
This course explores various data management technologies and software applications used to define, organize, retrieve, and manipulate data. Students will learn how to communicate with relational databases through the Structured Query Language (SQL) and retrieve data for reports and analysis. Through hands-on projects, students will gain practical experience and acquire foundational skills in SQL that will allow them to access, read, manipulate, and analyze the data stored in a database and generate useful insights to drive an informed decision-making process.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM633 - Indep Study Bus Analytic/Info Management

General

Subject Code ~
BAIM

Course Number ~
633

Course Name (appears on the transcript) ~
Indep Study Bus Ana/Info Mgmt

Content

Description
See "Independent Study". Laboratory fees may be required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM635 - Enterprise Analytics With SAP

General

Subject Code ~
BAIM

Course Number ~
635

Course Name (appears on the transcript) ~
Enterprise Analytics With SAP

Content

Description
This course introduces students to business analytics using modern commercial and open-source analytics tools. The course provides an overview of the processes, methodologies, infrastructure, and current practices used to transform business data into useful information that supports business decision-making. Business analytics requires foundation knowledge in data storage and retrieval, thus, this course will review logical data models for both database management systems and data warehouses. This course will introduce data warehousing concepts and definitions, together with text mining concepts and techniques. The course will use the SAP Business Warehouse (BW) server, SAP Lumira, SAP Predictive Analytics, and other SAP analytics tools.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BAIM 610 and Graduate Standing

BAIM640 - Business Analytics With R

General

Subject Code ~
BAIM

Course Number ~
640

Course Name (appears on the transcript) ~
Business Analytics With R

Content

Description
R is an easily accessible, robust, open-source data analysis tool that has been widely used by data scientists across the globe to retrieve, process, analyze data, and generate high-end statistical graphics. Using the R programming language, students will be able to analyze and extract valuable information from a large amount of data. Further, students will be studying a complete business analytics workflow including data manipulation, data visualization, and modeling business problems with graphical models.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM645 - Business Analytics with Python

General

Subject Code ~
BAIM

Course Number ~
645

Course Name (appears on the transcript) ~
Business Analytics with Python

Content

Description
This course examines and focuses on how python can be used as a descriptive, predictive, and prescriptive data analytics tool. Given its ability to access, categorize and display data, python has become one of the most popular languages for business analytics. Using python, students will learn how to import, clean, manipulate, and visualize data. Through lectures, labs, and hands-on projects, students will engage in exploratory data analysis, create various predictive and prescriptive models, manipulate data, and create data visualization.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM650 - Pattern Discovery and Visual Analytics

General

Subject Code ~
BAIM

Course Number ~
650

Course Name (appears on the transcript) ~
Patt Discov & Visual Analytics

Content

Description
This course has two main goals. First, it introduces students to various unsupervised learning methods such as cluster analysis and association analysis. Second, students will be provided with an effective way to communicate information in a universal manner using visual information. Using some of the most popular data visualization tools such as Tableau, Excel, and R, students will be able to translate information into a visual context.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM660 - Predictive and Text Analytics

General

Subject Code ~
BAIM

Course Number ~
660

Course Name (appears on the transcript) ~
Predictive and Text Analytics

Content

Description
This course introduces students to a wide range of predictive analytics techniques and models used to find patterns in data and to build models that predict future outcomes based on historical data. In addition, using popular text analytics techniques and tools such as SAS Enterprise Miner, students will be able to automatically process unstructured data to uncover insights, trends, and patterns from unstructured textual data.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM665 - Mgmt Science for Perspective Analytics

General

Subject Code ~
BAIM

Course Number ~
665

Course Name (appears on the transcript) ~
Mgt Sci for Persp Analytics

Content

Description
This course focuses on computational sciences and mathematical programming models used to optimize a set of decisions for achieving desired business outcomes. Using mathematical optimization tools, students will be able to make complex decisions about which courses of action to take to achieve any given business objectives. Methodologies covered in this course include linear programming, nonlinear programming, integer programming, and Monte Carlo simulation.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM670 - AI and Machine Learning for Bus Apps

General

Subject Code ~
BAIM

Course Number ~
670

Course Name (appears on the transcript) ~
AI & Machine Learning Bus Apps

Content

Description
This course is designed to provide students with a theoretical and practical understanding of core artificial intelligence (AI) and machine learning (ML) concepts and techniques. Students will acquire hands-on experience in applying these techniques to find patterns in massive amounts of data. The course will cover the basic principles, the potential, and the limitations of supervised, unsupervised, and reinforcement machine learning algorithms and applications.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM680 - Business Analytics Capstone Project

General

Subject Code ~
BAIM

Course Number ~
680

Course Name (appears on the transcript) ~
Bus Analytics Capstone Project

Content

Description
Using their sound business judgments and data-driven decision-making skills, students will be able to apply what they've learned to solve real-life business problems and challenges faced by a variety of organizations. They'll be able to develop various solutions to any given business problem and formulate measures to evaluate the effectiveness of their solutions. The capstone project will involve the application of business analytics tools to solve real-world problems in marketing, supply chain, healthcare, finance, and other business disciplines.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BAIM690 - ST in Business Analytics Info Management

General

Subject Code ~
BAIM

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in BAIM

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.Laboratory fees may be required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BIO101 - Basic Biology: Organisms

General

Subject Code ~
BIO

Course Number ~
101

Course Name (appears on the transcript) ~
Basic Biology: Organisms

Content

Description
This is an introduction to the biology of organisms and their component parts. Intended primarily for nonmajors, the emphasis is on the structure and function of human cells and organs.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

BIO103 - Life Sciences I

General

Subject Code ~
BIO

Course Number ~
103

Course Name (appears on the transcript) ~
Life Sciences I

Content

Description
This is a one-semester laboratory course in Life Science for non-majors who are preparing for a career in elementary education. This course fulfills the lab science requirement of the natural science perspective.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

BIO107 - General Biology I

General

Subject Code ~
BIO

Course Number ~
107

Course Name (appears on the transcript) ~
General Biology I

Content

Description
Intended for science majors, this course focuses on introductory cellular and molecular biology. Concepts around which the course is built include cellular biochemistry, metabolism, and genetics. Students should be comfortable with these principles of general chemistry that are necessary to develop an understanding of these concepts.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
One unit of secondary school chemistry or CHEM 101 or CHEM 103 or CHEM 105
Concurrent with BIO 117

BIO108 - General Biology II

General

Subject Code ~
BIO

Course Number ~
108

Course Name (appears on the transcript) ~
General Biology II

Content

Description
This is the second semester of the two-semester sequence of Introductory General Biology intended for biology and other science majors. The focus in this course is on the phylogenetic relationships as well as the structural and functional characteristics of the three life domains: the Archaea, the Bacteria, and the Eukarya.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 107/BIO 117, or permission of the instructor
Concurrent with BIO-118

BIO117 - General Biology Laboratory I

General

Subject Code ~
BIO

Course Number ~
117

Course Name (appears on the transcript) ~
General Biology Lab I

Content

Description
Students apply scientific thinking and basic technical skills to the study of cells. Methods practiced include microscopy, spectroscopy, and chromatography as well as the collection, graphing, and interpretation of data.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BIO 107, or take concurrently

BIO118 - General Biology Laboratory II

General

Subject Code ~
BIO

Course Number ~
118

Course Name (appears on the transcript) ~
General Biology Lab II

Content

Description
Students examine the difference between various types of organisms and conduct inquiry-based experiments using an organismal model system. Students also learn and use applicable terminology related to organismal biology.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 108

BIO152 - Human Heredity

General

Subject Code ~
BIO

Course Number ~
152

Course Name (appears on the transcript) ~
Human Heredity

Content

Description
This course introduces the student to an overview of hereditary issues in humans. Topics include inheritance patterns, DNA profiling uses in forensics, gene therapy, recombinant DNA technologies, and pedigree analysis.

BIO 101 or BIO 103 or BIO 107/BIO 117, followed by this course, would meet the General University Requirements for the Natural Science Perspective (NSP)

This is a one semester course without a lab.

Credit for both this course and BIO 306 is not permissible.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 101 or BIO 103, or BIO 107/BIO 117

BIO153 - Principle of Environmental Science

General

Subject Code ~
BIO

Course Number ~
153

Course Name (appears on the transcript) ~
Princ of Environmental Sci

Content

Description
Finding effective solutions to most environmental problems requires an understanding of sound science and engineering, good public policy, an appreciation of political and economic reality, and an ethical sense of the relationship between humans and the natural world. The interrelationships among these principles provide the unifying theme for this course, which will be covered in five parts. GUR/MR BIO 101 or BIO 103 or BIO 107/BIO 117 or CHEM 101 or CHEM 105 or GEOL 101, followed by this course, would meet the General University Requirements for the Natural Science Perspective (NSP) This is a one-semester course without a lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 101, BIO 103, CHEM 101, CHEM 105, GEOL 101 or BIO 107/BIO 117

BIO156 - Biological Evolution

General

Subject Code ~
BIO

Course Number ~
156

Course Name (appears on the transcript) ~
Biological Evolution

Content

Description
This course is an introduction to the historical development of the theory of evolution, the evidence for and mechanisms of evolution, and the major events in the history of life on Earth with emphasis on humans. BIO 101 or BIO 103 or BIO 107/BIO 117 or GEOL 101, followed by this course, would meet the General University Requirements for the Natural Science Perspective (NSP) This is a one-semester course without a lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 101 or BIO 103 or BIO 107/BIO 117 or GEOL 101

BIO157 - Human Disease & Drug Therapy

General

Subject Code ~
BIO

Course Number ~
157

Course Name (appears on the transcript) ~
Human Disease & Drug Therapy

Content

Description
This course covers basic concepts of the molecular basis of disease and drug therapy using a systemic approach. A spectrum of human diseases and the specific mechanisms of action and physiological effects of various classes of drugs used to treat these diseases will be studied. Students will integrate concepts from cell biology, physiology, and biochemistry to understand different human diseases and their treatment by drugs. This course is occasionally offered. BIO 101 or BIO 103 or BIO 107/BIO 117 followed by this course, would fulfill the General University Requirement for the Natural Science Perspective (NSP). This is a one-semester course without a lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 101 or BIO 103 or BIO 107/BIO 117

BIO158 - Microbes & Society

General

Subject Code ~
BIO

Course Number ~
158

Course Name (appears on the transcript) ~
Microbes & Society

Content

Description
Intended for non-majors, this course covers some of the basic concepts of microbiology with an emphasis on the role microbiology plays in today's society. Recognition of different classes of microbes, understanding the places in day-to-day existence where microbes exist, and understanding how microbes have had a significant impact in history are emphasized. Microbes in industry, the environment, the human microbiome, and current, real-world applications of genetic engineering and biotechnology will be discussed. BIO 101 or BIO 103 or BIO 107/BIO 117, followed by this course, would fulfill the General University requirement for the Natural Science Perspective (NSP). This is a one-semester course without a lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 101 or BIO 103, or BIO 107/BIO 117

BIO190 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

BIO191 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

BIO196 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
196

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

BIO201 - Plant Biology

General

Subject Code ~
BIO

Course Number ~
201

Course Name (appears on the transcript) ~
Plant Biology

Content

Description
Students examine various kinds of plants as well as their structure, internal workings, ecological relationships, and evolution. They learn and write about basic concepts using the appropriate terminology. Data collecting, analysis, and interpretation are also practiced. This course comprises of three class hours and a three hour lab.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 107, BIO 117, and at least sophomore Standing

BIO203 - Microbiology

General

Subject Code ~
BIO

Course Number ~
203

Course Name (appears on the transcript) ~
Microbiology

Content

Description
This is an introduction to bacteria and viruses, and the techniques for working with them, including their isolation, identification, and enumeration. This course comprises three class hours and three lab hours.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 107, BIO 117, and CHEM 106

BIO211 - Animal Behavior

General

Subject Code ~
BIO

Course Number ~
211

Course Name (appears on the transcript) ~
Animal Behavior

Content

Description
This course will introduce students to the field of animal behavior. We will examine basic principles derived from evolution, ecology, ethology and development and use these principles to explain how and why animals behave as they do in particular situations. We will focus on many important biological activities such as foraging, communication, migration, predator-prey interactions, mating, and parental care. The central unifying theory for ethology is the same as that for biology itself, namely evolutionary theory. In this class we will use evolutionary theory and what is known of evolutionary history as a context for all of our treatments of animal behavior.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BIO 108 and CHEM 106

BIO213 - Ecology

General

Subject Code ~
BIO

Course Number ~
213

Course Name (appears on the transcript) ~
Ecology

Content

Description
This is a study of the interaction of plants and animals and their relationship to the physical environment. The topics such as population dynamics, food chains, energy flow, and adaptations are included.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BIO 107, BIO 117 and Sophomore Standing
Complete CHEM 105 or take concurrently

BIO215 - Anatomy & Physiology I

General

Subject Code ~
BIO

Course Number ~
215

Course Name (appears on the transcript) ~
Anatomy & Physiology I

Content

Description
This course offers a comprehensive study of human anatomy and physiology at the cell, tissue, and organ system levels of organization. Topics include anatomical terminology, the basic chemistry of life, structure and function of human cells and tissues, and the anatomy and physiology of integumentary, skeletal, muscular, nervous, and endocrine systems. This course comprises three class hours and three lab hours.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BIO 108/BIO 118. Complete CHEM 106 or HON 106 or concurrently.

BIO216 - Anatomy & Physiology II

General

Subject Code ~
BIO

Course Number ~
216

Course Name (appears on the transcript) ~
Anatomy & Physiology II

Content

Description
A continuation of BIO 215, this course includes a study of the structure and function of the skeletal, muscular, cardiovascular, immune, digestive, respiratory, urinary, and reproductive systems. This course comprises three class hours and three lab hours.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 215 or HON 215

BIO240 - Research Projects in Biology

General

Subject Code ~
BIO

Course Number ~
240

Course Name (appears on the transcript) ~
Research Projects in Biology

Content

Description
This course provides students with an opportunity to explore, in the laboratory, topics that go beyond what is normally covered in their coursework as well as help develop good laboratory and research skills.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 106, BIO 108/BIO 118, sophomore Standing, a minimum GPA of 3.30 in BIO major, and permission of the instructor

BIO241 - Research Projects in Biology

General

Subject Code ~
BIO

Course Number ~
241

Course Name (appears on the transcript) ~
Research Projects in Biology

Content

Description
This course provides students with an opportunity to explore, in the laboratory, topics that go beyond what is normally covered in their coursework while developing good laboratory and research skills.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 106, BIO 108/BIO 118, sophomore Standing, a minimum GPA of 3.30 in BIO major, and permission of the instructor

BIO290 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete BIO 108 and CHEM 106, or permission of instructor

BIO304 - Histology

General

Subject Code ~
BIO

Course Number ~
304

Course Name (appears on the transcript) ~
Histology

Content

Description
This is a microscopic study of tissues. The course discusses their origin, structure, and relationships to organs. There is an introduction to histological techniques. Three class hours, three-hour lab.

Offered: occasionally

Credit Hours

Min
3

BIO306 - Genetics

General

Subject Code ~
BIO

Course Number ~
306

Course Name (appears on the transcript) ~
Genetics

Content

Description
A study of classical organismal heredity and its molecular basis. Topics will include Mendelian principles, gene structure and function, and changes in genetic material. Three class hours, three-hour lab.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BIO 107/BIO 117 and CHEM 210

BIO310 - Cell Biology

General

Subject Code ~
BIO

Course Number ~
310

Course Name (appears on the transcript) ~
Cell Biology

Content

Description
Students examine cellular structure and function including the molecular organization of the various cell organelles. They learn basic concepts and write about them using the appropriate terminology. An oral presentation is also required of every student. Data collecting, analysis, and interpretation are practiced in the laboratory.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 107, BIO 117 and CHEM 210

BIO312 - Developmental Biology

General

Subject Code ~
BIO

Course Number ~
312

Course Name (appears on the transcript) ~
Developmental Biology

Content

Description
Students examine the embryonic development of animals and its genetic control. They learn basic concepts and write about them using the appropriate terminology.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 108; CHEM 106 and junior Standing

BIO320 - Principles of Biochemistry

General

Subject Code ~
BIO

Course Number ~
320

Course Name (appears on the transcript) ~
Princ of Biochemistry

Content

Description
This lecture-based course is an examination of the chemistry of biological systems with emphasis on human biochemistry. Topics include the biosynthesis; metabolism; and function of proteins, nucleic acids, carbohydrates, and lipids.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO-107 and CHEM-210

BIO333 - Indep Study in Biology

General

Subject Code ~
BIO

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study Biology

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

BIO334 - Indep Study in Biology

General

Subject Code ~
BIO

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Biology

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

BIO340 - Research Projects in Biology

General

Subject Code ~
BIO

Course Number ~
340

Course Name (appears on the transcript) ~
Research Projects in Biol

Content

Description
Research Project courses provide students with an opportunity to explore, in the laboratory, topics that go beyond what is normally covered in their coursework as well as help develop good laboratory and research skills.

May be a continuation of BIO 240-241.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 210/CHEM 220, BIO 201, BIO 213, junior Standing, a minimum GPA of 3.30, in the BIO major and permission of the instructor

BIO341 - Research Projects in Biology

General

Subject Code ~
BIO

Course Number ~
341

Course Name (appears on the transcript) ~
Research Projects in Biol

Content

Description
Research Project courses provide students with an opportunity to explore, in the laboratory, topics that go beyond what is normally covered in their coursework as well as help develop good laboratory and research skills.

May be a continuation of BIO 240-241.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 210/CHEM 220, BIO 201, BIO 213, junior Standing, a minimum GPA of 3.30, in the BIO major and permission of the instructor

BIO390 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Members of the biology faculty offer selected topics in their areas of specialty. These courses are not offered on a regular basis and may be repeated for credit if the topic differs.

Credit Hours

Max
3

Min
1

BIO392 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

BIO394 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

BIO395 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Topics in biology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

BIO401 - Molecular Biology

General

Subject Code ~
BIO

Course Number ~
401

Course Name (appears on the transcript) ~
Molecular Biology

Content

Description
This course introduces the techniques and tools of isolating DNA, use of recombinant DNA techniques to move genes, to recognize genes, to understand the sequencing of DNA, and the use of bioinformatics to compare genetic sequences.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BIO 306, or concurrently

BIO440 - Undergraduate Research

General

Subject Code ~
BIO

Course Number ~
440

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

BIO441 - Undergraduate Research

General

Subject Code ~
BIO

Course Number ~
441

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete BIO 440 and senior Standing

BIO455 - Evolution

General

Subject Code ~
BIO

Course Number ~
455

Course Name (appears on the transcript) ~
Evolution

Content

Description
This is a study of organic evolution and its theoretical basis. This course develops three major themes: the history of evolutionary thought, the mechanisms of evolution, and highlights in the history of life.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BIO 306 and senior Standing

BIO470 - Seminar in Biology

General

Subject Code ~
BIO

Course Number ~
470

Course Name (appears on the transcript) ~
Seminar in Biology

Content

Description
This seminar is intended as a capstone experience for biology majors. Students will read, discuss, and present articles from the primary literature related to a particular theme in biology

Credit Hours

Min
1

Requisites

Free Form Requirements
BIO 306 or instructor permission

BIO480 - Internship in Biology

General

Subject Code ~
BIO

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Biology

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

BIO481 - Internship in Biology

General

Subject Code ~
BIO

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Biology

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

BIO490 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Members of the biology faculty offer selected topics in their areas of specialty. These courses are not offered on a regular basis and may be repeated for credit if the topic differs.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

BIO491 - Special Topics in Biology

General

Subject Code ~
BIO

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Biology

Content

Description
Members of the biology faculty offer selected topics in their areas of specialty. These courses are not offered on a regular basis and may be repeated for credit if the topic differs.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete BIO 490 or permission of instructor

BL201 - Intro to Business Law

General

Subject Code ~
BL

Course Number ~
201

Course Name (appears on the transcript) ~
Intro to Business Law

Content

Description
The goal of this course is to identify and distinguish the different aspects of the State and Federal Court System, as well as alternative dispute resolution options and identify legal issues and apply legal principles related to the following areas of law: torts, negligence, defamation, and contracts. Key learning outcomes for these areas of law include students' ability to communicate the positions of the parties to a legal conflict; differentiate between the boundaries of law, ethics, and sound business decision-making; and apply legal analysis in planning and decision-making to avoid legal conflicts in business decisions.Offered: Fall and Spring

Credit Hours

Min
3

BL308 - Labor Management Relations

General

Subject Code ~
BL

Course Number ~
308

Course Name (appears on the transcript) ~
Labor Management Relations

Content

Description
The course explores the elements associated with the formalized relationship between labor and management with particular emphasis on the collective bargaining framework. Key learning outcomes focus on the understanding, recognition, and application of concepts associated with workplace factors that lead to union organizing; the elements of the organizing process; identification of unfair labor practices; the collective bargaining process, strike mechanisms, and mediation; the arbitration process; and the role of third parties in the labor-management relationship. Students cannot take both BL 308 and BL 388 for credit.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing

BL360 - Business Law for Sport Management

General

Subject Code ~
BL

Course Number ~
360

Course Name (appears on the transcript) ~
Business Law for Sport Man

Content

Description
Open to Sport Management students only. The goal of this course is to identify and distinguish the different aspects of the State and Federal Court System, identify legal issues, and apply legal principles related to torts, and contracts. Specific attention is given to legal issues related to the following areas of sport law: negligence law, anti-trust, defamation, disabilities, trademark, Title IX. Key learning outcomes for these areas of law include students' ability to apply and use the skills necessary to communicate the positions of the parties to a legal conflict, explain the differentiation between the boundaries of law and ethics in sound business decision-making, and apply legal analysis in planning and decision-making to avoid legal conflicts in business decisions.

Students cannot take BL 360 and BL 201/HONB 201 for credit.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete SPMN 250

BL388 - Labor Management Relation in Sports

General

Subject Code ~
BL

Course Number ~
388

Course Name (appears on the transcript) ~
Labor Man Relations in Sports

Content

Description
Students will acquire an understanding of the various phases of the labor-management relationship generally and in the sports industry. Specifically, this understanding will be achieved through an understanding of historical developments leading to the development of labor-management generally and labor-management relations in sports. In addition, the labor relations process including the union organizing process, the collective bargaining process, and the administration and interpretation of collective bargaining agreements will be studied.Students cannot take both BL 308 and BL 388 for credit. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BL 360

BL390 - Special Topics in Business Law

General

Subject Code ~
BL

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Business Law

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing or permission of instructor

BL424 - Business Law for HR Management

General

Subject Code ~
BL

Course Number ~
424

Course Name (appears on the transcript) ~
Business Law for HR Man

Content

Description
The goal of this course is to identify legal issues related to the following areas of human resource law: negligent hiring, employment at-will, race discrimination, sex discrimination (including sexual harassment), and disabilities discrimination. Key learning outcomes for these areas of law include students' ability to apply and use skills necessary to communicate the positions of the parties to a legal conflict, explain the boundaries between law and ethics in sound business decision-making, and apply legal analysis in planning and decision-making to avoid legal conflicts in business decisions.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BL 201/HONB 201 or BL 360, and MAN 323

BL640 - Business Law

General

Subject Code ~
BL

Course Number ~
640

Course Name (appears on the transcript) ~
Business Law

Content

Description
This course focuses on law in the business context. Key outcomes include the ability to understand contract requirements and breach, the Uniform Commercial Code, agency law, and legal issues pertaining to choice of entity.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BL690 - Special Topics in Business Law

General

Subject Code ~
BL

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Business Law

Content

Description
This is a study of advanced topics in business law.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BME201 - Foundations of Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
201

Course Name (appears on the transcript) ~
Foundations Biomedical Engr

Content

Description
This sophomore-level course introduces the students to fundamental concepts in the field of biomedical engineering including engineering calculations and an in-depth study on conservation principles, with a particular focus on conservation of mass, energy, and charge. The course introduces students to the concept of mathematical modeling of biological and physiological systems.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

BME202 - Biomedical Systems

General

Subject Code ~
BME

Course Number ~
202

Course Name (appears on the transcript) ~
Biomedical Systems

Content

Description
This sophomore-level course introduces the students to concepts in systems theory as it relates to biomedical systems. Topics covered include time domain, Laplace domain, and Fourier domain analysis of systems, including impulse response, step response and system stability. Relevant physiological systems will be introduced and serve as a primer for deeper study of physiological systems in the junior year. The course will rely heavily on computer simulation.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE 205/HONE 205 and MATH 236
Corequisite - BME 206

BME206 - Biomedical Engr Sophomore Lab

General

Subject Code ~
BME

Course Number ~
206

Course Name (appears on the transcript) ~
Biomedical Engr Soph Lab

Content

Description
This laboratory course will allow students to apply the concepts learned in courses to the real world. Experiments include design of experiments using analysis of biosignals, introduction to rapid prototyping while considering end user feedback, circuit design and calibration, as well as 1st and 2nd order mechanical and electrical systems.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Take BME 202 and BME 240 concurrently

BME210 - Intro to Biomedical Engineer Research

General

Subject Code ~
BME

Course Number ~
210

Course Name (appears on the transcript) ~
Intro to Biomed Engr Resrch

Content

Description
This course allows first- and second-year biomedical engineering students to perform research with a biomedical engineering faculty member. Students are expected to work three hours per week for each credit hour attempted. Students will present a formal report on their research project at the end of the semester. Course is repeatable for credit if topic differs.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete or concurrent ENGR 103

BME240 - Biomaterials

General

Subject Code ~
BME

Course Number ~
240

Course Name (appears on the transcript) ~
Biomaterials

Content

Description
This is an introduction to the fundamental concepts of materials science with applications in biomedical engineering. Students will analyze physical properties of biomaterials, understand the interaction of the biomaterial with the human body, examine material specifications and fabrication methods, and compare and contrast various materials for an application.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 105 and BME 201
Corequisite - BME 206

BME290 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

BME291 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

BME292 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

BME301 - Engineering Physiology I

General

Subject Code ~
BME

Course Number ~
301

Course Name (appears on the transcript) ~
Engineer Physiology I

Content

Description
This course combines the study of physiology, anatomy, and engineering. Students gain an in-depth understanding of specified physiological systems and additionally study appropriate engineering models and concepts associated with the various systems. The systems covered include introduction to cell physiology, skeletal and smooth muscle, blood, circulatory system, immunology, and the endocrine system.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ENGR-105 or take concurrently

BME302 - Engineering Physiology II

General

Subject Code ~
BME

Course Number ~
302

Course Name (appears on the transcript) ~
Engineer Physiology II

Content

Description
This is the second of a two-part course that combines the study of physiology, anatomy, and engineering. Students gain an in depth understanding of specified physiological systems and additionally study appropriate engineering models and concepts associated with the various systems. The topics covered include neurophysiology, cardiovascular physiology, respiratory system, renal system, gastrointestinal system, and endocrinology.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BME 202, BME 301 and BME 305

BME305 - Biomedical Engineering Lab I

General

Subject Code ~
BME

Course Number ~
305

Course Name (appears on the transcript) ~
Biomedical Engr Lab I

Content

Description
This laboratory will allow the student to apply the concepts learned in the classroom to the real world. Experiments and exercises will be relevant to and augment the topics covered in the classroom. Topics include data acquisition, amplifiers and filters, electromyography (EMG), electrocardiography (ECG), and ultrasound.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212 or take concurrently
Corequisite- BME 331

BME306 - Biomedical Engineering Lab II

General

Subject Code ~
BME

Course Number ~
306

Course Name (appears on the transcript) ~
Biomedical Engr Lab II

Content

Description
This laboratory will allow the student to apply the concepts learned in the classroom to the real world. Experiments and exercises will be relevant to and augment the topics covered in the classroom. Topics include: technical writing, microscopy, cell culture, mechanical testing, enzyme-linked immunosorbent assay (ELISA), and ethics in the workplace.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

BME313 - Clinical Engineering

General

Subject Code ~
BME

Course Number ~
313

Course Name (appears on the transcript) ~
Clinical Engineering

Content

Description
This course studies the tools and equipment utilized in a hospital setting that are sold by, programmed, and repaired by clinical engineers. Topics include anatomy and physiology of surgical interventions focusing in orthopedics, cardiology, endoscopy, and trauma. Students will explore the surgical techniques, tools, and medical products used in procedures. This will highlight the technical roles that are available in a hospital setting as opportunities for engineering students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing

BME331 - Bioinstrumentation

General

Subject Code ~
BME

Course Number ~
331

Course Name (appears on the transcript) ~
Bioinstrumentation

Content

Description
This course introduces students to the principles and techniques of acquiring data from the human body. Topics include measurement terminology, conversion of analog and digital signals, transduction, sensors, and medical imaging. Students will learn how to measure a wide variety of physiologically relevant phenomena including: temperature, pressure, flow, bioelectric signals, and concentration of biochemical analytes. The design features of instrumentation related to making measurements from physiological systems are explored. Students design, build, and validate biomedical amplifier circuits; specify off-the-shelf equipment; and study the latest advances in medical instrumentation.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BME 202, and EE 205, Corequisite- BME 305

BME332 - Biomedical Imaging

General

Subject Code ~
BME

Course Number ~
332

Course Name (appears on the transcript) ~
Biomedical Imaging

Content

Description
This course is a study of the underlying principles associated with medical imaging systems. Several medical imaging modalities will be studied including: xray, computed tomography, ultrasound, magnetic resonance imaging, and nuclear imaging. Topics will focus on clinical applications of the technology.

Credit Hours

Min
3

Requisites

Free Form Requirements
Pre or Corequisite BME 202, or permission of the instructor

BME342 - Drug Delivery

General

Subject Code ~
BME

Course Number ~
342

Course Name (appears on the transcript) ~
Drug Delivery

Content

Description
This course will introduce students to the concept of drug delivery systems that provide pharmaceutical agents at target tissues; the mechanism of pharmacokinetic regulation; and the basics, technology, and applications of drug delivery systems. The emphasis is on understanding the principles of pharmacokinetics and drug delivery systems to improve clinical efficacy as well as to reduce side effects and on realizing the importance of the field of drug delivery. The course will be taught through traditional didactic lectures (60%), laboratory modules, article discussions, and class presentations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BME 240

BME351 - Biomechanics I

General

Subject Code ~
BME

Course Number ~
351

Course Name (appears on the transcript) ~
Biomechanics I

Content

Description
This course introduces biomedical engineering students to statics and strength of materials related to the human body. Topics include musculoskeletal anatomy, force and moment vectors, statics of various joints, stress and strain, tension, compression, torsion, bending, combined loading, and material properties of biological tissues such as bone, tendons, ligaments, and articular cartilage.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MATH 134 and PHYS 133
Corequisite- BME 306

BME380 - Biomedical Engineering Practicum

General

Subject Code ~
BME

Course Number ~
380

Course Name (appears on the transcript) ~
Biomedical Engr Practicum

Content

Description
Projects in which engineering analysis and design are applied to practical engineering problems in the rehabilitation, instrumentation, biological, or medical fields. A written plan at the time of registration and a final oral and written report are required. Prerequisite: Junior standing and permission of instructor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and permission of instructor

BME390 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

BME405 - Biomedical Engineering Senior Lab

General

Subject Code ~
BME

Course Number ~
405

Course Name (appears on the transcript) ~
Biomedical Engr Sr Lab

Content

Description
This senior-level course is designed to foster independent thinking in the laboratory. Students will conduct experiments on living systems. Students will also develop fundamental skills in designing experiments.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BME 302 and BME 306
Corequisite- BME 451

BME410 - Biomedical Engineering Research

General

Subject Code ~
BME

Course Number ~
410

Course Name (appears on the transcript) ~
Biomedical Engineering Resrch

Content

Description
This course allows third- and fourth-year biomedical engineering students to perform research with a biomedical engineering faculty member. Students are expected to work three hours per week for each credit hour attempted. Students will present a formal report on their research project at the end of the semester. Course is repeatable for credit if topic differs.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or senior Standing

BME423 - Product Development & Innovation

General

Subject Code ~
BME

Course Number ~
423

Course Name (appears on the transcript) ~
Product Develop & Innovat

Content

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing

BME425 - Prosthetic and Orthotic Devices

General

Subject Code ~
BME

Course Number ~
425

Course Name (appears on the transcript) ~
Prosthetic and Orthotic Device

Content

Description
This course will apply concepts in physiology, anatomy, and biomechanics to the understanding of prosthetic and orthotic devices. The students will be introduced to the components of normal and pathological gait, mechanical loading through assistive devices, and unique challenges in dealing with patient care. Students will learn career requirements for practicing as a CPO in the field and will be exposed to body-powered devices as well as the biofeedback devices prescribed for patients with lower- and upper-limb deficiencies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete or Concurrent BME 301 or BIO 215

BME431 - Adv Bioinstrumentation

General

Subject Code ~
BME

Course Number ~
431

Course Name (appears on the transcript) ~
Adv Bioinstrumentation

Content

Description
This course is a study of practical aspects of designing instrumentation for biomedical applications. The course will include topics such as semiconductor devices and applications, non ideal amplifiers and filters, noise in electrical circuits, data acquisition principles, and regulatory requirements. Students will learn to design and validate subsystems, focusing on critical performance parameters and the limitations of the devices for practical use.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BME 331
Complete BME 302 or take concurrently

BME437 - Design Projects

General

Subject Code ~
BME

Course Number ~
437

Course Name (appears on the transcript) ~
Design Projects

Content

Description
Working under the supervision of the biomedical engineering faculty, students select a capstone design project, thoroughly research solutions, and undergo formal design reviews. Students will learn and apply fundamental project management techniques to their projects. They are encouraged to work on clinically or industry relevant projects. The students will undergo formal design reviews with faculty, clinical, or industrial sponsors, and other students. Students are assessed with progress reports, design reviews, and the creation of a design history file. The project will be continued in BME 440 in the subsequent semester.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior BME Standing;

BME440 - Senior Projects

General

Subject Code ~
BME

Course Number ~
440

Course Name (appears on the transcript) ~
Senior Projects

Content

Description
Working under the supervision of biomedical engineering faculty and project advisors, students complete the work on a capstone project that was proposed in BME 437. Students organize formal design reviews with faculty, other students, and industrial sponsors. Students are assessed with weekly progress reports, design reviews, a final written report, and an oral defense of the project. Additionally, students will prepare a technical paper for external dissemination of their project results to a regional biomedical engineering conference.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete BME 437

BME443 - Adv Biomed Materials & Med Devices

General

Subject Code ~
BME

Course Number ~
443

Course Name (appears on the transcript) ~
Adv Biomed Mater & Device

Content

Description
This course is designed to explore the field of biomaterials and medical devices. The basic science of metals, ceramics, polymers and biological materials used in medical and dental applications will be presented. Major concepts will focus on structure-property relationships and the physical and mechanical properties of these important classes of materials. Other topics will include modes of materials degradation and failure, including metallic corrosion, wear and fretting, and polymer degradation. Issues related to the biocompatibility of materials and the performance of medical devices will be presented. An emphasis is placed on surface and interfacial properties of biomaterials and the biological response of the human body to the presence of artificial materials. Examples of specific implants and medical devices will be presented and studied both through lecture materials and group projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BME 240/BME 340 or ME 309

BME450 - Biotransport Processes

General

Subject Code ~
BME

Course Number ~
450

Course Name (appears on the transcript) ~
Biotransport Processes

Content

Description
Equilibrium and non-equilibrium thermodynamics of cellular transport and electrical properties from a combined biological, physical, and engineering point of view. Matter transport across cellular membranes involving diffusion, osmosis, coupled solute and solvent transport, carrier-mediated transport, and ion transport. homeostatic mechanisms involved in maintaining cellular solute concentrations, volume, and potential. The course also covers electrically inexcitable and excitable cells, lumped parameter and distributed-parameter cell models, linear electric properties of cells, and voltage gated ion channels.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 106, MATH 236, and BME 301

BME451 - Biomechanics II

General

Subject Code ~
BME

Course Number ~
451

Course Name (appears on the transcript) ~
Biomechanics II

Content

Description
This course will introduce biomedical engineering students to the dynamics of the human body. Topics include musculoskeletal dynamics, kinematics and kinetics of rigid bodies, and anthropometry.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BME 251 or BME 351
Corequisite- BME 405

BME460 - Cell & Tissue Engineering

General

Subject Code ~
BME

Course Number ~
460

Course Name (appears on the transcript) ~
Cell & Tissue Engineering

Content

Description
This course will cover principles behind the rapidly advancing field of cell and tissue engineering. Topics include the culture of mammalian cells, the role of mechanical forces in cellular processes, and biomaterial-cell interactions. Development of tissue-engineered devices for the replacement of blood vessels and heart valves, liver, kidney, and bone and cartilage will be studied.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Prerequisite: BME 240

BME480 - Internship in Biomedical Engr

General

Subject Code ~
BME

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Biomedical Engr

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing, and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

BME490 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

BME491 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

BME492 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
492

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

BME493 - Special Topics in Biomedical Engineering

General

Subject Code ~
BME

Course Number ~
493

Course Name (appears on the transcript) ~
Special Topics in Biomed Engr

Content

Description
This is a study of an advanced topic in bioengineering of special interest to engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
BME Standing & permission of Professor

BUS101 - First Year Business Seminar

General

Subject Code ~
BUS

Course Number ~
101

Course Name (appears on the transcript) ~
First Year Business Seminar

Content

Description
This is a course designed specifically for new college students in the College of Business. The emphasis, which is on personal development, focuses on an understanding of self and the habits necessary for personal effectiveness and for effective relationships with others. Key learning outcomes include: time management skills, listening skills, oral presentation skills, critical thinking skills, and information literary skills. The course includes a term project and exposure to the range of career options consistent with students' personal mission statements. There is a high level of interaction with the faculty and peers both inside and outside the classroom.

Credit Hours

Min
3

Requisites

Free Form Requirements
Freshmen College of Business Majors Only

BUS110 - Introduction to Business Seminar

General

Subject Code ~
BUS

Course Number ~
110

Course Name (appears on the transcript) ~
Intro to Business Seminar

Content

Description
This is a course designed specifically for students new to the study of business in a university setting. Students will have the opportunity to develop their business vocabulary and advance critical and analytical thinking skills for addressing business issues. Students will be introduced to concepts associated with the core business functions of marketing, management, finance, accounting, human resources, and information systems. A component of the course focuses on personal and professional development through the acquisition of skills in time management, oral presentations, working in teams, information literacy and career choice. There is a high level of interaction with faculty and peers both inside and outside the classroom.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Freshmen College of Business Majors Only

BUS190 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
1

BUS191 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
4

BUS290 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS291 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS292 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
1

BUS293 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS294 - Special Topics Business

General

Subject Code ~
BUS

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
1

BUS312 - Business Process & Enterprise w/SAP

General

Subject Code ~
BUS

Course Number ~
312

Course Name (appears on the transcript) ~
Bus Proc & Enterprise SAP

Content

Description
This course provides the intermediate integrative framework between BUS 110 and BUS 423/BUS 450. It does so by using SAP ERP application software. Each student establishes a virtual business by configuring SAP to create the needed organizational elements and the Master Data. Students execute transactions for the procurement and sales cycles. Through these business process implementations, students learn integration of core business functions at the operations level. Students are taught business process design concepts and vocabulary which can be implemented in any ERP system.This course satisfies the SAP University Alliance Student Recognition Award requirement.Students cannot take both BUS 312 and HONB 312 for credit. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 202, BAIM 202, BAIM 221, BL 201/HONB 201 or BL 360, FIN 214, MAN 204/HONB 204, MK 200/HONB 200

BUS315 - International Practicum

General

Subject Code ~
BUS

Course Number ~
315

Course Name (appears on the transcript) ~
International Practicum

Content

Description
International Practicum involves pre-travel study and travel of 10-14 days duration during school breaks that are chaperoned and supervised by a business faculty member. These trips take students outside the geographic borders of the U.S. and provide learning experiences beyond the classroom environment. Programs and activities enhance the ability of students to comprehend, analyze, and grasp different cultural aspects that impact successful management of organizations in the global work environment. The major goal of the International Practicum is to allow undergraduate students opportunities to enhance their understanding of cross-cultural differences and the globalization of the work environment. The course may be repeated for credit if the location/topic varies. This course is cross-listed as CUL 315.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing and consent of instructor

BUS326 - Business Planning for New Ventures

General

Subject Code ~
BUS

Course Number ~
326

Course Name (appears on the transcript) ~
Business Plan New Venture

Content

Description
The course provides an intermediate integrative framework in the business curriculum for continued development of analytical and decision-making skills in the business environment. Focused on the development of a new business venture or a new product in an established firm, the course integrates core concepts from each functional area covered in introductory coursework as a means of understanding the dynamic interplay between functional areas. Students will develop a full business plan as an element of course pedagogy. Established learning outcomes include: understanding the principal elements of a business plan, describing the process of business plan development, recognizing the impact of a proposed product or venture on functional areas of a firm.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 202, BAIM 202, BAIM 221, BL 201/HONB 201 or BL 360, FIN 214, MAN 204/HONB 204, and MK 200/HONB 200

BUS333 - Indep Study in Business

General

Subject Code ~
BUS

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Business

Content

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

BUS334 - Indep Study in Business

General

Subject Code ~
BUS

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Business

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

BUS350 - Business Etiquette & Professionalism

General

Subject Code ~
BUS

Course Number ~
350

Course Name (appears on the transcript) ~
Bus Etiquette & Profess

Content

Description
This course is designed to introduce students to elements of culture and behavior in a professional atmosphere that contribute to personal and professional success. Students will examine a variety of professional customs including communication norms, behavioral expectations, and professional appearance. In addition, students will be introduced to different norms for these areas in international settings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

BUS364 - Industry Studies: Golf

General

Subject Code ~
BUS

Course Number ~
364

Course Name (appears on the transcript) ~
Indust St: Golf

Content

Description
This course is designed to introduce students to the business of the golf industry. Students will explore all aspects of golf operations including management of tournaments, golf manager-professional services, golf shop services, food and beverage, recreation facilities, club amenities, and the golf course/grounds itself. Students will examine golf-industry-specific business applications including marketing and sales strategies, revenue development, customer service, and the various owner/management work settings in golf. Current and future issues in golf management including environmental impact and sustainability, economic challenges, and technological applications will be explored. Students will also learn about employment requirements and career opportunities in the golf industry.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing or permission of instructor

BUS390 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of advanced topics in business of special interest to business majors, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

BUS391 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS392 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS393 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS394 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS423 - Product Development & Innovation

General

Subject Code ~
BUS

Course Number ~
423

Course Name (appears on the transcript) ~
Product Dev & Innovation

Content

Description
This course will cover new product innovation from both an entrepreneurship and intrapreneurship perspective. The course will have three components: a theoretical, a practical or clinical, and an application. The theoretical will consist of generating and identifying business opportunities; assessing concept ideas from technical, market, and financial perspectives; designing and developing new products; testing prototypes from technical and market perspectives; and developing a marketing plan including launch, monitoring, and measurement provisions. The practical or clinical component will consist of business/engineering student teams identifying consumer or business new product ideas of their own, from a faculty-generated list, or from local corporations. Teams will develop marketing plan to market product designs. The application component will involve presenting the final designs and plans to an expert panel of business executives, investors, and faculty.Students cannot receive credit for taking both BUS 423 and BME 423 or ME 423.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete BUS 312/HONB 312 or BUS 326

BUS450 - Business Strategy

General

Subject Code ~
BUS

Course Number ~
450

Course Name (appears on the transcript) ~
Business Strategy

Content

Description
The course provides the framework for an overall integration of business perspectives in the development of an organization's strategies. Key learning outcomes include identification of the key elements of the strategic management process, explaining operational and strategic-level decisions, explaining environmental opportunities and threats, explaining a firm's strategic performance through financial statements, making decisions about a firm's chosen strategies, and the application of strategic management theories.

Students cannot receive credit for both BUS 450 and HONB 450.

Cannot be taken concurrently with BUS 312/HONB 312 or BUS 326.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BUS 312/HONB 312 or BUS 326

BUS465 - Senior Seminar in General Business

General

Subject Code ~
BUS

Course Number ~
465

Course Name (appears on the transcript) ~
Senior Seminar in General Bus

Content

Description
The course provides students with an enhanced understanding of current perspectives in business. The course includes opportunities to apply business knowledge to current business problems and opportunities.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing and General Business Major

BUS480 - Internship in Business

General

Subject Code ~
BUS

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Business

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Remove all prerequisites

BUS481 - Internship in Business

General

Subject Code ~
BUS

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Business

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Remove all perquisites

BUS490 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS491 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS492 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
492

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

BUS610 - Business & Its Environment

General

Subject Code ~
BUS

Course Number ~
610

Course Name (appears on the transcript) ~
Business & Its Environment

Content

Description
This course examines the social, economic, and political environment facing business and its leaders in the 21st century. Coverage includes the economic dynamics of the global marketplace, demographic trends and their impact on the organization, public policy and regulatory issues, the relationship between business and governments, and the nature of business ethics and corporate social responsibility. The goal of this course is to enhance students' ability to meet multifaceted challenges facing managers in the business environment.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BUS675 - Graduate Business Internship

General

Subject Code ~
BUS

Course Number ~
675

Course Name (appears on the transcript) ~
Graduate Business Internship

Content

Description
The graduate business internship is an opportunity for students to apply theories and principles of the business disciplines in a workplace setting. The student will work with a faculty advisor to establish specific internship learning outcomes.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

BUS680 - Strategic Management

General

Subject Code ~
BUS

Course Number ~
680

Course Name (appears on the transcript) ~
Strategic Management

Content

Description
This course focuses on strategic level analysis of the firm. Key learning outcomes include: the application of corporate and business strategies through environmental analyses based on economic, political, legal, social, global, and internal organizational factors; decision making based on the firm's strategic performance using financial statements, stakeholders satisfaction, and investment decisions; the application and use of functional strategies in implementing corporate and business level strategies; and decision-making based on micro and macro environmental factors influencing the strategic management process. The course makes wide use of case studies in achieving the course objectives.

Credit Hours

Min
3

BUS690 - Special Topics in Business

General

Subject Code ~
BUS

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Business

Content

Description
This is a study of topics in business that are not offered on a regular basis.

Credit Hours

Min
3

CEE230 - Engineering Geology

General

Subject Code ~
CEE

Course Number ~
230

Course Name (appears on the transcript) ~
Engineering Geology

Content

Description
This course is designed to provide students with a fundamental understanding of physical geology and geologic processes relevant to engineering. Emphasis is on origin and distribution of natural hazards (earthquakes, volcanoes, floods, winds, mass wasting) as they impact built infrastructure, and chemical and physical processes impacting contaminant transport in water.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore, Junior or Senior Standing

CEE240 - Strength of Civil Engineer Material

General

Subject Code ~
CEE

Course Number ~
240

Course Name (appears on the transcript) ~
Strength Civil Engr Material

Content

Description
This course is designed to provide students with a fundamental understanding of civil engineering materials and their strengths. In the first half of this course, students will learn material properties of metals and alloys, cements, ceramics, concrete, glass, steel, mineral aggregates, lumber and timber, plastics, and composites. Students will also learn corrosion and material selection process. The second half of this course will focus on stress and strain, bending and torsion of beams, principal and combined stresses, axial and lateral loads, elasticity, and energy principles. Students should concurrently take the laboratory component of this course.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CEE242 - Strength of Civil Engr Material Lab

General

Subject Code ~
CEE

Course Number ~
242

Course Name (appears on the transcript) ~
Strength Civil Engr Mat Lab

Content

Description
This is the laboratory course accompanying CEE 240. This course will allow students to apply theories and concepts learned in the classroom to hands-on laboratory testing and analysis of civil engineering materials.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Corequisite CEE 240

CEE251 - Surveying

General

Subject Code ~
CEE

Course Number ~
251

Course Name (appears on the transcript) ~
Surveying

Content

Description
This course is designed to provide students with a fundamental understanding of land surveying. Topics covered in this course include measurement of distances, angles, directions, elevations, and areas. Students will also learn computer aided design (CAD), global positioning system (GPS), and graphical information systems (GIS). Students should concurrently take the laboratory component of this course.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 123, 127, or 133 Sophomore Standing or greater

CEE253 - Surveying Laboratory

General

Subject Code ~
CEE

Course Number ~
253

Course Name (appears on the transcript) ~
Surveying Laboratory

Content

Description
This course will allow students to apply theories and concepts learned in the classroom to hands-on field training using professional surveying equipment.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Corequisite CEE 251

CEE310 - Civil Engineering Research

General

Subject Code ~
CEE

Course Number ~
310

Course Name (appears on the transcript) ~
Civil Engineering Research

Content

Description
See "Undergraduate Research" in catalog. Course may be repeated once for credit if topic differs.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior CEE major Standing

CEE320 - Environmental Engineering

General

Subject Code ~
CEE

Course Number ~
320

Course Name (appears on the transcript) ~
Environmental Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of environmental engineering. Topics covered in this course include water quality, water and wastewater treatment, solid and hazardous waste management, environmental law and regulations, air pollution, and remediation. A team design project is required. Students should concurrently take the laboratory component of this course.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CEE 361 or ME 316

CEE322 - Environmental Engineering Lab

General

Subject Code ~
CEE

Course Number ~
322

Course Name (appears on the transcript) ~
Environmental Engineering Lab

Content

Description
This is the laboratory course accompanying CEE320. This course will allow students to apply theories and concepts learned in the classroom to hands-on laboratory training of water and wastewater analysis. This laboratory course also includes hands-on laboratory demonstrations of fundamental concepts in engineering fluid mechanics.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Corequisite CEE-320

CEE324 - Groundwater Engineering

General

Subject Code ~
CEE

Course Number ~
324

Course Name (appears on the transcript) ~
Groundwater Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of groundwater engineering. Topics covered in this course include the hydrologic cycle, hydrogeology, unsaturated and saturated flow, confined and unconfined aquifers, well hydraulics, contamination, remediation, solute transport, mathematical modeling, and aquatic chemistry.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete CEE 361 or ME 316

CEE330 - Soil Mechanics

General

Subject Code ~
CEE

Course Number ~
330

Course Name (appears on the transcript) ~
Soil Mechanics

Content

Description
The course is designed to provide students with a fundamental understanding of soil behavior. Topics covered in this course include mechanics of soils, composition and classification, compaction and consolidation, shear strength, bearing capacity, stress and strain tensors, seepage, slope stability, retaining walls, and soil testing methods. Students should concurrently take the laboratory component of this course.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CEE332 - Soil Mechanics Lab

General

Subject Code ~
CEE

Course Number ~
332

Course Name (appears on the transcript) ~
Soil Mechanics Lab

Content

Description
This is the laboratory course accompanying CEE 330. This course will allow students to apply theories and concepts learned in the classroom to hands-on laboratory demonstration of soil behavior and training of various soil testing methods.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

CEE341 - Structural Analysis

General

Subject Code ~
CEE

Course Number ~
341

Course Name (appears on the transcript) ~
Structural Analysis

Content

Description
This course is designed to provide students with a fundamental understanding of structural analysis with a focus on beams, trusses, and frames. Students will learn to analyze statically indeterminate structures, shear and moment diagrams, influence line diagrams, and vibrations. Students will also learn basic structural analysis using computer software. A team design project is required.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CEE 240;

CEE342 - Steel & Reinforced Concrete

General

Subject Code ~
CEE

Course Number ~
342

Course Name (appears on the transcript) ~
Steel & Reinforced Concrete

Content

Description
This course is designed to provide students with a fundamental knowledge of steel design. Topics covered in this course include the design process for beams, columns, frames, trusses, connections, and other structures using the Load and Resistance Factor Design (LRFD) method. A team design project is required.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CEE 341

CEE351 - Transportation Engineering

General

Subject Code ~
CEE

Course Number ~
351

Course Name (appears on the transcript) ~
Transportation Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of transportation engineering. Topics covered in this course include traffic volume and speed, geometric design, pavement design, horizontal and vertical curves, interchanges, drainage, level of service, traffic safety, and accident analysis. Students will also learn fundamental concepts in air and water transportation. A team design project is required. Students should concurrently take the laboratory component of this course.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ME 203 or take concurrently.

CEE353 - Transportation Engineering Lab

General

Subject Code ~
CEE

Course Number ~
353

Course Name (appears on the transcript) ~
Transportation Engineering Lab

Content

Description
This is the laboratory course accompanying CEE 351. This course will allow students to apply theories and concepts learned in the classroom to hands-on computer programming, simulations, and analysis of transportation topics.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Corequisite CEE 351

CEE361 - Engineering Fluid Mechanics

General

Subject Code ~
CEE

Course Number ~
361

Course Name (appears on the transcript) ~
Engineering Fluid Mechanics

Content

Description
This course is designed to provide students with a fundamental understanding of fluid behavior with an emphasis on liquids. Topics covered include fluid statics and dynamics, laminar and turbulent flow, pressure, forces, energy equation, dimensional analysis, drag, incompressible and compressible flow, energy and hydraulic grade lines, and simple pumps. A team design project is required.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 235 or MATH 236

CEE370 - Architecture Engineering

General

Subject Code ~
CEE

Course Number ~
370

Course Name (appears on the transcript) ~
Architecture Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of architecture history, form and function, interior design, exterior design, graphical representations, architecture technologies, computer applications, blueprints, and structure analysis.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CMGT 202 or ME 202

CEE390 - Special Topics in Civil & Enviro Engr

General

Subject Code ~
CEE

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics Civ & Env Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CEE391 - Special Topics in Civil & Enviro Engr

General

Subject Code ~
CEE

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics Civ & Env Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
1

CEE400 - Ethical & Professional Issues

General

Subject Code ~
CEE

Course Number ~
400

Course Name (appears on the transcript) ~
Ethical & Professional Issues

Content

Description
This course is designed to provide students with a fundamental understanding of social, ethical, global, and professional issues facing civil and environmental engineers. Topics covered also include case studies of law, contracts, and liability issues.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior or Senior Standing

CEE402 - Capstone Design

General

Subject Code ~
CEE

Course Number ~
402

Course Name (appears on the transcript) ~
Capstone Design

Content

Description
This course is designed to provide students a comprehensive civil engineering design experience. Students will learn the entire process of executing a civil engineering project from initial design to project completion. Topics covered also include alternative solutions, cost analysis, and project management. Students are expected to complete a team design project and are expected to present project outcomes in a public setting.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing

CEE406 - Green & Substainable Civil Engineer

General

Subject Code ~
CEE

Course Number ~
406

Course Name (appears on the transcript) ~
Green & Substain Civil Engr

Content

Description
This course is designed to provide students with a fundamental understanding of modern green and sustainable technologies available to civil and environmental engineers. Topics covered include life cycle analysis, alternative energy and renewable fuels, building efficiency, sustainable materials, and green building certifications. An individual design project is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

CEE410 - Civil Engineering Research

General

Subject Code ~
CEE

Course Number ~
410

Course Name (appears on the transcript) ~
Civil Engineering Research

Content

Description
See "Undergraduate Research" in catalog. Course may be repeated once for credit if topic differs.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior CEE majors

CEE411 - Petro Fluids & Reservoir Engineerin

General

Subject Code ~
CEE

Course Number ~
411

Course Name (appears on the transcript) ~
Petro Fluids & Reservoir Engr

Content

Description
This course is designed to provide students with a fundamental understanding on the chemical and physical behavior of petroleum fluids. Topics include fluid properties, phase behavior, gas-liquid equilibria calculations, mass balance calculations, and types of petroleum reservoir fluids. This course also covers classification of subsurface reservoirs, recovery mechanisms, and steady-state and transient fluid flow in permeable subsurface reservoirs.

This course is offered every other year.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete or Co-requisite CEE 361

CEE412 - Petrophysics & Reservoir Geomechani

General

Subject Code ~
CEE

Course Number ~
412

Course Name (appears on the transcript) ~
Petrophysics & Reservoir Geo

Content

Description
This course is designed to provide students with a fundamental understanding of petrophysics and reservoir geomechanics. Petrophysics topics include properties of rocks, measurement and interpretation of petrophysical properties, application of petrophysics to subsurface engineering problems, and interaction of resident fluids with rocks. Reservoir geomechanics topics include stress and strain analysis, pore pressure and in-situ stress estimation and measurement, deformation mechanisms in rock, wellbore stresses and failure, depletion-induced reservoir deformation, and hydraulic fracturing.

This course is offered every other year.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Corequisite CEE-330

CEE430 - Geotechnical Engineering

General

Subject Code ~
CEE

Course Number ~
430

Course Name (appears on the transcript) ~
Geotechnical Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of geotechnical engineering. Topics covered in this course include deep and shallow foundations, piles, earth structures, geoenvironmental engineering, groundwater, soil and structure interactions, earthquake engineering, and computer simulations. A team design project is required.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CEE 330

CEE451 - Construction Materials

General

Subject Code ~
CEE

Course Number ~
451

Course Name (appears on the transcript) ~
Construction Materials

Content

Description
This course is designed to provide students with a fundamental understanding of concrete and pavement designs. Concrete topics covered in this course include prestressed concrete, reinforced concrete, loading and stresses, shear and torsion, deflection, sensors, concrete canoe, and concrete inspection. Pavement topics covered in this course include design and construction, rigid and flexible pavements, loading, drainage, and pavement inspection.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CEE 342 or take concurrently

CEE455 - Railroad Transportation Engineering

General

Subject Code ~
CEE

Course Number ~
455

Course Name (appears on the transcript) ~
Railroad Transportation Engr

Content

Description
This course is designed to provide students with a fundamental understanding of railroad transportation engineering. Topics include railroad engineering efficiency, infrastructure, economics, energy, cost-benefit analysis, route selection, geometric design, alignment, high-speed rail, power, movement, materials characterization, subgrade design, construction and drainage.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete ME 203 or take concurrently

CEE456 - Railroad Track Structure Engineering

General

Subject Code ~
CEE

Course Number ~
456

Course Name (appears on the transcript) ~
Railroad Track Struc Engr

Content

Description
This course examines Static, kinematic, and dynamic characteristics of trains, wheel/track interaction, characterization and design of railroad track components, turnouts and switches design, crossing, crossover, grade design, advanced track systems, special track work, track standards, inspection, condition assessment and asset management.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete CEE 341 or take concurrently

CEE461 - Water Resources Engineering

General

Subject Code ~
CEE

Course Number ~
461

Course Name (appears on the transcript) ~
Water Resources Engineer

Content

Description
This course is designed to provide students with a fundamental understanding of water resources engineering. Topics covered in this course include hydrologic cycle, hydrology, water quantity, watershed analysis, dams, flow in closed conduits, pipeline networks, open channel flow, turbines and pumps, and computer simulations. A team design project is required.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CEE 361 or ME 316

CEE470 - Construction Engineering

General

Subject Code ~
CEE

Course Number ~
470

Course Name (appears on the transcript) ~
Construction Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of construction engineering. Topics covered in this course include construction documents, procurement methods, project operation and delivery methods, scheduling, management, construction safety, and cost estimating.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior or Senior Standing and CEE or CMGT major

CEE480 - Internship in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Civil Engr

Content

Description
See "Internships" in Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CEE490 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE491 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE492 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
492

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE493 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
493

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE494 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
494

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE495 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
495

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE551 - Construction Materials

General

Subject Code ~
CEE

Course Number ~
551

Course Name (appears on the transcript) ~
Construction Materials

Content

Description
This course is designed to provide students with a fundamental understanding of concrete and pavement designs. Concrete topics covered in this course include prestressed concrete, reinforced concrete, loading and stresses, shear and torsion, deflection, sensors, concrete canoe, and concrete inspection. Pavement topics covered in this course include design and construction, rigid and flexible pavements, loading, drainage, and pavement inspection.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CEE 342

CEE555 - Railroad Transportation Engineering

General

Subject Code ~
CEE

Course Number ~
555

Course Name (appears on the transcript) ~
Railroad Transportation Engr

Content

Description
This course is designed to provide students with a fundamental understanding of railroad transportation engineering. Topics include railroad engineering efficiency, infrastructure, economics, energy, cost-benefit analysis, route selection, geometric design, alignment, high-speed rail, power, movement, materials characterization, subgrade design, construction, drainage.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete ME 203

CEE556 - Railroad Track Structure Engineering

General

Subject Code ~
CEE

Course Number ~
556

Course Name (appears on the transcript) ~
Railroad Track Struc Engr

Content

Description
This course examines a static, kinematic, and dynamic characteristics of trains, wheel/track interaction, characterization and design of railroad track components, turnouts and switches design, crossing, crossover, grade design, advanced track systems, special track work, track standards, inspection, condition assessment, asset management.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete CEE 341 or take concurrently

CEE561 - Water Resources Engineering

General

Subject Code ~
CEE

Course Number ~
561

Course Name (appears on the transcript) ~
Water Resources Engineer

Content

Description
This course is designed to provide students with a fundamental understanding of water resources engineering. Topics covered in this course include hydrologic cycle, hydrology, water quantity, watershed analysis, dams, flow in closed conduits, pipeline networks, open channel flow, turbines and pumps, and computer simulations. A team design project is required.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CEE 361 or ME 316

CEE570 - Construction Engineering

General

Subject Code ~
CEE

Course Number ~
570

Course Name (appears on the transcript) ~
Construction Engineering

Content

Description
This course is designed to provide students with a fundamental understanding of construction engineering. Topics covered in this course include construction documents, procurement methods, project operation and delivery methods, scheduling, management, construction safety, and cost estimating.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior or Senior CEE Standing

CEE590 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or 5th year BS/MS

CEE591 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or 5th year BS/MS

CEE592 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
592

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or 5th year BS/MS

CEE593 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
593

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or 5th year BS/MS

CEE594 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
594

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE595 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
595

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

CEE596 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
596

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil and environmental engineering majors.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CEE program

CEE602 - Finite Element & Numerical Analysis

General

Subject Code ~
CEE

Course Number ~
602

Course Name (appears on the transcript) ~
Finite Element & Nume Ana

Content

Description
This course examines shape functions, isoparametric formulation, plates and shells elements, elements assembly, convergence, programming, computational modeling, finite difference, numerical methods, error, probability and statistics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE606 - Adv Green & Sustainable CEE

General

Subject Code ~
CEE

Course Number ~
606

Course Name (appears on the transcript) ~
Adv Green & Sustainable Cee

Content

Description
This course examines solar, wind, geothermal, hydro energy, biofuels, energy balance, sustainable construction and transportation materials, climate change, carbon footprint analysis, entrepreneurship.Cross-listed with CMGT 606. Students may not receive credit for both CMGT 606 and CEE 606.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing in MS in CE or MS in CMGT program

CEE609 - Engineering Cost Analysis

General

Subject Code ~
CEE

Course Number ~
609

Course Name (appears on the transcript) ~
Engineering Cost Analysis

Content

Description
This is a study of the economic aspects of engineering decisions. Topics include comparison of alternatives in engineering programs and economic factors in selecting and replacing machinery, equipment, and structure.

Students cannot receive credit for this course and EMGT 609 or IE 609.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing with CEE or CMGT program

CEE630 - Adv Geotechnical Engineering

General

Subject Code ~
CEE

Course Number ~
630

Course Name (appears on the transcript) ~
Adv Geotechnical Engr

Content

Description
This course examines shallow and deep foundations design, earth retaining structures, site investigation methods, in-situ tests, parameters selection and estimation and soil improvement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE640 - Solid Mechanics

General

Subject Code ~
CEE

Course Number ~
640

Course Name (appears on the transcript) ~
Solid Mechanics

Content

Description
This course examines elastic deformable bodies, kinematics, balance laws, constitutive equations, small-deformation theory, boundary-value problems, variational formulations, and minimum principles.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE641 - Energy Management

General

Subject Code ~
CEE

Course Number ~
641

Course Name (appears on the transcript) ~
Energy Management

Content

Description
This is an examination of energy cost and its impact on technical and management approaches to conservation programs. Topics include energy reduction in electrical and thermal systems; heating, ventilation, and air conditioning systems; and methods of initiating and managing an effective conservation program.

May not take CEE 641 and EMGT 640 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CEE 609 or equivalent

CEE642 - Adv Reinforced Concrete Design

General

Subject Code ~
CEE

Course Number ~
642

Course Name (appears on the transcript) ~
Adv Reinforced Concrete Design

Content

Description
This course examines indeterminate reinforced concrete structures, flat slabs, two-way slabs, yield line method, design of reinforced concrete beams, columns, and footings, fire resistance, seismic analysis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE644 - Structural Dynam & Earthquake Engr

General

Subject Code ~
CEE

Course Number ~
644

Course Name (appears on the transcript) ~
Struct Dynam & Earthquake Engr

Content

Description
This course examines dynamic load analysis, foundation excitation, single-degree-of-freedom systems, multi-degree-of-freedom systems, spectral analysis, design of seismic resistant structures and simple inelastic structural systems.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE650 - Adv Railway Engineering & Plan

General

Subject Code ~
CEE

Course Number ~
650

Course Name (appears on the transcript) ~
Adv Railway Engineer/Plan

Content

Description
This course examines high speed rail technologies, corridor and land-use planning, forecasting, noise and vibration, advanced track design, risk assessment, environmental and social impacts, international perspectives.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE670 - Construction Management

General

Subject Code ~
CEE

Course Number ~
670

Course Name (appears on the transcript) ~
Construction Management

Content

Description
This course examines construction history, bid package, estimation, project reduction, contracts, legal matters, project planning, scheduling, financial and cost control, labor issues, equipment management and safety.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE or MSCMGT Standing

CEE671 - AI: Machine Learning - Concepts

General

Subject Code ~
CEE

Course Number ~
671

Course Name (appears on the transcript) ~
AI: Machine Learning - Concep

Content

Description
This course focuses on AI concepts such as Data Exploration, Single and Multivariate Parametric and Non-Parametric methods of regression and classification tasks. Students will learn the theory that underlies these algorithms and implement them using popular machine learning packages such as Python with scikit-learn and MATLAB. During the final project, students will implement multiple algorithms and learn how to select the best algorithm with the optimized hyperparameters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CEE672 - Mater Select, Cost Estimation & Bidding

General

Subject Code ~
CEE

Course Number ~
672

Course Name (appears on the transcript) ~
Mater Select, Cost Esti & Bid

Content

Description
This course will include construction materials selection, sustainability and environmental impacts, renewable energy for buildings, material life cycle analysis, cost estimation, bidding procedures, and contracts.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CEE673 - AI: Applied Neural Networks and Machine

General

Subject Code ~
CEE

Course Number ~
673

Course Name (appears on the transcript) ~
AI: Applied Neural Networks

Content

Description
This course concentrates on application of neural networks in the field of engineering. In this course, students will learn vision-based applications of Perceptron algorithm as well as back propagation. Linearly and nonlinearly separable clustering and classification problems will be covered. This course is project-based and concentrates on the latest applied Neural Networks and Machine Learning algorithms. All concepts are heavily reinforced using MATLAB, the main computational platform.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CEE674 - Ai: Machine Learning - Applications

General

Subject Code ~
CEE

Course Number ~
674

Course Name (appears on the transcript) ~
AI: Machine Learning - Applic

Content

Description
This course focuses on Artificial Intelligence application packages such as Data exploration, Natural Language Processing, Support Vector Machine, Reinforcement Learning, Artificial Neural Networks (ANNs) and Computer Vision and Deep Learning. Students will learn the theory and applications of a variety of algorithms. These algorithms will be implemented using Python and MATLAB software. As the final project, students will apply a combination of algorithms to a specific application and develop an end to end solution.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CEE676 - AI: Applied Fuzzy Logic AI: Applied Fuzzy Logic

General

Subject Code ~
CEE

Course Number ~
676

Course Name (appears on the transcript) ~
AI: Applied Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. In this course students will learn to analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and will learn to apply fuzzy logic theory to a variety of practical applications. Students will also learn to use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. Machine Controls will be the application.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

CEE680 - Civil Engineering Project

General

Subject Code ~
CEE

Course Number ~
680

Course Name (appears on the transcript) ~
Civil Engineering Project

Content

Description
Students must select a project faculty adviser and obtain topic approval prior to registration for this course. This is an independent engineering project under the supervision of a project faculty advisor. The design process is emphasized. Progress reports and a final written report are required. An oral presentation and defense of the project is made before a faculty committee.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE690 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil engineering majors, but not carried in the Catalog on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE691 - Special Topics in Civil Engineering

General

Subject Code ~
CEE

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Civil Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to civil engineering majors, but not carried in the Catalog on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE698 - Thesis Research

General

Subject Code ~
CEE

Course Number ~
698

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to civil engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CEE699 - Thesis Research

General

Subject Code ~
CEE

Course Number ~
699

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to civil engineering graduate students who have completed requirements for admission to candidacy for the master?s degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MSCE Standing

CHEM101 - Modern Chemistry I

General

Subject Code ~
CHEM

Course Number ~
101

Course Name (appears on the transcript) ~
Modern Chemistry I

Content

Description
This is an introductory course intended to help students with little background in the physical sciences to understand the material environment. Modern concepts of atomic and molecular structure are developed and used to explain the properties of familiar substances including solids, liquids, and gases. Laboratory work is designed to enhance understanding of fundamental concepts at the practical level and may include field sampling and demonstrations as well as individual experiments.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CHEM103 - Elementary Chemistry

General

Subject Code ~
CHEM

Course Number ~
103

Course Name (appears on the transcript) ~
Elementary Chemistry

Content

Description
This course is designed to provide students with the background needed to succeed in General Chemistry. Topics covered are: units and unit conversions, nomenclature of inorganic compounds, stoichiometry, atomic structure, the periodic table, chemical bonding, and molecular structure.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CHEM105 - General Chemistry I

General

Subject Code ~
CHEM

Course Number ~
105

Course Name (appears on the transcript) ~
General Chemistry I

Content

Description
This is the first course of a two-semester sequence intended for science and engineering majors and qualified students who wish to pursue a more in-depth study of chemical principles than is provided in CHEM 101.

The following topics are studied: physical measurements and chemistry data handling; states of matter and its properties; stoichiometry and reactions in aqueous solution; chemical reactions and energy relationships; atomic structure and periodic trends; and theories of chemical bonding and molecular structures. The laboratory experiments complement the topics covered in lecture and enable students to acquire basic chemistry laboratory skills.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete one unit of secondary school chemistry

CHEM106 - General Chemistry II

General

Subject Code ~
CHEM

Course Number ~
106

Course Name (appears on the transcript) ~
General Chemistry II

Content

Description
An extension of CHEM 105, this course illustrates and amplifies the principles developed previously. Detailed topics include but are not limited to: properties of solutions and liquids, chemical equilibria, reaction kinetics, acid-base chemistry, chemical thermodynamics, and electrochemistry. The laboratory experiments complement the topics covered in lecture and enable students to acquire more advanced laboratory skills including the use of instrumentation to monitor reactions and the characterization of compounds.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 105 with minimum grade of C-

CHEM190 - Special Topics in Chemistry

General

Subject Code ~
CHEM

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Chemistry

Content

Description
Topics in chemistry that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CHEM209 - Organic Chemistry I

General

Subject Code ~
CHEM

Course Number ~
209

Course Name (appears on the transcript) ~
Organic Chemistry I

Content

Description
This is an introduction to the basic principles of organic chemistry. Emphasis is on functional group recognition and how the structures are related to the substances' physical and chemical properties. The alkene, alkyne, and alkyl halide structural classes are studied, in detail, including their nomenclature, stereochemistry, and reactions. A mechanistic approach to studying organic chemical reactions is emphasized.

An introduction to key spectroscopic methods (IR and NMR) used to characterize organic compounds is included.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 106 or HON 106 with minimum grade of C-

Corequisite- CHEM 219

CHEM210 - Organic Chemistry II

General

Subject Code ~
CHEM

Course Number ~
210

Course Name (appears on the transcript) ~
Organic Chemistry II

Content

Description
This is a continuation of CHEM 209. The more complex structural classes are studied including but not limited to: the alcohols and ethers, aromatic compounds, carboxylic acids and derivatives, and the aldehydes and ketones. More complex reactions and their mechanisms are investigated. Synthesis design and spectroscopic methods used to determine chemical structure are emphasized.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 209 and CHEM 219
Corequisite- CHEM 220

CHEM211 - Analytical Methods

General

Subject Code ~
CHEM

Course Number ~
211

Course Name (appears on the transcript) ~
Analytical Methods

Content

Description
This is a study of the theory and methodology of classical and modern analytical chemistry. Topics include statistical treatment of data, errors, precipitation processes, the equilibria associated with gravimetric procedures, acid-base and redox titrations, and related items.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CHEM 106 or HON 106

Complete CHEM 221 or take concurrently

CHEM219 - Organic Chemistry Laboratory I

General

Subject Code ~
CHEM

Course Number ~
219

Course Name (appears on the transcript) ~
Organic Chemistry Lab I

Content

Description
Laboratory for CHEM 209. The laboratory exercises are designed to increase students' skills in planning, conducting, and interpreting the results of experimental work. Students are introduced to the basics of synthetic organic chemistry techniques, including the characterization of organic compounds by chemical and instrumental methods.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 209 or concurrently

CHEM220 - Organic Chemistry Laboratory II

General

Subject Code ~
CHEM

Course Number ~
220

Course Name (appears on the transcript) ~
Organic Chemistry Lab II

Content

Description
Building upon skills acquired via CHEM 219, the emphasis of the laboratory experiments is on synthesis and subsequent characterization and identification of organic compounds by both chemical and instrumental methods. This course is a continuation of CHEM 219. Four-hour lab. Distribution: MR. This course is a prerequisite. Offered: spring semester.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 210 or concurrently

CHEM221 - Analytical Methods Laboratory

General

Subject Code ~
CHEM

Course Number ~
221

Course Name (appears on the transcript) ~
Analytical Methods Lab

Content

Description
Laboratory for CHEM 211. The objective of the laboratory is the development of precise experimental techniques and organizational skills. Classical gravimetric and volumetric methods are applied in order to determine the percent composition of several samples of minerals, ores, or alloys, and to characterize qualitative aspects of selected systems.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete CHEM 211 or concurrently

CHEM240 - Research Projects in Chemistry

General

Subject Code ~
CHEM

Course Number ~
240

Course Name (appears on the transcript) ~
Research Proj Chemistry

Content

Description
This course provides students with the opportunity to learn more advanced laboratory techniques and become familiar with special chemical handling. Safe general laboratory practice and accurate record keeping (laboratory notebook) are emphasized.

The project may be a more detailed investigation of a course topic or one that is independent of specific course content. The research topic may be proposed by either the instructor or the student; but, ultimately, the specific topic must be clearly defined and agreed upon by both.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 106, Sophomore Standing, a minimum GPA of 3.00, and permission of the instructor

CHEM241 - Research Projects in Chemistry

General

Subject Code ~
CHEM

Course Number ~
241

Course Name (appears on the transcript) ~
Research Proj Chemistry

Content

Description
This course provides students with the opportunity to learn more advanced laboratory techniques and become familiar with special chemical handling. Safe general laboratory practice and accurate record keeping (laboratory notebook) are emphasized.

The research project conducted may be a continuation of a previous project, a new, more detailed investigation of a course topic, or one that is independent of specific course content. The research topic may be proposed by either the instructor or the student; but, ultimately, the specific topic must be clearly defined and agreed upon by both.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 106, Sophomore Standing, a minimum GPA of 3.00, and permission of the instructor

CHEM290 - Special Topics in Chemistry

General

Subject Code ~
CHEM

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Chemistry

Content

Description
Topics in chemistry that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Sophomore Standing

CHEM312 - Instrumental Analysis

General

Subject Code ~
CHEM

Course Number ~
312

Course Name (appears on the transcript) ~
Instrumental Analysis

Content

Description
Building upon the concepts of classical quantitative analysis, this course includes the modern instrumental methods currently used for qualitative and quantitative analysis. For each major instrumental method, the fundamental interaction of energy with material samples is developed, followed by detailed examination of instrument design, operation, and application. Offered in alternate years.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 210 or concurrently, CHEM 211, CHEM 220 or concurrently, CHEM 221, CHEM 322, or concurrently; or permission of the instructor

CHEM314 - Biochemistry

General

Subject Code ~
CHEM

Course Number ~
314

Course Name (appears on the transcript) ~
Biochemistry

Content

Description
This course offers an exploration of the chemistry of biological macromolecules and complexes emphasizing the structure, organization, and function of proteins, nucleic acids, lipids, and polysaccharides. Topics also include: enzyme kinetics, major metabolic pathways, and bioenergetics. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 210 and CHEM 220
Corequisite- CHEM 324

CHEM317 - Physical Chemistry I

General

Subject Code ~
CHEM

Course Number ~
317

Course Name (appears on the transcript) ~
Physical Chemistry I

Content

Description
This course focuses on quantum theory with the overall objective being to teach the fundamentals of quantum mechanics and demonstrate their intrinsic relationship to spectroscopy and nanoscience. The topics examined range from how quantization arises from the Schrodinger equation to the discussion of specific systems including: the particle in the box, the harmonic oscillator, the rigid rotor, the hydrogen atom, multi-electron atoms, and molecules; and how quantization of energy is manifest in real-world applications.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 211; CHEM 221; MATH 124 or MATH 134; MATH 235 or FS 240; PHYS 124 or PHYS 134, and Senior Standing
Corequisite- CHEM 327

CHEM318 - Physical Chemistry II

General

Subject Code ~
CHEM

Course Number ~
318

Course Name (appears on the transcript) ~
Physical Chemistry II

Content

Description
This is a continuation of CHEM 317. This course focuses on exploring fundamental thermodynamic concepts including: the properties of gases; partition functions; the first, second, and third laws of thermodynamics; Helmholtz and Gibbs energies; phase equilibria; and chemical kinetics. The comprehensive coverage of these topics includes an exploration of their real world applications.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
CHEM 317; CHEM 327
Corequisite CHEM 328 or Instructor Permission

CHEM322 - Instrumental Analysis Laboratory

General

Subject Code ~
CHEM

Course Number ~
322

Course Name (appears on the transcript) ~
Instrumental Analysis Lab

Content

Description
Laboratory for CHEM 312. The instrumental methods used in this laboratory typically include: ultraviolet, visible, infrared, and atomic absorption spectroscopy; fluorescence spectroscopy; nuclear magnetic resonance spectrometry; gas and liquid chromatography; and mass spectrometry.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 312 or concurrently

CHEM324 - Biochemistry Laboratory

General

Subject Code ~
CHEM

Course Number ~
324

Course Name (appears on the transcript) ~
Biochemistry Laboratory

Content

Description
Laboratory exercises introduce students to modern techniques and methods that are required for the separation, purification, and characterization of biological macromolecules. Taken with CHEM 314. This course satisfies one of the Writing Intensive Course requirements for Arts & Science students.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Corequisite CHEM 314

CHEM327 - Physical Chemistry Laboratory I

General

Subject Code ~
CHEM

Course Number ~
327

Course Name (appears on the transcript) ~
Physical Chemistry Lab I

Content

Description
Laboratory for CHEM 317. This course focuses on techniques and calculations that enable students to explore the chemical properties of matter at the molecular level. The quantum mechanical calculations and experiments parallel the content covered in CHEM 317.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 317 or take concurrently

CHEM328 - Physical Chemistry Laboratory II

General

Subject Code ~
CHEM

Course Number ~
328

Course Name (appears on the transcript) ~
Physical Chemistry Lab II

Content

Description
Laboratory for CHEM 318. This course expands upon concepts, calculations, and techniques learned in CHEM 317/CHEM 327 enabling students to explore both the chemical and physical properties of matter. The experiments complement the content covered in CHEM 318.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 318 or take concurrently

CHEM333 - Indep Study in Chemistry

General

Subject Code ~
CHEM

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Chemistry

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CHEM334 - Indep Study in Chemistry

General

Subject Code ~
CHEM

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Chemistry

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CHEM340 - Research Projects in Chemistry

General

Subject Code ~
CHEM

Course Number ~
340

Course Name (appears on the transcript) ~
Research Projs Chemistry

Content

Description
This course serves to build upon the student's laboratory skills and techniques, and is designed to help the student develop into a more knowledgeable and independent researcher. The student will learn to work more independently than in CHEM 240/CHEM 241 and will be expected to perform relevant chemical literature research, as required by the project. The research project conducted may either be a continuation of a previous project or involve chemical research that is focused on a completely different topic.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 210 and CHEM 220 or CHEM 211 and CHEM 221, Junior Standing, a minimum GPA of 3.00, and permission of the instructor

CHEM341 - Research Projects in Chemistry

General

Subject Code ~
CHEM

Course Number ~
341

Course Name (appears on the transcript) ~
Research Projs Chemistry

Content

Description
This course serves to build upon the student's laboratory skills and techniques, and is designed to help the students develop into a more knowledgeable and independent researcher. Students will learn to work more independently than in CHEM 240/CHEM 241 and will be expected to perform relevant chemical literature research, as required by the project. The research project conducted may either be a continuation of a previous project or involve chemical research that is focused on a completely different topic.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 210 and CHEM 220 or CHEM 211 and CHEM 221, junior Standing, a minimum GPA of 3.00, and permission of the instructor

CHEM390 - Special Topics in Chemistry

General

Subject Code ~
CHEM

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Chemistry

Content

Description
Topics in chemistry that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
60 credits;

CHEM402 - Toxicology

General

Subject Code ~
CHEM

Course Number ~
402

Course Name (appears on the transcript) ~
Toxicology

Content

Description
This course investigates the effects of xenobiotics on living systems. Integrating principles taken from chemistry, biology, pharmacology, and biochemistry, dose-response relationships between chemical exposures and disease states are identified. Basic processes central to understanding toxicological events including ADME (absorption, distribution, metabolism and excretion) are covered in detail. Selected toxicants, drugs, and poisons are studied and include representatives of various structural classes that induce pulmonary, hepatic, renal, cardiac, hematologic, and neurologic toxicity.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 314 and CHEM 324

CHEM421 - Inorganic Chemistry

General

Subject Code ~
CHEM

Course Number ~
421

Course Name (appears on the transcript) ~
Inorganic Chemistry

Content

Description
This is a theoretical course discussing the wave mechanical concept of electronic structure and modern bonding theories including molecular orbitals. Additional topics include periodic properties, covalent and ionic compounds, advanced acid-base and solvent interactions, and the structure, properties, and reactions of coordination compounds. Offered in alternate years.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CHEM 210, CHEM 220, CHEM 317, CHEM 327
Corequisite - CHEM 431

CHEM431 - Inorganic Chemistry Lab

General

Subject Code ~
CHEM

Course Number ~
431

Course Name (appears on the transcript) ~
Inorganic Chemistry Lab

Content

Description
Laboratory for CHEM 421. This course consists of the laboratory preparation and characterization of inorganic, coordination, and organometallic compounds. Techniques such as infrared spectroscopy and magnetic susceptibility are used to characterize compounds. The writing of scientific laboratory reports is emphasized. Four-hour laboratory. Offered in alternate years.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Corequisite CHEM 421

CHEM440 - Undergraduate Research

General

Subject Code ~
CHEM

Course Number ~
440

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CHEM441 - Undergraduate Research

General

Subject Code ~
CHEM

Course Number ~
441

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 440 and Senior Standing

CHEM470 - Seminar in Chemistry

General

Subject Code ~
CHEM

Course Number ~
470

Course Name (appears on the transcript) ~
Seminar in Chemistry

Content

Description
This seminar is intended as a capstone experience for chemistry majors helping to prepare students for graduate studies and/or entrance into the professional workplace. Students will actively explore the current primary chemistry literature; investigate, discuss, and critique current research topics; prepare oral and poster presentations based upon their literature research; and prepare written briefs and seminar evaluations.

Credit Hours

Min
1

Requisites

Free Form Requirements
CHEM 421 or concurrently or permission of instructor

CHEM480 - Internship in Chemistry

General

Subject Code ~
CHEM

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Chemistry

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CHEM481 - Internship in Chemistry

General

Subject Code ~
CHEM

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Chemistry

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CHEM490 - Special Topics in Chemistry

General

Subject Code ~
CHEM

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Chemistry

Content

Description
This seminar is intended as a capstone experience for chemistry and forensic chemistry majors helping to prepare students for graduate studies and/or entrance into the professional workplace. Students will actively explore the current primary chemistry literature; investigate, discuss, and critique current research topics; prepare oral and poster presentations based upon their literature research; and prepare written briefs and seminar evaluations.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CHEM 312, CHEM 314 & CHEM 317 or concurrently, or permission of instructor
CHEM or FC Major; Senior Standing

CJ101 - Intro to Criminal Justice

General

Subject Code ~
CJ

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Criminal Justice

Content

Description
This course is an overview of the U.S. criminal justice system and the interaction of its components: the police, prosecution, the court systems, the correctional systems, parole, and probation. Career opportunities in criminal justice are explored.

Credit Hours

Min
3

CJ110 - Serial Killers & Their Victims

General

Subject Code ~
CJ

Course Number ~
110

Course Name (appears on the transcript) ~
Serial Killers & Their Victims

Content

Description
This course explores the topic of serial murder, including motivations, methods, and types of killers; serial killer victims; victim-offender relationships; and criminal justice response. Topics include gender, race, myths, and the media. Course incorporates academic and popular literature as well as film and official statistics.

Credit Hours

Min
3

CJ190 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ191 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ210 - Criminology

General

Subject Code ~
CJ

Course Number ~
210

Course Name (appears on the transcript) ~
Criminology

Content

Description
This is an examination of the various categories of offenses and offenders including casual and habitual individual offenders, organized criminal enterprises, and white-collar criminals. Current theories and research, with an emphasis on understanding the causative factors and sociological implications of criminal and delinquent behavior, are included. Satisfies a Writing Intensive course (WIC) requirement.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CJ211 - Corrections

General

Subject Code ~
CJ

Course Number ~
211

Course Name (appears on the transcript) ~
Corrections

Content

Description
This course is an empirical analysis of the main considerations of correctional behavior and practice. Topics include the prison community, problems of treatment from the viewpoints of the offender and the treatment staff, and prevention and treatment in the community at large.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101

CJ214 - Drugs, Society & Criminal Justice Sys

General

Subject Code ~
CJ

Course Number ~
214

Course Name (appears on the transcript) ~
Drugs, Society & CJ System

Content

Description
This is a study of the legal and social background of the pressing problem of drugs and alcohol and their use and abuse in American society.

Credit Hours

Min
3

CJ215 - Race & the Criminal Justice System

General

Subject Code ~
CJ

Course Number ~
215

Course Name (appears on the transcript) ~
Race & the Criminal Justice Sy

Content

Description
This course explores race, crime, and the criminal justice system. It starts with the historical picture of race and crime before surveying the contemporary landscape of race, crime, and the administration of justice. It also examines how race plays a role in policing, courts, sentencing, the death penalty, corrections, and juvenile justice. Special attention is paid to the role that race plays in the social construction of crime in the American context, while international similarities will also be highlighted.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101

CJ218 - Intro to Police & Society

General

Subject Code ~
CJ

Course Number ~
218

Course Name (appears on the transcript) ~
Intro to Police & Society

Content

Description
This is a study of the history of policing, particularly in the United States, to include the police role, recruiting, and police organization. This course investigates the various police missions, crime, community relations, and police accountability, and the ever increasing demands on law enforcement being made by the American public of today. Offered: spring semesters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101

CJ234 - The Judicial Process

General

Subject Code ~
CJ

Course Number ~
234

Course Name (appears on the transcript) ~
The Judicial Process

Content

Description
This is a study of the nature of law and the courts; the State and Federal Court systems of the United States, as well as the U.S. Supreme Court and its jurisdiction, operation, and workload. The concept of judicial review is analyzed, and the courts of England, Wales, and Germany are examined for comparative purposes.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 211 or CJ 218

CJ290 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CJ 101, SO 101, SW 101, or PSY 101

CJ291 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ292 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ293 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ302 - Women & the Criminal Justice Sys

General

Subject Code ~
CJ

Course Number ~
302

Course Name (appears on the transcript) ~
Women & the CJ System

Content

Description
This course will scrutinize the various roles that women experience with the criminal justice system. Confronting the misconception that female criminal behavior is a less serious problem than male criminal behavior; students will study phenomena of female offenders with an emphasis on examining gender specific programs to address the issue. At great cost to the individual and to society, violence against women has reached epidemic proportions and will be examined specifically. Employment availability and relative success will be contrasted with workplace issues specific to women; the working woman employed by the criminal justice system in law enforcement, the courts, and corrections will be considered. Students will learn that today's role of women and crime is poorly defined and rarely definitive.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101

CJ303 - Victimology

General

Subject Code ~
CJ

Course Number ~
303

Course Name (appears on the transcript) ~
Victimology

Content

Description
Victimology is the scientific study of victims of crime. This course will examine the characteristics of various victims of crime, victim-offender relationships, the interactions between victims and the criminal justice system, as well as the physical, emotional, and financial harm individuals suffer at the hands of offenders. In exploring these dynamics and connections, this course will address the theory, history, research, legislation, and policy implications related to victimization.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CJ304 - Child Abuse and Neglect

General

Subject Code ~
CJ

Course Number ~
304

Course Name (appears on the transcript) ~
Child Abuse and Neglect

Content

Description
This is a critical look at the policy, the theory, and the practice of state intervention into families on behalf of children. The study involves a review of the legal theory underlying child protective services, an explanation of the relevant federal and state laws, an investigation of the various types of state involvement with families, an exploration of the role of social workers and departments of social services, and a practical look into how the legal system deals with families and children. Foster care and child treatment by the system will be explored.

Credit Hours

Min
3

CJ310 - Criminal Law

General

Subject Code ~
CJ

Course Number ~
310

Course Name (appears on the transcript) ~
Criminal Law

Content

Description
This is a study of the major felonies (murder, rape, robbery, assault, larceny, burglary, and arson), their definitions, and methods of proof.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 234

CJ311 - Criminal Investigation

General

Subject Code ~
CJ

Course Number ~
311

Course Name (appears on the transcript) ~
Criminal Investigation

Content

Description
This is an introduction to the process of criminal investigation. Emphasis is on investigative techniques including interrogation of suspects and witnesses; use of informants; surveillance and undercover assignments; photographing, collecting, and processing physical evidence; obtaining information; and identifying and locating suspects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 218

CJ312 - Criminal Procedure

General

Subject Code ~
CJ

Course Number ~
312

Course Name (appears on the transcript) ~
Criminal Procedure

Content

Description
This course studies the constitutional restrictions upon each aspect of a felony prosecution: arrest, investigation, booking, initial appearance, preliminary hearing, trial and sentencing. Major areas of interest are due process, arrest, search and seizure, right to counsel, and sentencing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 218

CJ313 - Criminal Justice Interview/Interrog

General

Subject Code ~
CJ

Course Number ~
313

Course Name (appears on the transcript) ~
Crim Just Interv/Interrog

Content

Description
This course focuses on the art of inquiry and persuasion. The aim of the course is to complement standard techniques of communication while offering options for eliciting information. Interviewing procedures for obtaining statements from children and difficult adult populations are explored. Emphasis is on investigative methodologies consistent with federal and state constitutional principles.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 218

CJ315 - Research Methods in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
315

Course Name (appears on the transcript) ~
Research Methods in Crim Just

Content

Description
This course teaches students how to conduct research in the criminal justice field. We will cover research design, sampling, survey construction, and other common methodologies used in criminal justice research. All assignments will utilize examples drawn from contemporary criminological research, encouraging students to develop the ability to evaluate the strengths and weaknesses of various methodologies as they apply to criminal justice research. Students will also learn research skills by participating in the development of an original research study. Although students will not learn statistics in this course, we will learn how to interpret descriptive and inferential statistical results from commonly used statistical procedures. Satisfies Writing Intensive Course (WIC) requirement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 210

CJ320 - Probation & Parole

General

Subject Code ~
CJ

Course Number ~
320

Course Name (appears on the transcript) ~
Probation & Parole

Content

Description
This course is an analysis of both past and present-day systems for probation and parole, an examination of state local referral systems of probation and parole, and an introduction to current innovation within the field. Topics include probation and parole in the United States, intensive supervision programs, the role of the probation and parole officer, and substance abuse treatment methods.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 211

CJ322 - Evidence

General

Subject Code ~
CJ

Course Number ~
322

Course Name (appears on the transcript) ~
Evidence

Content

Description
The purpose of this course is to provide students with a general overview of the rules of evidence as practiced in the various courts of the United States. These rules are drawn from the rules of evidence as they existed at common law and were modified by various U.S. Federal Courts. The course is designed to give students some background into the origin, usually dictated by a need, of certain rules of evidence at common law, and to view these rules as modified by contemporary courts. It has become increasingly important for all individuals working in the field of criminal justice to have some familiarity with evidentiary rules so that significant evidence may be perceived and preserved, and that criminal investigation may avoid the pitfall of obtaining evidence of little or no value in the courtroom.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101

CJ333 - Indep Study Criminal Justice

General

Subject Code ~
CJ

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study Criminal Justice

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CJ334 - Indep Study Criminal Justice

General

Subject Code ~
CJ

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Criminal Justice

Content

Description
See "Independent Study " in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CJ335 - Writing for the CJ Professional

General

Subject Code ~
CJ

Course Number ~
335

Course Name (appears on the transcript) ~
Writing for CJ Professional

Content

Description
This course focuses on the writing essential to those who work in the criminal justice system. Writing is an important tool in communication and written material is used in a variety of areas in the criminal justice system including police reports, presentencing investigation reports, motions, affidavits, statements, incident reports, and memos.

Students entering the criminal justice field should be knowledgeable on report/narrative writing and persuasive writing. This course will focus on students' ability to observe activity and write about it accurately.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CJ 210

CJ340 - Ethical Decision Making

General

Subject Code ~
CJ

Course Number ~
340

Course Name (appears on the transcript) ~
Ethical Decision Making

Content

Description
This course examines the major philosophical points of ethical theories and the decision process. Classical and modern viewpoints are studied in an attempt to gain a better understanding of the major social issues in today's world. Cultural implications are addressed and students gain a better understanding of their values and their personal philosophy.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 211 and CJ 218

CJ341 - Constitutional Issues in Criminal Just

General

Subject Code ~
CJ

Course Number ~
341

Course Name (appears on the transcript) ~
Constitutional Issues CJ

Content

Description
This course explores the constitutional issues as they relate to the police and corrections. Major areas of interest are due process and state and federal liability law as these concepts relate to the law enforcement.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CJ 218 and CJ 234

CJ342 - Juvenile Delinquency

General

Subject Code ~
CJ

Course Number ~
342

Course Name (appears on the transcript) ~
Juvenile Delinquency

Content

Description
This course focuses on the history, causes, behavior, laws, and treatment of juveniles. It includes the criminal justice system, the process within the system, court decisions, and alternatives to incarceration. Where possible, on-site locations are visited. An in-depth perspective of juvenile gangs, drugs, and crime is included.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CJ343 - Domestic Violence

General

Subject Code ~
CJ

Course Number ~
343

Course Name (appears on the transcript) ~
Domestic Violence

Content

Description
Domestic violence between adults is studied from an interdisciplinary perspective. The cycle of violence, dominance, and control are among the issues covered sociologically and psychologically. The legal perspective includes discussion of proactive arrest policies, restraining orders, and anti-stalking legislation that have emerged across the United States.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CJ348 - Intro to Cyber Crimes

General

Subject Code ~
CJ

Course Number ~
348

Course Name (appears on the transcript) ~
Intro to Cyber Crimes

Content

Description
This course examines crime which targets computers, crimes committed by use of computers, and forms of evidence stored on computers. Forms and impact of cyber crime are studied within the context of societal harm and criminal justice response. Designed to familiarize students with the available and emerging State and Federal Law, the class will investigate legal limitations in the investigation and prosecution of cyber crime.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CJ349 - Multicultural Policing

General

Subject Code ~
CJ

Course Number ~
349

Course Name (appears on the transcript) ~
Multicultural Policing

Content

Description
This course is designed to familiarize the student with the theoretical and practical application of peace keeping in a multicultural setting. Students will explore the issues of diversity, cultural understanding, and communication facing the law enforcement community in a multicultural environment. Particular attention will be given to the concept of cross-cultural law enforcement for diverse communities.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CJ 218

CJ353 - Violence Against Women

General

Subject Code ~
CJ

Course Number ~
353

Course Name (appears on the transcript) ~
Violence Against Women

Content

Description
This course focuses on violence against women and girls. As such, this course will cover the history of VAW as a social problem, its dynamics, prevalence, outcomes, research issues, how the media construes VAW, and contemporary VAW policy. Specific topics covered will include VAW that occurs in relationships (e.g., femicide, sexual violence, and psychological abuse), in the family (e.g., honor violence, female genital mutilation, violence committed against mothers and grandmothers, and familial rape and abuse), in public spaces (e.g., sexual violence and harassment in the workplace, in streets, and public places), and in institutions (e.g., institutional abuse in residential care facilities and VAW in higher education).

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CJ360 - Intro to Homeland Security & Terrorism

General

Subject Code ~
CJ

Course Number ~
360

Course Name (appears on the transcript) ~
Intr Homeland Security/Terror

Content

Description
This course is an introduction to the study of terrorism, and to the study of the United States response to defending the homeland. It examines the criminology and the controversy of terrorism. Students review definitions and motivations for terrorism: religious, ideological, nationalistic, and ethnic terrorism; domestic and international terrorist movements; cyber, nuclear, biological, and chemical terrorism; terrorist financing; terrorism and the media; and the bureaucracy of homeland security.

Credit Hours

Min
3

CJ362 - Counter-Terrorism

General

Subject Code ~
CJ

Course Number ~
362

Course Name (appears on the transcript) ~
Counter-Terrorism

Content

Description
This course looks at the various practices, trends, and trade-crafts of local, state, and federal agencies used against actual or perceived threats of terrorist activities. Specifically, students examine surveillance strategies, military and law enforcement responsibilities, and seizure and interrogation tactics in carrying out a war on terrorism.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CJ 360

CJ363 - Weapons of Mass Destruction

General

Subject Code ~
CJ

Course Number ~
363

Course Name (appears on the transcript) ~
Weapons of Mass Destruction

Content

Description
This course introduces and explains how the use of weapons of mass destruction by terrorists and rogue states could give them attack advantages over military, local, and federal law enforcement agencies. Today's danger of weapons of mass destruction comes mostly from the possible use of nuclear, biological, or chemical (NBC) weapons. In this course, students examine "how to respond to" and "how to deal with" NBC attacks. The course distinguishes facts from falsehoods about NBC weaponry.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CJ 360 or Junior Standing

CJ365 - LGBTQ+ Issues in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
365

Course Name (appears on the transcript) ~
LGBTQ+ Issues in Crim Justice

Content

Description
This seminar will provide an overview of the experiences of LGBTQ+ (Lesbian, Gay, Bisexual, Transgender, Queer, and other) persons with the American criminal justice system. The seminar will provide a brief overview of the relationship between society and LGBTQ+ history including, but not limited to, laws regarding sexual behavior and gender expression. Intersectionality will also be discussed including sexual/gender identity, race, socioeconomic, and disability statuses. Legislation against LGBTQ+ persons throughout time will be presented, as will specific concerns regarding law enforcement, the courts, and the correctional system. Victimization and hate crimes, as well as possible future directions for society will also be discussed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101 or SO 101

CJ375 - Emergency Response Management

General

Subject Code ~
CJ

Course Number ~
375

Course Name (appears on the transcript) ~
Emergency Response Management

Content

Description
Though some natural and humanmade disasters can be predicted, many cannot be anticipated. This course examines the personal and professional responses through the lenses of emergency response teams (e.g. law enforcement, medical and fire personnel) as well as through social institutions, including government agencies, education, and families in the face of widespread catastrophe. Formal protocal, along with case studies of disasters, are explored.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

CJ390 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Prequisites may vary depending on topic

CJ391 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CJ 101 and CJ 260;

CJ392 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ393 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ394 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ395 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CJ396 - Sem of Current Issues Criminal Justice

General

Subject Code ~
CJ

Course Number ~
396

Course Name (appears on the transcript) ~
Sem of Current Issues in CJ

Content

Description
This seminar looks at current developments, issues, and/or debates facing the criminal justice system and its various subsystems including courts, corrections, and/or policing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CJ 101 or POSC 102

CJ399 - Special Topics in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
399

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

CJ405 - Organized Crime

General

Subject Code ~
CJ

Course Number ~
405

Course Name (appears on the transcript) ~
Organized Crime

Content

Description
This course will provide an overview of organized crime in the United States, its history, and modern influences. The student will explore traditional organized crime (the mafia), as well as other forms of organized crime (ethnic groups, biker gangs, etc.)

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CJ425 - Problem Analysis in Victim Studies

General

Subject Code ~
CJ

Course Number ~
425

Course Name (appears on the transcript) ~
Problem Analysis Victim Study

Content

Description
This course examines a wide range of contemporary issues facing crime victims, including victims' rights, advocacy, and interaction with the criminal justice process using victimology research. Students will be exposed to the most current understanding of the efficacy of various policies and programs addressing victims and victimization. Coursework will be aimed at encouraging students to think critically, not only about the problems facing victim studies, but potential pathways forward.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CJ 303

CJ430 - Human Trafficking

General

Subject Code ~
CJ

Course Number ~
430

Course Name (appears on the transcript) ~
Human Trafficking

Content

Description
This course focuses on the social awareness of human trafficking in all forms. We will examine how human trafficking is defined, its prevalence, and the places in which it occurs. We will also examine who is trafficked, the indicators of human trafficking, and the consequences of human trafficking. Finally, we will discuss various interventions and disruptions used to combat human trafficking.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CJ440 - Immigration and Crime

General

Subject Code ~
CJ

Course Number ~
440

Course Name (appears on the transcript) ~
Immigration and Crime

Content

Description
This course will be an introduction to the topic of immigration and crime. It will explore the prevailing myths and realities vis-a-vis the immigration-crime nexus in the contemporary American context. The politics of immigration and crime and its impact on criminal justice policy will also be explored. Finally, pressing global issues regarding immigration and crime will be introduced.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CJ445 - Mental Health & Criminal Justice System

General

Subject Code ~
CJ

Course Number ~
445

Course Name (appears on the transcript) ~
Mental Health & Crim Just Syst

Content

Description
This course will explore contemporary issues surrounding criminal justice response to persons having mental, cognitive, and psychiatric disabilities. It will also explore the varied causes of criminal behavior among those who have mental health challenges.

This course is equivalent to SO 206.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CJ 101 and Sophomore Standing

CJ450 - Senior Seminar

General

Subject Code ~
CJ

Course Number ~
450

Course Name (appears on the transcript) ~
Senior Seminar

Content

Description
This course includes a basic review of general principles of criminal justice. Each student will be required to do extensive independent research and produce a research paper.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CJ 315

CJ major and senior Standing

CJ480 - Internship in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Criminal Justice

Content

Description
See "Internships" in the Catalog

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CJ481 - Internship in Criminal Justice

General

Subject Code ~
CJ

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Criminal Justice

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CJ490 - Special Topics in CJ

General

Subject Code ~
CJ

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

CJ491 - Special Topics in CJ

General

Subject Code ~
CJ

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in CJ

Content

Description
Topics in criminal justice that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

CL190 - Special Topics in Colloquia

General

Subject Code ~
CL

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Colloquia

Content

Description
For students interested in discussing the topics relevant to the November elections with other students and faculty, this one-credit course will help become more informed as well as better able to articulate thoughts on the topics that are relevant to the elections. Faculty members and guest speakers will present and facilitate discussions based on the different issues that arise during the elections. Students will have an opportunity to learn factual information, analyses of current topics as well as express viewpoints on controversial issues that impact students and their future.

Credit Hours

Min
1

CMGT200 - Construction CAD

General

Subject Code ~
CMGT

Course Number ~
200

Course Name (appears on the transcript) ~
Construction CAD

Content

Description
This course is designed to provide students with a fundamental understanding of construction graphics, AutoCAD, mechanical electrical and plumbing drawings, blueprints, and building designs.

Billing Hours

Min
3

Credit Hours

Min
3

CMGT201 - Construction Machinery

General

Subject Code ~
CMGT

Course Number ~
201

Course Name (appears on the transcript) ~
Construction Machinery

Content

Description
This course is designed to provide students with a fundamental understanding of earthwork machines, construction tools, cost of operation, machine selection, and scheduling.

Billing Hours

Min
3

Credit Hours

Min
3

CMGT202 - Fundamentals of Statics

General

Subject Code ~
CMGT

Course Number ~
202

Course Name (appears on the transcript) ~
Fundamentals of Statics

Content

Description
This course is designed to provide students with a fundamental understanding of particle and rigid body equilibrium, force vectors, force systems, internal forces, simple structural analysis, friction, moment of inertia, and virtual work.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 123, MATH 127, or MATH 133

CMGT300 - Soil Behavior and Site Development

General

Subject Code ~
CMGT

Course Number ~
300

Course Name (appears on the transcript) ~
Soil Behavior and Site Develop

Content

Description
This course is designed to provide students with a fundamental understanding of soil behavior, soil type, compaction, basic foundations, and real estate development.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CEE 251

CMGT301 - Analysis of Concrete, Steel, & Wood Stru

General

Subject Code ~
CMGT

Course Number ~
301

Course Name (appears on the transcript) ~
Analysis of Concrete, Steel

Content

Description
This course is designed to provide students with a fundamental understanding of structures, loading analysis, materials selection, methods of construction, building codes, and computer applications.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CMGT 202 or ME 202

CMGT302 - Passive and Active Bldg Systems

General

Subject Code ~
CMGT

Course Number ~
302

Course Name (appears on the transcript) ~
Passive & Active Bldg Systems

Content

Description
This course is designed to provide students with a fundamental understanding of alternative energy sources, energy and water demands, HVAC systems, fire protection and safety systems, design concepts, sustainability, life cycle analysis, green buildings, and ROI analysis.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

CMGT303 - Leadership and Human Resources Skills

General

Subject Code ~
CMGT

Course Number ~
303

Course Name (appears on the transcript) ~
Leadership and Human Resources

Content

Description
This course is designed to provide students with a fundamental understanding of lifelong learning, leadership skills, communication, employee development, employee assessments, and legal issues in HR.

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing

CMGT304 - Construction Health and Safety, Risk Mgt

General

Subject Code ~
CMGT

Course Number ~
304

Course Name (appears on the transcript) ~
Construction Health & Safety

Content

Description
This course is designed to provide students with a fundamental understanding of health and safety standards, hazard identification, accident prevention, risk analysis, OSHA, safety plan, and compliance.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

CMGT305 - Construction Project Bidding & Cost Mgmt

General

Subject Code ~
CMGT

Course Number ~
305

Course Name (appears on the transcript) ~
Construction Project Bidding

Content

Description
This course is designed to provide students with a fundamental understanding of material selection, material and labor costs, bidding strategies, planning and scheduling, overhead, cost management, and software applications.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete AC 202

CMGT310 - Construction Engineering Research

General

Subject Code ~
CMGT

Course Number ~
310

Course Name (appears on the transcript) ~
Construction Engineering Res

Content

Description
See Undergraduate Research

Billing Hours

Min
3

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior CMGT majors

CMGT390 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CMGT391 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CMGT392 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CMGT393 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CMGT394 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CMGT395 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

CMGT400 - Material Quality Control

General

Subject Code ~
CMGT

Course Number ~
400

Course Name (appears on the transcript) ~
Material Quality Control

Content

Description
This course is designed to provide students with a fundamental understanding of construction materials testing, ASTM procedures, concrete analysis, and materials inspection.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CMGT 202 or take concurrently

CMGT401 - Capstone Design

General

Subject Code ~
CMGT

Course Number ~
401

Course Name (appears on the transcript) ~
Capstone Design

Content

Description
This course is designed to provide students with a comprehensive design experience. Students will learn the entire process of executing a team-based senior design project, from construction pre-design through commission. Students are expected to present project outcomes in a public setting.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Senior Standing

CMGT402 - Material Quality Control Laboratory

General

Subject Code ~
CMGT

Course Number ~
402

Course Name (appears on the transcript) ~
Material Quality Control Labor

Content

Description
This course is designed to provide students with a fundamental understanding of concrete tests, soils tests, masonry tests, asphalt tests, and on-site material quality control.

Credit Hours

Min
1

Requisites

Free Form Requirements
Co-requisite CMGT 400

CMGT403 - Construction Law, Contract, & Regulation

General

Subject Code ~
CMGT

Course Number ~
403

Course Name (appears on the transcript) ~
Construction Law, Contract

Content

Description
This course is designed to provide students with a fundamental understanding of construction law, contractual relationships and obligations, insurance, and regulations.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

CMGT404 - Computer Applications in Construction

General

Subject Code ~
CMGT

Course Number ~
404

Course Name (appears on the transcript) ~
Computer Applications in Const

Content

Description
This course is designed to provide students with a fundamental understanding of Building Information Modeling, scheduling and management software, and other computer applications.

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CMGT 200

CMGT410 - Construction Engineering Research

General

Subject Code ~
CMGT

Course Number ~
410

Course Name (appears on the transcript) ~
Construction Engineering Res

Content

Description
See "Undergraduate Research" in the Catalog.

Billing Hours

Min
3

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior CMGT majors

CMGT439 - Senior Design Project I

General

Subject Code ~
CMGT

Course Number ~
439

Course Name (appears on the transcript) ~
Senior Design Project I

Content

Description
Each student develops a complete senior project plan in an construction setting, obtains approval by faculty and project advisor, and makes an oral presentation of the proposal to the faculty. Guest lecturers relating to patents, technical writing, ethics, engineering registration, and other professional concerns are included.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Graduating senior status

CMGT480 - Internship in Construction Mgmt

General

Subject Code ~
CMGT

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Construction Mg

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CMGT490 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CMGT491 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CMGT492 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
492

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CMGT493 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
493

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CMGT494 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
494

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CMGT495 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
495

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
Topics offered depend on student interests as well as particular interests of instructors. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

CMGT590 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT591 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT592 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
592

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT593 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
593

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT594 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
594

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT595 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
595

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT606 - Adv Green & Sustainable Civil Engr

General

Subject Code ~
CMGT

Course Number ~
606

Course Name (appears on the transcript) ~
Adv Green & Sustainable CEE

Content

Description
This course examines solar, wind, geothermal and hydro energy, biofuels; energy balance; sustainable construction and transportation materials; climate change; carbon footprint analysis; entrepreneurship.

Students may not receive credit for both this course and CEE 606.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT609 - Engineering Cost Analysis

General

Subject Code ~
CMGT

Course Number ~
609

Course Name (appears on the transcript) ~
Engineering Cost Analysis

Content

Description
This is a study of the economic aspects of engineering decisions. Topics include comparison of alternatives in engineering programs and economic factors in selecting and replacing machinery, equipment, and structure.

Students may not receive credit for this course and CEE 609, IE 609, or EMGT 609.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MS CMGT Standing

CMGT641 - Energy Management

General

Subject Code ~
CMGT

Course Number ~
641

Course Name (appears on the transcript) ~
Energy Management

Content

Description
This is an examination of energy cost and its impact on technical and management approaches to conservation programs. Topics include energy reduction in electrical and thermal systems; heating, ventilation, and air conditioning systems; and methods of initiating and managing an effective conservation program.

Students may not take CEE 641 and EMGT 640 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CMGT 609 or equivalent

CMGT670 - Construction Management

General

Subject Code ~
CMGT

Course Number ~
670

Course Name (appears on the transcript) ~
Construction Management

Content

Description
This course examines construction history, bid package, estimation, project reduction, contracts, legal matters, project planning, scheduling, financial and cost control, labor issues, equipment management and safety.

Students cannot receive credit for both this course and CEE 670.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and CMGT program

CMGT680 - Construction Engineering Project

General

Subject Code ~
CMGT

Course Number ~
680

Course Name (appears on the transcript) ~
Construction Engineering Proj

Content

Description
Students must select a project faculty adviser and obtain topic approval prior to registration for this course. This is an independent engineering project under the supervision of a project faculty advisor. The design process is emphasized. Progress reports and a final written report are required. An oral presentation and defense of the project is made before a faculty committee.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MS CMGT Standing

CMGT690 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CMGT691 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CMGT692 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CMGT693 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CMGT694 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
694

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CMGT695 - Special Topics Construction Engineering

General

Subject Code ~
CMGT

Course Number ~
695

Course Name (appears on the transcript) ~
Special Topics in Constr Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to construction engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CMGT698 - Thesis Research

General

Subject Code ~
CMGT

Course Number ~
698

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to construction management graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MS CMGT Standing

CMGT699 - Thesis Research

General

Subject Code ~
CMGT

Course Number ~
699

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to construction management graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate MS CMGT Standing

COMM100 - Principles of Communication

General

Subject Code ~
COMM

Course Number ~
100

Course Name (appears on the transcript) ~
Princ of Communication

Content

Description
This course provides an introduction to basic theories and practices of interpersonal, small group, and public communication. The course explores effective listening, dyadic dynamics, nonverbal communication, verbal communication, and similarities and differences between speaking and writing.

Credit Hours

Min
3

COMM102 - Intro to Public Speaking

General

Subject Code ~
COMM

Course Number ~
102

Course Name (appears on the transcript) ~
Intro to Public Speaking

Content

Description
This course is designed to develop students' skills in researching, composing, and presenting speeches in public, and in adapting principles of public speaking to different situations and contexts.

Credit Hours

Min
3

COMM190 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

COMM191 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

COMM192 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

COMM205 - Mass Communication

General

Subject Code ~
COMM

Course Number ~
205

Course Name (appears on the transcript) ~
Mass Communication

Content

Description
This course offers an introduction to the structure and function of mass communication, including print, film, and telecommunications. The course addresses the history, purpose, problems, and power of the mass media.

Credit Hours

Min
3

COMM206 - Intro to Communication Research

General

Subject Code ~
COMM

Course Number ~
206

Course Name (appears on the transcript) ~
Intro to Communication Resrch

Content

Description
This course introduces students to research methods in communication, addressing such issues as the reliability of information sources, measurement factors and techniques, qualitative vs. quantitative methodologies, experimental research, and ethical considerations.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete COMM 100 or COMM 233, or the equivalent

COMM233 - Business Writing and Communication

General

Subject Code ~
COMM

Course Number ~
233

Course Name (appears on the transcript) ~
Business Writing & Communicat

Content

Description
This course helps students become effective communicators by teaching various forms of communication, including verbal, nonverbal, cultural, written, oral, and online communication designed to prepare them to send messages in professional contexts. Students are expected to produce common forms of business writing and a presentation, with emphasis on grammatical accuracy, spelling, punctuation, and the technical aspects of business formats.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ENGL 132 and ENGL 133 w/grades of C- or better

COMM235 - British Press & Politics

General

Subject Code ~
COMM

Course Number ~
235

Course Name (appears on the transcript) ~
British Press & Politics

Content

Description
This course examines the interaction between British news media and the national government. Students of American media and politics may be surprised to learn that the constitutional guarantee of free press that Americans take for granted is not codified in a single document in Great Britain. Instead, the media-government relationship has evolved over time largely through practice, with print media today policing themselves through the Independent Press Standards Organisation and electronic media laboring under tighter government control. Students will examine the relationship between British media and government in comparison with their counterparts in the United States. The course consists of a mix of lecture notes, class discussions, case studies, and field trips. Students complete short homework assignments and quizzes while in London and submit a research papers after they return to the United States.

This course satisfies the Social/Behavioral Science perspective requirement. This course can also be taken at the 300-level with permission of instructor.

Credit Hours

Min
3

Session Cycle ~
SUO - Summer Only

COMM245 - Video Editing and Production

General

Subject Code ~
COMM

Course Number ~
245

Course Name (appears on the transcript) ~
Video Editing and Production

Content

Description
This course focuses on the technical and aesthetic aspects of digital audio and video editing, as well as studio lighting and sound design, studio production dynamics, and script development. Classes consist of instruction in using digital editing software, operating studio and field cameras, and understanding and using audio-visual conventions.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

COMM251 - Video Communication

General

Subject Code ~
COMM

Course Number ~
251

Course Name (appears on the transcript) ~
Video Communication

Content

Description
This course offers an introduction to writing and presenting TV news stories and commercials.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete COMM 241 or COMM 245, or take concurrently, & Sophomore Standing

COMM280 - Organizational Communication

General

Subject Code ~
COMM

Course Number ~
280

Course Name (appears on the transcript) ~
Organizational Communicat

Content

Description
This course is designed to explore the communication dynamics, effective communication processes, and misunderstandings that may occur at all levels of an organization. Students will study about the evolution of different theories about what constitutes an effective organizational structure; assess the roles, rights, and responsibilities of individuals in a variety of institutional positions; and consider the relationship among organizational norms, organizational structure, and interpersonal communication practices. Students will also explore how organizational cultures are created and altered in response to internal and external stimuli.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete COMM 100, or COMM 233, or the equivalent

COMM283 - Health Communications

General

Subject Code ~
COMM

Course Number ~
283

Course Name (appears on the transcript) ~
Health Communications

Content

Description
This course introduces students to theories of health communication and information about patient-provider communication, social support, and media influence on health-related behavior. Using both theories and case studies, students will gain a better understanding of the healthcare context in the U.S. and the role communication plays in that context.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

COMM285 - Intro to Public Relations

General

Subject Code ~
COMM

Course Number ~
285

Course Name (appears on the transcript) ~
Intro to Public Relations

Content

Description
Students in this course study several types of communication that are common in business and professional environments. Topics include professional presentations, techniques of interviewing, questionnaire construction, small group dynamics, symposium planning, and presentation.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 100, or COMM 233, or the equivalent

COMM290 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete COMM 100 or permission of instructor

COMM291 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete COMM 100 or permission of instructor

COMM293 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 100 or permission of instructor

COMM300 - Communication Theories

General

Subject Code ~
COMM

Course Number ~
300

Course Name (appears on the transcript) ~
Communication Theories

Content

Description
This course describes the purpose and significance of theories of intrapersonal, interpersonal, small group, public, intercultural, professional, and mass communication, highlighting the distinctions among different theoretical paradigms within these areas. It also enables students to apply communication theories to contemporary issues within the communication disciplines as well as everyday life.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 206

COMM315 - Rhetoric of Social Justice Movements

General

Subject Code ~
COMM

Course Number ~
315

Course Name (appears on the transcript) ~
Rhetoric of Social Justice Mov

Content

Description
This course examines the ways in which language is used and misused as a communication tool, as well as a variety of language-based communication issues, including the cultural, political, rhetorical, and/or professional implications of word choice. Students also consider the role of language in persuasion and in the cultivation and maintenance of social power.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete COMM 100, or COMM 233, or the equivalent, and Junior Standing

COMM320 - Small Group Communication

General

Subject Code ~
COMM

Course Number ~
320

Course Name (appears on the transcript) ~
Small Group Communicat

Content

Description
Students study several types of communication involving small groups that are common in business and professional environments. Students consider how leaders and followers emerge in small groups, what factors contribute to or detract from effective small group dynamics and what roles different individuals may play in small groups.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 100, COMM 201, or COMM 233, or the equivalent, and Junior Standing

COMM321 - Interpersonal Communication

General

Subject Code ~
COMM

Course Number ~
321

Course Name (appears on the transcript) ~
Interpersonal Communicat

Content

Description
This course explores all of the channels of nonverbal communication, analyzing individual, cultural, and contextual variables that affect it.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete COMM 100, COMM 201, or COMM 233, or the equivalent; and Junior Standing or permission of instructor

COMM324 - Media Industry, Government & Society

General

Subject Code ~
COMM

Course Number ~
324

Course Name (appears on the transcript) ~
Media Industry, Gov't & Soc

Content

Description
This course explores the relationship among media industries, government, and society in the United States. The course provides a brief history of media regulation and deregulation, examine the impact of new media (cable, satellites, the Internet) on old media (broadcast television and radio), consider how to define and to operate media in the public interest, and scrutinize the relationship among corporate interest, government interests, consumer interests, and citizen interests. Students will also examine the role of news media and entertainment media as well as news media as entertainment media and the effects of media mergers on media, the government, and U.S. culture.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete COMM 100 or COMM 233, and COMM 205

COMM326 - Race, Gender & Ethnicity in Media

General

Subject Code ~
COMM

Course Number ~
326

Course Name (appears on the transcript) ~
Race, Gender & Ethn Media

Content

Description
This course examines the media as cultural artifacts that provide the images and representations that help shape our identities, beliefs, and values. Special attention is paid to questions of race, gender, and ethnicity. Students investigate such forms of communication as advertising, popular music, popular fiction, television, film, and the internet. This course satisfies the Behavioral/Social Science requirement of the School of Arts and Sciences.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

No Requirements

COMM328 - Health Communication Campaigns

General

Subject Code ~
COMM

Course Number ~
328

Course Name (appears on the transcript) ~
Health Comm Campaigns

Content

Description
Event planning and management is designed to employ students? understanding of communication techniques, developing their skills in creating messages designed with a target audience in mind while enhancing their professional presentation and writing skills. In this course students will have creative freedom while learning how to plan an event, from idea to implementation. By the end of the course, students will know how to parse an audience, combine words and images to attract a target public, and understand theoretically and practically the fundamentals of event planning and management.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 283, or COMM 285

COMM333 - Indep Study in Communication

General

Subject Code ~
COMM

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Communication

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

COMM334 - Indep Study in Communication

General

Subject Code ~
COMM

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Communication

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

COMM340 - Business Communication

General

Subject Code ~
COMM

Course Number ~
340

Course Name (appears on the transcript) ~
Business Communication

Content

Description
This course explores the principles of effective professional writing. The course requires extensive practice in planning, organizing, writing, revising and editing, and analyzing memoranda, executive summaries, letters, reports, speeches, and other forms of writing commonly found in business and industry contexts. Students are expected to focus on grammatical accuracy and other technical elements of English writing, as well as using concise and precise prose. Oral presentations are also expected.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and 2 courses in ENGL writing w/grades of "C-" or better

COMM344 - Event Planning

General

Subject Code ~
COMM

Course Number ~
344

Course Name (appears on the transcript) ~
Event Planning

Content

Description
Event planning and management is designed to employ students' understanding of communication techniques, developing their skills in creating messages designed with a target audience in mind while enhancing their professional presentation and writing skills. In this course, students will have creative freedom while learning how to plan an event, from idea to implementation. By the end of the course, students will know how to parse an audience, combine words and images to attract a target public, and understand theoretically and practically the fundamentals of event planning and management.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 283 or COMM 285

COMM348 - Intercultural Communication

General

Subject Code ~
COMM

Course Number ~
348

Course Name (appears on the transcript) ~
Intercultural Comm

Content

Description
This course promotes the appreciation and understanding of other cultures by instructing students in the use of cross-cultural communication skills. Activities include discussion, guest lectures, simulations, case studies, role-playing, and presentations. This course satisfies the Behavioral/Social Science requirement of the School of Arts and Sciences. Offered: every semester.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 100 or COMM 233, or equivalent, and Junior Standing

COMM352 - Multimedia Communication

General

Subject Code ~
COMM

Course Number ~
352

Course Name (appears on the transcript) ~
Multimedia Communication

Content

Description
This course focuses on advanced TV news reporting with instruction and practice in reporting, writing, and producing in-depth broadcast news stories. Investigative techniques, interviewing, writing for broadcast news, photography, voice-overs, and on-the-air talent techniques for production are emphasized.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete COMM 251

COMM356 - Global Communication

General

Subject Code ~
COMM

Course Number ~
356

Course Name (appears on the transcript) ~
Global Communication

Content

Description
This course examines the development and current state of global communication networks and policies. It devotes special attention to evaluating international telecommunication infrastructures and regulatory policy frameworks, examining national sovereignty and cultural identity in relation to pressures toward cultural homogenization, discussing media imperialism and various forms of resistance to globalization, and assessing the development of competition strategies and market dynamics on communication policy and practice. Different theories of globalization will also be discussed.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete COMM 205

COMM360 - Sportswriting

General

Subject Code ~
COMM

Course Number ~
360

Course Name (appears on the transcript) ~
Sportswriting

Content

Description
This course will introduces students to the craft of sportswriting. Beginning with a discussion of how to approach writing in general, the course focuses principally on analyzing models of successful sports writing and developing students' skills in producing students' sportswriting. Students are expected to read copiously and critically and to write (and revise) several short assignments as well as one research-based project. This course is equivalent to JRNL 360. This course satisfies a Writing Intensive requirement for Arts & Sciences students

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete JRNL 100 or JRNL 101, and two courses in English writing with grades of "C" or better

COMM371 - Adv Radio Reporting

General

Subject Code ~
COMM

Course Number ~
371

Course Name (appears on the transcript) ~
Adv Radio Reporting

Content

Description
This course provides students with professional radio reporting opportunities. It focuses on radio news reporting with instruction and real-life applications in developing, researching, writing, and producing broadcast news stories to be aired on National Public Radio station WAMC. Students receive on-the-air talent techniques and one-on-one coaching for professional voice-over productions. Story ideas are assigned by the instructor, the WAMC news director, and news producers, and the student must also generate his/her own ideas.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete COMM 241 and COMM 251, or JRNL 100/JRNL 101 and COMM 245

COMM390 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

COMM391 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM392 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM393 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM394 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM395 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM396 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM397 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
397

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM398 - Special Topics in Communication

General

Subject Code ~
COMM

Course Number ~
398

Course Name (appears on the transcript) ~
Special Topics Communication

Content

Description
Topics in communication that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

COMM480 - Internship in Communication

General

Subject Code ~
COMM

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Communication

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

COMM481 - Internship in Communication

General

Subject Code ~
COMM

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Communication

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

COMM490 - Seminar in Media and Journalism

General

Subject Code ~
COMM

Course Number ~
490

Course Name (appears on the transcript) ~
Seminar in Media & Journalism

Content

Description
This capstone course is designed to enable students in media and journalism concentrations to integrate the theoretical and practical knowledge from their previous coursework into a cohesive whole. Students will examine the social, political, cultural, and economic contexts of mass media and journalism; probe a variety of theoretical frameworks for understanding mass media and journalism; and design and implement a substantial research project that draws on those contexts and frameworks.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete COMM 300, Graduating Communication seniors or permission of instructor

COMM491 - Seminar in PR and Health Communication

General

Subject Code ~
COMM

Course Number ~
491

Course Name (appears on the transcript) ~
Seminar in PR & Health Commun

Content

Description
This capstone course is designed to enable students in media and journalism concentrations to integrate the theoretical and practical knowledge from their previous coursework into a cohesive whole. Students will examine the social, political, cultural, and economic contexts of mass media and journalism; probe a variety of theoretical frameworks for understanding mass media and journalism; and design and implement a substantial research project that draws on those contexts and frameworks.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Graduating Communication seniors, or permission of instructor and COMM 300

COMM501 - Principles & Practices Public Relat

General

Subject Code ~
COMM

Course Number ~
501

Course Name (appears on the transcript) ~
Prin & Pract Public Relat

Content

Description
Students are introduced to the foundational elements of the discipline, examining the historical development of public relations and its roots in the sub-disciplines of interpersonal, group, and mass communication; studying the organizational roles of public relations; evaluating the sociopolitical and economic functions of public relations; and considering the broad role of public relations in contemporary culture. Students also learn current theoretical approaches to public relations and apply this knowledge both to public relations management practices and to creating a code of professional competence in the discipline.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and acceptance to MA program

COMM505 - Writing for Communications Professi

General

Subject Code ~
COMM

Course Number ~
505

Course Name (appears on the transcript) ~
Writing for Commun Profes

Content

Description
This course develops writing skills required for successful advancement in professional settings, with an eye toward achieving specific effects on target audiences. Students complete frequent writing assignments, learning how to write effective news releases and media advisories, developing technical writing skills, and creating copy for a variety of outlets across media platforms: on-line and printed magazines, newsletters, brochures, video/audio scripts, web site copy, and speeches. Successful completion of this course will provide students with a professional portfolio of writing samples.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

COMM510 - Communication Research Methods

General

Subject Code ~
COMM

Course Number ~
510

Course Name (appears on the transcript) ~
Commun Research Methods

Content

Description
This course provides students with a variety of methodological tools to identify, create, and evaluate a variety of communication campaigns and initiatives. Students are exposed to qualitative data gathering methods such as focus groups, open-ended questionnaires, and interviews. Students learn both qualitative data analysis techniques, such as constant-comparative method and thematic analysis, and quantitative methods, such as content analysis and surveys, as well as analysis tools including tests of difference and relationship. Students also learn about the range of evaluation techniques used within the discipline.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and acceptance to MA program

COMM525 - Ethics in Public Communication

General

Subject Code ~
COMM

Course Number ~
525

Course Name (appears on the transcript) ~
Ethics in Public Communic

Content

Description
This course investigates the philosophical underpinnings of communication ethics and perspectives. Based on those ethical perspectives and the Public Relations Society of America's code of ethics, students examine ethical and moral implications of manufacturing public opinion in corporate, nonprofit, and governmental public relations settings. Students also examine the legal implications of unethical public relations and regulations for public relations practitioners.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and acceptance to MA program

COMM550 - Manufacturing/Managing Public Opin

General

Subject Code ~
COMM

Course Number ~
550

Course Name (appears on the transcript) ~
Manufact/Manage Pub Opin

Content

Description
This course focuses critically on the relationship among public relations organizations, media industries, and the public, examining techniques that shape media discourse and indirectly influence public opinion as well as techniques that directly shape public opinion. Students learn how to conduct media research and examine the organizational structure of media firms in order to identify effective points of entry and influence for media relations messages; how to design press kits for use by media organizations; and develop strategies to appeal to target audiences within the general public both by using conventional mass media outlets and bypassing those outlets.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and COMM 501 and COMM 505

COMM605 - Strategic Approaches to Public Rel

General

Subject Code ~
COMM

Course Number ~
605

Course Name (appears on the transcript) ~
Strategic Approaches Pr

Content

Description
Students in this course learn about different strategic approaches to public relations planning, both internally and externally. Students examine contemporary case studies that illustrate successful strategic public relations campaigns and develop a public relations campaign plan for a hypothetical client.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and COMM 501

COMM615 - Crisis Management & Public Relat

General

Subject Code ~
COMM

Course Number ~
615

Course Name (appears on the transcript) ~
Crisis Management Pub Rel

Content

Description
This course exposes students to a variety of public relations crises across corporate, nonprofit, and governmental settings, creating awareness of how to protect an organization?s reputation and ensure the trust of key stakeholders. Students learn both how to prepare strategic communication crisis plans proactively and how to develop and implement reactive crisis communication techniques. Students also critique successful and cautionary examples of crisis management.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and COMM 501

COMM625 - Public Relations for Nonprofits

General

Subject Code ~
COMM

Course Number ~
625

Course Name (appears on the transcript) ~
Public Relations Nonprof

Content

Description
This course examines marketing and public relations strategies deployed uniquely by nonprofit organizations. Students consider the sensitivity of budget constraints on nonprofits and their impact on public relations efforts, and they discover new and innovative ways to promote nonprofit organizations. Students will learn about and critique techniques for coordinating messages and design strategies for raising awareness and funds for nonprofits. Participants of this course are required to read and write weekly responses, actively participate in online discussions, and design and plan the execution of a PR event for a nonprofit of their choice.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete COMM 501 or permission of instructor

COMM680 - Indep Study in Public Relations

General

Subject Code ~
COMM

Course Number ~
680

Course Name (appears on the transcript) ~
Indep Study Public Relations

Content

Description
Students taking this course will develop and implement an individual research project tailored to their own area(s) of interest within the field of public relations that advances their understanding of theoretical and/or practical aspects of public relations. The program director must approve a student's proposal and authorize the number of credits (which will vary according to the scope and complexity of the proposed project) prior to registration for this course.

Prerequisites: Graduate standing and permission of director of master?s program.

Credit Hours

Max
6

Min
3

Requisites

Free Form Requirements
Graduate Standing and approval of MACOMM Program Director

COMM699 - Master's Thesis in Public Relations

General

Subject Code ~
COMM

Course Number ~
699

Course Name (appears on the transcript) ~
Master's Thesis Pub Relat

Content

Description
Students pursing a Masters in Public Relations will craft a master's thesis demonstrating their ability to conduct original research, apply theoretical knowledge, and explore ethical considerations related to public relations practices. As the culmination of the program, students are expected to integrate concepts from across the curriculum into their thesis. The program director must approve thesis proposals and authorize the number of credits (which will vary according to the scope and complexity of the thesis project) prior to registration for this course.

Credit Hours

Max
6

Min
3

Requisites

Free Form Requirements
Graduate Standing and approval of MACOMM Program Director

CPE271 - Digital Design

General

Subject Code ~
CPE

Course Number ~
271

Course Name (appears on the transcript) ~
Digital Design

Content

Description
This is an introductory level course that gives its participants the ability to analyze and design digital circuits. Students learn procedural approaches to designing digital circuits starting from specification of the problem. Students become familiar with the number systems that are used in computers and other digital circuits. Students learn to use Boolean algebra and logic gates; and proof of logic theorems. Methods of manipulating and simplifying Boolean expressions are learned. Basic combinational logic function models are designed. Students become familiar with arithmetic functional blocks, latches, flip-flops, counters, and registers. Sequential circuits are also designed, and students are introduced to VHDL programming. In addition to the classroom portion of the course, there are several laboratory sessions where students build and test their logic designs. The methods for assessing student learning in the course are quizzes, tests, and lab reports.

This course comprises three class hours and two lab hours.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

CPE305 - Data Struc Embedded Firmware Design

General

Subject Code ~
CPE

Course Number ~
305

Course Name (appears on the transcript) ~
Data Str Embedded Firm de

Content

Description
This is an introductory course in understanding abstract data types, and structures for firmware design of embedded systems. Students learn data types and statements, functions, pointers, and arrays in C++; and become proficient in the syntax and semantics of C++. Students learn abstract data structures and their implementations, such as singly linked list, stack, queue, and doubly linked list; binary tree structures and tree traversal algorithms; and sorting algorithms. Students understand the difference among data structures and are able to select appropriate data structures for solving engineering problems. Students will enhance the skills needed to troubleshoot systems. The course prepares students for advanced course work.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 271, EE 285, and ENGR 105/HONE 105

CPE310 - Microprocessors I

General

Subject Code ~
CPE

Course Number ~
310

Course Name (appears on the transcript) ~
Microprocessors I

Content

Description
This is an introductory course in computer architecture utilizing low level computer programming as a vehicle for student understanding. Students learn about the fundamental restrictions the underlying architecture places on the software they write. Students also develop skills in writing programs using operations that electronic circuits on a processor can perform. Atmel's AVR series of microcontrollers are used as example machines for running and testing programs. Students learn assembly language instructions, different addressing modes, and their use in different situations. They use basic programming constructs such as branching and loop control, data structures, and program debugging and testing. The methods of assessing student learning in this course are programming and other assignments and exams.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 271 or EE 285, or equivalent

CPE323 - Embedded Systems Laboratory

General

Subject Code ~
CPE

Course Number ~
323

Course Name (appears on the transcript) ~
Embedded Systems Laboratory

Content

Description
A laboratory that emphasizes the design of embedded systems. Topics include interfacing to digital and analog circuits, sensors, and actuators. Communication using serial and parallel I/O, analog to digital conversion, interrupts; and timers are covered. The basic principles of real-time design, scheduling, thread synchronization, producer-consumer problem, critical sections, performance, and real-time operating systems (RTOS) are studied. Students apply real-time techniques to implement projects constrained by time and deadlines.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete EE 319 and CPE 310
Corequisite- CPE 355

CPE333 - Indep Study in CPE Engineering

General

Subject Code ~
CPE

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study CPE Engineering

Content

Description
See Independent Study on p. 32 of catalogue

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CPE350 - Adv Programming Languages

General

Subject Code ~
CPE

Course Number ~
350

Course Name (appears on the transcript) ~
Adv Programming Languages

Content

Description
This course introduces students to software engineering issues that arise in medium to large scale systems design. Rather than focus on a particular language, the course introduces the theory and design of modern programming languages. Students learn the basic elements of a language translator (compiler); lexical analysis, parsing, code generation, symbol table management, and error recovery. They learn to write regular expressions and context- free grammars. Students also learn the separate phases of compilation and the issues involved in designing a medium-sized translator. To facilitate student understanding, a semester long, incremental design project is employed. As a result of building their own compiler, students understand the operation and messages presented by any modern commercial translator. The methods of assessing student learning in the course are homework assignments, quizzes, an exam, and a semester, long design project that culminates in a formal presentation.

Credit Hours

Min
3

CPE355 - Real-Time Embedded Kernels

General

Subject Code ~
CPE

Course Number ~
355

Course Name (appears on the transcript) ~
Real-Time Embedded Kernels

Content

Description
This is an introductory course in the theory, design, and use of real-time kernels for embedded systems. Classes are a mixture of hands-on laboratory work and standard presentation of material and examples. A real-time kernel is the control software that manages the time resources of a microprocessor. Students learn the basic structure and services of a kernel. Topics include dispatching, hierarchical scheduling, priority-driven scheduling, real-time schedulers, scheduling groups, and multitasking. Students also learn to utilize tasks to describe multiple threads of execution in a computation. Students study methods to manage and control task execution as well as other kernel services.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 305 or equivalent, and CPE 310 or equivalent

CPE360 - Microprocessors II

General

Subject Code ~
CPE

Course Number ~
360

Course Name (appears on the transcript) ~
Microprocessors II

Content

Description
This is a course in the theory and design of modern microprocessor systems. It is a continuation of Microprocessors 1 and builds on concepts learned in that course. Students increase their awareness of the basic principles of system design, including hardware, software, and systems integration. Students design; fabricate, and test a complete working ATMEGA based system. Students design memory-mapped systems which include non-volatile (FLASH etc.) and volatile (RAM) memory; and study bus timing and loading considerations. In addition, students also design I/O subsystems, supporting both parallel and serial devices. A semester-long design project is employed to provide the students with a hands-on experience. Upon successful completion of the course, students will have learned about more detailed microprocessor architecture concepts, bus interfacing and clocking, memory system design, how to interface peripheral chips and devices to the bus, to use different serial and parallel I/O interfaces, to build I/O ports, and the concept of a total system design. The method of assessing student learning in the course includes quizzes, exams, lab reports, and lab demonstrations.

The course comprises three class hours and three lab hours.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CPE 310

CPE420 - Computer Architecture

General

Subject Code ~
CPE

Course Number ~
420

Course Name (appears on the transcript) ~
Computer Architecture

Content

Description
This is a senior-level course in the theory and design of modern computer architectures. Students learn the fundamental organization of processors, controllers, memory, and communication links as well as the issues involved with internal data representation. They understand the close correlation between registers, bus interconnections, and instruction sets. Students gain skills in computer performance prediction by analyzing advanced features including instruction pipelines, arithmetic circuits or co-processors, cache, and virtual memory. After successful completion of this course students understand the issues involved with instruction set design and implementation and are able to evaluate new architectures. The methods of assessing student learning in the course are homework assignments, a term project, and exams.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CPE 310 and CPE 271

CPE422 - Internet of Things (IoT)

General

Subject Code ~
CPE

Course Number ~
422

Course Name (appears on the transcript) ~
Internet of Things (IoT)

Content

Description
This introductory course covers the basic building blocks of the Internet of Things (IoT) and develops the necessary skills required to design and implement products and services. Students learn to develop applications under the Linux operating system, craft interface circuits and sensors, develop scripts to process data, use IoT programming tools, and leverage web technologies for remote monitoring and control of electronic devices using the Internet. The roles of cybersecurity, machine learning, and data analytics in IoT systems are discussed. Through hands-on projects, students design and build IoT systems for sensing, processing, actuation, and wireless communication using mobile single-board computers.

Credit Hours

Min
3

Requisites

Free Form Requirements
A programming language (eg C/C++), and CPE senior Standing or EE senior Standing

CPE425 - Software Engineering

General

Subject Code ~
CPE

Course Number ~
425

Course Name (appears on the transcript) ~
Software Engineering

Content

Description
This is a first-year graduate course in software system design fundamentals. Students learn the approaches to designing medium- to large-scale systems. After completing this course, students understand lifecycle issues in modern software design. They learn a variety of software design methodologies including structured design, top down design, bottom up design, and incremental design, and are introduced to object-oriented design. Students participate in a semester-long team project with design documentation delivered and presented at specified design review milestones. The methods of assessing student learning in the course are homework assignments, a research paper, and a semester-long design project that culminates in a formal presentation.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
A structured programming language

CPE427 - Computer Engineering Laboratory III

General

Subject Code ~
CPE

Course Number ~
427

Course Name (appears on the transcript) ~
Computer Engineer Lab III

Content

Description
This laboratory course emphasizes the integration of advanced techniques in the design and implementation of an embedded microcontroller. Topics include embedded systems design and development using a flash based, industry standard microcontroller, interfacing serial and parallel I/O, Analog to Digital conversion (ADC), Timers as well as interrupt structures. The course provides students the opportunity to design a control and data acquisition system for the alternative fuel car interdisciplinary project. Students design, construct, and test a microprocessor based real-time system. The embedded computer is used to control and acquire performance data from the alternative fuel vehicle. Sensors are interfaced to the ADC, and data is later up-loaded to a workstation for analysis. Students learn about the challenges of system's integration by participating in a vehicle race with team members from electrical and computer engineering.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 360
Corequisite- CPE 420

CPE436 - Project Research, Innovat & Develop

General

Subject Code ~
CPE

Course Number ~
436

Course Name (appears on the transcript) ~
Project Res, Innov & Dev

Content

Description
This course is designed to enable students to select and get started on the year-long senior project. Students are guided in formulating a proposal for a Senior Design Project in preparation for project completion in CPE 440. Faculty and representatives from industry present ideas for Senior Design Projects. Each student chooses a project and develops a project proposal with the guidance of a faculty advisor. In the process of completing this course, students learn the product development process - they learn about researching the problem being addressed, how to innovate and develop products. Students will also learn about needs analysis, identification of business opportunities and assess market potential. The assessment in this course is based primarily on measurements related to making progress towards project completion. This includes, maintain a log book, submit brief reports, and making a presentation at the end of the semester that documents the project status. Brief papers on some of the issues discussed in presentations will also be graded and counted to the final grade.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior Standing

CPE439 - Professional Awareness

General

Subject Code ~
CPE

Course Number ~
439

Course Name (appears on the transcript) ~
Professional Awareness

Content

Description
This course is designed to make students aware of the problems, concerns, and responsibilities of an engineer as a professional. Students participate in discussions. Guest speakers facilitate on topics that enable students to write a professional resume, interview for a job, generate an effective and substantive report, and make an effective technical oral presentation. Students are exposed to ethical issues in engineering environments, protecting their work with patents, copyrights, trademarks, or trade secrets and of not infringing on the similar rights of others. Students also study safety in the work place, product liability, and the importance of professional registration. Assessment is based on students' participation in discussions, submission of short papers on issues raised in the presentations, and the quality of project proposal and oral presentation.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Graduating Senior Standing

CPE440 - Senior Design Projects

General

Subject Code ~
CPE

Course Number ~
440

Course Name (appears on the transcript) ~
Senior Design Projects

Content

Description
This capstone design course prepares students for entry-level positions. Each student works on an independent engineering project under the supervision of a faculty advisor. Students apply the design process and communicate the results of their project work in both oral and written form. Oral reports are presented before an assembly of faculty and students. Students apply engineering design principles either by working on a product, improving a product, or designing experiments to investigate causes of either an observed phenomenon or a problem in engineering. Students are required to demonstrate their achievements using appropriate laboratory exhibits. Students who select industry-sponsored projects have the opportunity of working with the industrial advisor in an engineering environment. The assessment in this course is based on the student's level of commitment demonstrated throughout the semester, the level of achievement attained, the recording of activities in a log book, and the quality of the written report and oral presentation before an assembly of faculty and students. Meeting hours by arrangement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 436 and CPE 439

CPE462 - VHDL: Simulation & Synthesis

General

Subject Code ~
CPE

Course Number ~
462

Course Name (appears on the transcript) ~
VHDL: Simulation & Synthes

Content

Description
This project-oriented course covers the design of digital systems using VHSIC Hardware Description Language (VHDL), synthesizing the design, and mapping it onto hardware (Altera DE2-115 Field Programmable Gate Arrays (FPGA) boards). Students learn VHDL language to describe digital circuits and write test bench for design verification. Students distinguish synthesis coding versus simulation coding and students will learn different coding styles such as structural, data flow, and behavioral. Students use functions, procedures, components, and generics to describe hardware. Students also acquire the skills to use Altera Quartus synthesis tools as well as the Altera Edition of the MultiSim simulator. The course provides a solid foundation for advanced work.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 271 or equivalent

CPE470 - Real-Time Embedded Controls

General

Subject Code ~
CPE

Course Number ~
470

Course Name (appears on the transcript) ~
Real-Time Embedded Cntrls

Content

Description
This is an introductory course in the design and understanding of embedded micro-controllers in a time-critical control application. After completing this course, students understand, issues involved with, concurrent threads, real-time scheduling theory and constraints. In addition, students learn the fundamentals of discrete systems modeling, analysis, and design. They also gain an understanding of how to solve the complete response of a system represented in discrete time. Students implement control algorithms on an embedded processor in the C language. Control issues associated with fixed-point processors, limited bandwidth I/O channels, and limited precision interfaces are studied. The methods for assessing student learning in the course are, homework assignments, quizzes, exams, and a design project.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CPE 355 or concurrent, or permission of instructor

CPE475 - Operating Systems

General

Subject Code ~
CPE

Course Number ~
475

Course Name (appears on the transcript) ~
Operating Systems

Content

Description
This is a first course in operating system theory and design. After successfully completing this course, students understand concurrent processes, process communication, resource allocation, and resource scheduling. In addition, they learn how to apply basic queuing models to predict real time performance of an operating system. Students also learn the fundamentals of distributed (and network) operating systems and the interaction between operating system design and computer architectures. The methods of assessing student learning in this course are, homework assignments, quizzes, classroom discussions, two exams, and a term project.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 355 and CPE 420

CPE480 - Internship in Computer Engineering

General

Subject Code ~
CPE

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Computer Enginee

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CPE482 - Computer Engineering Research

General

Subject Code ~
CPE

Course Number ~
482

Course Name (appears on the transcript) ~
Computer Engineering Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

CPE485 - Computer Networks

General

Subject Code ~
CPE

Course Number ~
485

Course Name (appears on the transcript) ~
Computer Networks

Content

Description
Students examine communication networks. After completing this course, students understand the structure and issues of network design using the ISO Seven Layer model as a reference. They study the limitations placed on specific network architectures from the physical (hardware) layer up through the upper layers (transport). Problems of error detection and recovery are also discussed. Students learn to use delay models to predict network-specific performance measures and understand the limitations of these models. The course covers issues associated with routing and flow control. Assessments include homework assignments, quizzes, three exams, and research paper with a formal presentation.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ENGR 212 or IE 212 or equivalent

CPE490 - Special Topics in Computer Engineering

General

Subject Code ~
CPE

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Comp Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors,. This course is not offered on a regular basis and the course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
CPE or EE senior Standing

CPE491 - Special Topics in Computer Engineering

General

Subject Code ~
CPE

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Comp Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis. This course is not offered on a regular basis and may be repeated for credit if the topic varies.

Credit Hours

Min
3

CPE520 - Computer Architecture

General

Subject Code ~
CPE

Course Number ~
520

Course Name (appears on the transcript) ~
Computer Architecture

Content

Description
This is a senior-level course in the theory and design of modern computer architectures. Students learn the fundamental organization of processors, controllers, memory, and communication links as well as the issues involved with internal data representation. They examine the close correlation between registers, bus interconnections, and instruction sets. Students gain skills in computer performance prediction by analyzing advanced features including instruction pipelines, arithmetic circuits or co-processors, cache, and virtual memory. With successfully completion of this course, students understand the issues involved with instruction set design and implementation and are able to evaluate new architectures. Assessments include, homework assignments, a term project, and exams.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 310 and CPE 271

CPE522 - Internet of Things (IoT)

General

Subject Code ~
CPE

Course Number ~
522

Course Name (appears on the transcript) ~
Internet of Things (IoT)

Content

Description
This introductory course covers the basic building blocks of the Internet of Things (IoT) and develops the necessary skills required to design and implement products and services. Students learn to develop applications under the Linux operating system, interface circuits and sensors, develop scripts to process data, use IoT programming tools, and leverage web technologies for remote monitoring and control of electronic devices using the Internet. The roles of cybersecurity, machine learning, and data analytics in IoT systems are studied. Through hands-on projects, students design and build IoT systems for sensing, processing, actuation, and wireless communication using mobile single-board computers.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
A programming language (eg C/C++), and CPE senior Standing or EE senior Standing

CPE525 - Software Engineering

General

Subject Code ~
CPE

Course Number ~
525

Course Name (appears on the transcript) ~
Software Engineering

Content

Description
This is a first-year graduate course in software system design fundamentals. Students learn the approaches to designing medium to large-scale systems and examine lifecycle issues in modern software design. Students study a variety of software design methodologies including structured design, top-down design, bottom-up design, and incremental design and are introduced to object-oriented design. Students participate in a semester-long team project with design documentation delivered and presented at specified design review milestones. The methods of assessing student learning in the course are homework assignments, a research paper, and a semester-long design project culminating with a formal presentation.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing and a structured programming language

CPE535 - Requirement Analysis

General

Subject Code ~
CPE

Course Number ~
535

Course Name (appears on the transcript) ~
Requirement Analysis

Content

Description

This course addresses the issues associated with eliciting, recording, and managing requirements. Poor requirements processes are a leading cause of project failure. Engineers must have the skills and tools to effectively collect, verify, validate, and implement requirements in order to improve the success rates of their projects. Major models of requirements will be examined and methods of detecting ambiguity will be discussed and practiced. A comprehensive survey of various methods of eliciting, recording, and verifying requirements. Additional topics include: writing requirements, formal specification analysis, and formal notations. The primary methods of assessing student learning are, homework assignments, a presentation, a group project, midterm and final exam.

Credit Hours

Min
3

CPE538 - Software Quality Assurance

General

Subject Code ~
CPE

Course Number ~
538

Course Name (appears on the transcript) ~
Software Quality Assurance

Content

Description

This class addresses the issues associated with software quality. This course provides an in-depth exploration of designing, measuring, and maintaining the quality of a software artifact. Many software engineering topics are brought to bear on a systematic approach to ensure the quality delivered software (Software Quality Assurance, SQA). Students learn the issues associated with verification and validation, testing, audits, review of software artifacts, configuration management, and process improvement. Assessments include homework assignments, a presentation, a group project, a midterm, and final exam.

Credit Hours

Min
3

CPE542 - Verification & Validation

General

Subject Code ~
CPE

Course Number ~
542

Course Name (appears on the transcript) ~
Verification & Validation

Content

Description

This course introduces the student to software testing strategies and techniques. The goal is to provide a framework for the testing of the developed software in a series of well-planned steps. The cost impact of testing is illustrated in terms of effort, time, and resources. Students examine issues associated with program proving, code inspection, test coverage, code reviews, unit-level testing, and system-level testing. Students are exposed to the difficulty and costs of some types of analysis and testing in addition to the need for automation of tedious tasks. The benefits of automated test are explored as well as the associated costs. The advantages of regression tests are discussed. Assessments include homework assignments, a presentation, a group project, midterm, and final exam.

Credit Hours

Min
3

CPE545 - Computer Graphics Software

General

Subject Code ~
CPE

Course Number ~
545

Course Name (appears on the transcript) ~
Computer Graphics Software

Content

Description
This is an introductory course in computer graphics. Students examine the hardware organization of graphic display system in an IBM PC for both alphanumeric and bit mapped graphics. Students also write programs in C and assembly language to control, query, optimize, and write to and read from graphic controller chips in order to use the full capability of the display hardware. Students write programs to generate and manipulate alphanumeric display; read and write to display memory to generate points, lines, and circles; read and write to the color tables; and control the start address to allow panning and scrolling and animation. An individual project is required. Assessments include, writing program as homework, supervised laboratory work, and the quality of the project.

Credit Hours

Min
3

CPE550 - Topics in Compiler Design Theory

General

Subject Code ~
CPE

Course Number ~
550

Course Name (appears on the transcript) ~
Topics/Compile Des Theory

Content

Description
This is a first-year graduate course in the theory and design of modern programming languages. Students learn the basic elements of a language translator (compiler), lexical analysis, parsing, code generation, symbol table management, type checking, scope resolution, code optimization, and error recovery. They also learn to write regular expressions and context-free grammars and understand the separate phases of compilation and the issues involved in designing a medium-sized translator. To facilitate student understanding, a semester-long incremental design project. As a result of building their own compiler, students learn the operation and messages presented by any modern commercial translator. Assessments include homework assignments, quizzes, an exam, a research paper, and a semester-long design project that culminates in a formal presentation.

Credit Hours

Min
3

CPE560 - Microcomputer Hardware Design

General

Subject Code ~
CPE

Course Number ~
560

Course Name (appears on the transcript) ~
Microcomputer Hardware Design

Content

Credit Hours

Min
3

CPE562 - VHDL: Simulation & Synthesis

General

Subject Code ~
CPE

Course Number ~
562

Course Name (appears on the transcript) ~
VHDL: Simulation & Synthesis

Content

Description
This project-oriented course covers the design of digital systems using VHSIC Hardware Description Language (VHDL), then synthesizing design, and the hardware map(Altera DE2-115 Field Programmable Gate Arrays (FPGA) boards). Students learn VHDL language to describe digital circuits and to write test bench for design verification. Students can distinguish synthesis coding versus simulation coding. Students will examine different coding styles such as structural, data flow, and behavioral coding styles. Students will study the functions, procedures, components and generics to describe hardware. Students also acquire the skills to use Altera Quartus synthesis tools as well as the Altera Edition of the MultiSim simulator. The course provides a solid foundation for advanced work.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CPE 271 or equivalent & Graduate Student Standing

CPE590 - Special Topics in Computer Engineering

General

Subject Code ~
CPE

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Comp Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors. This course is not offered on a regular basis and may be repeated for credit if the topic varies.

Credit Hours

Min
3

CPE591 - Special Topics in Computer Engineer

General

Subject Code ~
CPE

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Comp Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, This course is not offered on a regular basis and the course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
CPE or EE senior Standing

CPE601 - Probablistic Models for Digital Sys

General

Subject Code ~
CPE

Course Number ~
601

Course Name (appears on the transcript) ~
Probab Meth Digital Syst

Content

Description
This course is designed to provide students with the necessary fundamental concepts and mathematical tools to conduct performance analysis. These methods are used to describe random processes and queuing theory and their application to such areas as computer hardware and software performance, scheduling, and stochastic machines. Both analytical models and simulation models are considered. Topics covered include basic probability theory review, random variables, and transform theory. Advanced topics such as Markov models, single queue models, and queuing networks are introduced. Students conduct several case studies throughout the course. Assessments include homework assignments, quizzes, exams, and a term project.

Credit Hours

Min
3

CPE603 - Object Oriented Specification & Con

General

Subject Code ~
CPE

Course Number ~
603

Course Name (appears on the transcript) ~
Object Oriented Spec/Cons

Content

Description
Students examine software construction using a modem, object-oriented language. Students learn to specify systems using design patterns, and abstraction techniques, including procedural, data, iteration, type, and polymorphic. Advantages of information hiding using classes, objects, and inheritance are discussed. Students design secure systems utilizing exception handling, event-based systems, and concurrency.

Credit Hours

Min
3

CPE620 - Adv Computer Architecture

General

Subject Code ~
CPE

Course Number ~
620

Course Name (appears on the transcript) ~
Adv Computer Architecture

Content

Description
This is an advanced study of computer architecture. Topics may include stack computers, pipeline computers, parallel computers, micro-programming, performance evaluation, and distributed processing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 420, or permission of instructor

CPE625 - Adv Software Engineering

General

Subject Code ~
CPE

Course Number ~
625

Course Name (appears on the transcript) ~
Adv Software Engineering

Content

Description
This course introduces advanced topics in software system design, construction, and maintenance: Students examine approaches to incorporating new features in legacy systems as well as reverse engineering in systems lacking sufficient documentation. The use of components is stressed as a means of isolating and extending existing systems Students participate in a semester-long team project.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 425 or equivalent

CPE635 - Adv Requirements Analysis

General

Subject Code ~
CPE

Course Number ~
635

Course Name (appears on the transcript) ~
Adv Requirements Analysis

Content

Description
This class examines advanced topics associated with system requirements and students study automated requirements. Approaches to formal methods used in specifying requirement are studied and automated approaches to verifying, validating, and detecting ambiguity, as well as implementation requirements in delivered software. Models employed in requirements engineering will be studied.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 435

CPE645 - Embedded Software Systems

General

Subject Code ~
CPE

Course Number ~
645

Course Name (appears on the transcript) ~
Embedded Software Systems

Content

Description
Students learn modern methods, techniques, and tools for the specification, design, and implementation of real-time embedded systems. Students are given an overview of various platforms and automated tools for developing software for embedded systems. Processes used in the development of systems with real-time performance and address issues associated with real-time debugging.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 442 or equivalent and CPE 601 or equivalent

CPE648 - Software Project Management

General

Subject Code ~
CPE

Course Number ~
648

Course Name (appears on the transcript) ~
Software Project Management

Content

Description
Students examine the importance of issues associated with managing a software project. Students study about the importance of establishing project scope and eliciting requirement. A detailed analysis of projects and conduct with emphasis on planning, estimating, scheduling, risk analysis, tracking, and control. Various approaches to managing a software projects will be studied at the critical level.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 435 or equivalent

CPE650 - Software Architecture

General

Subject Code ~
CPE

Course Number ~
650

Course Name (appears on the transcript) ~
Software Architecture

Content

Description
This course introduces students to architectural design. Students learn how to structure data and components in order to satisfy requirements of a design. Students learn about architectural styles that a solution may utilize. Students also study the structure and interrelationships among the architectural components. Alternative solutions are considered and evaluated. The role of architecture as a facilitator for communication between designers and stakeholders is emphasized. Metrics to assess architectural quality are introduced.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 425 or equivalent and CPE 601 or equivalent

CPE652 - Software Generation & Maintenance

General

Subject Code ~
CPE

Course Number ~
652

Course Name (appears on the transcript) ~
Software Generat & Maint

Content

Description
Students examine the importance of effective approaches to designing systems that are easier to maintain after their initial release. Maintenance accounts for some 70 percent of a software system's life cycle designing new maintainable software systems is as important as dealing with existing legacy systems. Students are introduced to writing reusable software components, automatic code, and application generators, as well as their limitations, regression analysis, and reverse engineering.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CPE 425 or equivalent and EE 601 or equivalent

CPE655 - Computer Network Architecture

General

Subject Code ~
CPE

Course Number ~
655

Course Name (appears on the transcript) ~
Computer Network Architecture

Content

Description
This is a comprehensive study of the way computer networks are designed and operated. The course focuses on basic principles that guide the development of computer networks, including management of complexity, standardization of connectivity, and resource sharing. Seven textural models such as IEEE 802, DOD, TOP, MAP, and ISDN are briefly covered.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CPE671 - AI: Machine Learning - Concepts

General

Subject Code ~
CPE

Course Number ~
671

Course Name (appears on the transcript) ~
AI: Machine Learning - Concep

Content

Description
This course focuses on AI concepts such as Data Exploration, Single and Multivariate Parametric and Non-Parametric methods of regression and classification tasks. Students will learn the theory that underlies these algorithms and implement them using popular machine learning packages such as Python with scikit-learn and MATLAB. During the final project, students will implement multiple algorithms and learn how to select the best algorithm with the optimized hyperparameters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CPE672 - Ai: Machine Learning - Applications

General

Subject Code ~
CPE

Course Number ~
672

Course Name (appears on the transcript) ~
AI: Machine Learning - Applic

Content

Description
This course focuses on AI application packages such as Data exploration, Natural Language Processing, Support Vector Machine, Reinforcement Learning, Artificial Neural Networks (ANNs) and Computer Vision and Deep Learning. Students examine the theory and applications of a variety of algorithms. Practice implementation with Python and MATLAB software. As the final project, students will apply a combination of algorithms to a specific application and develop an end-to-end solution.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CPE673 - AI: Applied Neural Networks and Machine

General

Subject Code ~
CPE

Course Number ~
673

Course Name (appears on the transcript) ~
AI: Applied Neural Networks

Content

Description
This course concentrates on application of neural networks in the field of engineering. Students examine vision-based applications of Perceptron algorithm as well as back propagation. Linearly and nonlinearly separable clustering and classification problems will be covered. This course is project- based and concentrates on the latest applied Neural Networks and Machine Learning algorithms. All concepts are heavily reinforced using MATLAB, the main computational platform.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CPE674 - AI: Applied Fuzzy Logic AI: Applied Fuzzy Logic

General

Subject Code ~
CPE

Course Number ~
674

Course Name (appears on the transcript) ~
AI: Applied Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. Students analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and apply fuzzy logic theory to a variety of practical applications. Students use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. Machine Controls will be the application.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

CPE690 - Special Topics in Computer Engineer

General

Subject Code ~
CPE

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Comp Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to computer engineering majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

CPE691 - Special Topics in Computer Engineer

General

Subject Code ~
CPE

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Comp Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to computer engineering majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

CS101 - Intro to Computing

General

Subject Code ~
CS

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Computing

Content

Description
This course is designed to introduce students to various fields of computing in order to help them make an informed choice about which career path they would like to pursue. Topics include data representation, hardware, system and application software, communications, and the systems development life cycle. Comparison of the computer science and information technology fields will be ongoing. The course comprises three hours of lecture and three hours of lab per week.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

CS102 - Intro to Programming

General

Subject Code ~
CS

Course Number ~
102

Course Name (appears on the transcript) ~
Intro to Programming

Content

Description
This course examines problem solving with programming in greater detail. Students apply fundamental imperative, procedural constructs to solve common programming problems, as well as the beginnings of object-oriented programming (e.g., defining classes, instantiating objects, using objects, and using application programmer's interfaces). Students design and develop small programs using a procedural, imperative programming language and appropriate analysis, design, and testing techniques. One cannot receive credit for both CS 102 and BIS 300. Offered: spring semester.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

CS111 - Accelerated Python

General

Subject Code ~
CS

Course Number ~
111

Course Name (appears on the transcript) ~
Accelerated Python

Content

Description
This course is for students who have learned to program in a programming language other than Python and want/need to learn Python. This course covers procedural and object-oriented programming in Python, including variables, types, expressions, selection, iteration, functions, classes, and objects.

Credit Hours

Min
1

CS131 - Computing for the Arts & Sciences

General

Subject Code ~
CS

Course Number ~
131

Course Name (appears on the transcript) ~
Computing Arts & Sciences

Content

Description
This is an introduction to computer systems, primarily from the user's viewpoint. Topics include hardware, software, vocabulary, and applications. The course culminates in a final project utilizing various software packages to research, analyze, and report on a topic of the student's choice.

Credit Hours

Min
3

CS132 - Principles of Computing

General

Subject Code ~
CS

Course Number ~
132

Course Name (appears on the transcript) ~
Principles of Computing

Content

Description
This course is an introduction to the fundamentals of computing and its impact on modern society. Students learn about computing devices, components, networks, and systems; computational thinking, including the roles of abstraction and algorithms in developing programs; and the interaction between computing and society, such as data privacy and the impact of algorithms in our daily lives. The course also provides a brief introduction to programming as a means of analyzing data and/or creating models.

Credit Hours

Min
3

CS170 - Technology in Mathematics

General

Subject Code ~
CS

Course Number ~
170

Course Name (appears on the transcript) ~
Technology in Mathematics

Content

Description
This course is an introduction to various computer software packages that can be useful for doing research, teaching, and working in the business world. Students will receive hands-on training in software packages including, but not limited to: computer algebra systems (Mathematica), Office products (Excel), and specialty math software (LaTeX).

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

CS171 - Programming for Mathematics

General

Subject Code ~
CS

Course Number ~
171

Course Name (appears on the transcript) ~
Programming for Mathematics

Content

Description
This course provides an introduction to computer programming with emphasis on using programming to solve problems in mathematics. Topics include variables, data types, control structures, arrays, simple graphics, functions, and recursion. Students will also be introduced to software packages for mathematical computation.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

CS190 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Comp Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

Requisites

Free Form Requirements
Prerequisites depend on special topics "topics"

CS191 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Comp Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

CS200 - Data Structures

General

Subject Code ~
CS

Course Number ~
200

Course Name (appears on the transcript) ~
Data Structures

Content

Description
This course continues the introduction to computer programming begun in CS 102 or IT 102. This course covers the development and use of data structures in computer science and object-oriented software development. Using a modern programming language, students learn about the implementation and use of abstract data types. Students are expected to apply and augment the programming knowledge acquired in previous courses to the task of developing more complex works. Topics include linked lists, stacks, queues, hash tables, common trees and tree algorithms, graphs and traversal algorithms, and common algorithms related to these structures. Students will also learn to evaluate the efficiency of the algorithms that they implement over the course of the semester.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 102/IT 102, CS 111/IT 111 or CS-171

CS210 - Software Design

General

Subject Code ~
CS

Course Number ~
210

Course Name (appears on the transcript) ~
Software Design

Content

Description
This course introduces software design concepts, standard software design notations, software architectures, and design patterns. Design notations will include data flow-oriented, object-oriented, data-oriented, and real-time approaches. Modularization of design patterns for software construction will be explored. Students will design and implement portions of a software system to demonstrate the use of design notations and design patterns.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CS 102/IT 102, CS 111/IT 111 or CS-171

CS220 - Software Development

General

Subject Code ~
CS

Course Number ~
220

Course Name (appears on the transcript) ~
Software Development

Content

Description
Participants will learn modern tools and practices to design and develop large systems in teams such as integrated development environments, build systems, testing, version control, and issue tracking.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CS 102/IT 102, CS 111/IT 111 or CS-171

CS290 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Comp Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

CS300 - Digital Forensics I

General

Subject Code ~
CS

Course Number ~
300

Course Name (appears on the transcript) ~
Digital Forensics I

Content

Description
This course explores methods for conducting digital forensic investigations, including how to obtain, analyze, reconstruct, and report on evidence. Students will examine various techniques that actors employ to compromise data and perform root cause analysis, to understand the tools and methods used during the breach. Students will also explore how to prevent these intrusions from occurring using security measures.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 101/IT 101 or CS 132, & Junior or Senior Standing, or instructor's permission

CS310 - Digital Forensics II

General

Subject Code ~
CS

Course Number ~
310

Course Name (appears on the transcript) ~
Digital Forensics II

Content

Description
This course covers digital forensics incident response with a focus on containment, remediation, and recovery. Students will review evidence, prepare and document incidents using forensic tools, while continuing to focus on security techniques.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CS 300

CS333 - Indep Study in Computer Science

General

Subject Code ~
CS

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Computer Sci

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CS334 - Indep Study in Computer Science

General

Subject Code ~
CS

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Computer Sci

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CS340 - Computer Graphics: Principles & Appl

General

Subject Code ~
CS

Course Number ~
340

Course Name (appears on the transcript) ~
Comput Graph: Princ & Appl

Content

Description
This course focuses on rendering the synthesis of realistic 3D images, the major concern in computer graphics today. Following a study of light, color, and shading, each student develops a simple program to generate images using ray-tracing, the most widely used photo-realistic rendering technique. Additional topics include 2D and 3D transformations, generation of 2D images on a screen, use of a simple 2D graphics package, and graphical user interfaces.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete CS 200/IT 200 or equivalent, or instructor's perm

CS351 - Programming Language

General

Subject Code ~
CS

Course Number ~
351

Course Name (appears on the transcript) ~
Programming Language

Content

Description
Students will study fundamental concepts related to the design and implementation of programming languages. Topics typically include lexical, syntactic, and semantic analysis; functional, procedural, object-oriented, and logical programming paradigms; call semantics; dynamic vs static scoping; and type systems.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 200/IT 200, & CS 210, or instructor permission

CS364 - Design Database Management Systems

General

Subject Code ~
CS

Course Number ~
364

Course Name (appears on the transcript) ~
Design Database Mgmt Sys

Content

Description
This is a study of concepts, theory, design techniques, and retrieval methods, particularly using the industry-standard SQL data language. Topics include physical data organization, database architecture, data models with emphasis on the relational model, logical database design, normalization, and relational query languages. A design and an implementation project are required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete CS 102 or IT 102 or CS 171

CS366 - Design & Analysis of Algorithms

General

Subject Code ~
CS

Course Number ~
366

Course Name (appears on the transcript) ~
Design & Analysis of Algorit

Content

Description
This course provides students with the fundamental techniques and strategies used in the design of algorithms, including proper selection of data structures, dynamic programming, divide-and-conquer, greedy methods, and backtracking. The course also exposes students to the analysis of algorithms using methods to estimate run-time performance. The theory of NP-completeness is discussed, along with heuristic methods for constructing algorithms for "hard problems." Numerous case studies give students perspective into how algorithm problems arise in the real world.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 200/IT 200, & CS 210, or instructor permission

CS370 - Artificial Intelligence

General

Subject Code ~
CS

Course Number ~
370

Course Name (appears on the transcript) ~
Artificial Intelligence

Content

Description
This course surveys artificial intelligence (AI) including fundamental ideas, techniques, and applications in the field. Topics covered include search, game playing, constraint satisfaction, planning, and machine learning. Students complete multiple projects on these topics using a modern programming language. Students must also research an advanced topic in artificial intelligence, completing a research paper and/or presentation.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing, and CS 200 or IT 200, or permission of the instructor

CS390 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Comp Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete CS-200 or IT-200; and Junior Standing

CS391 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Comp Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

CS413 - Parallel Computing

General

Subject Code ~
CS

Course Number ~
413

Course Name (appears on the transcript) ~
Parallel Computing

Content

Description
This course introduces students to the fundamentals of parallel computing with a focus on approaches appropriate for multicore architectures. Topics include parallel architectures, algorithms and programming paradigms, shared- and distributed-memory systems, message passing, graph and matrix algorithms. Cloud computing, synchronization techniques, shared data structures, and load balancing will also be covered.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CS 200 or IT 200

CS480 - Internship in Computer Science

General

Subject Code ~
CS

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Computer Science

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CS481 - Internship in Computer Science

General

Subject Code ~
CS

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Computer Science

Content

Description
See "Internships" in catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

CS490 - Software Engineering

General

Subject Code ~
CS

Course Number ~
490

Course Name (appears on the transcript) ~
Software Engineering

Content

Description
This is a software engineering course studying principles, methods, and ethical aspects of software engineering and featuring a large-scale software engineering project.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 210 and CS 220 and Senior Standing

CS491 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Comp Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

CS492 - Computer Science Capstone

General

Subject Code ~
CS

Course Number ~
492

Course Name (appears on the transcript) ~
Computer Science Capstone

Content

Description
This project-based course provides students the opportunity to demonstrate their ability to synthesize and apply knowledge and skills acquired throughout the computer science program. Using appropriate software engineering practices, students work in teams to substantially contribute to a significant, real world, software project.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete CS 490

CS501 - Programming & Data Structures

General

Subject Code ~
CS

Course Number ~
501

Course Name (appears on the transcript) ~
Programming & Data Structures

Content

Description
An accelerated introduction to the fundamentals of programming and data structures. Students start out designing and developing small programs using a modern programming language and learn appropriate analysis, design, and testing techniques. Students apply these concepts to the development of data structures, including linked lists, stacks, queues, trees, hash tables, and graphs.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Graduate Standing

CS610 - Advanced Software Engineering

General

Subject Code ~
CS

Course Number ~
610

Course Name (appears on the transcript) ~
Advanced Software Engineering

Content

Description
This course is a survey of current software engineering techniques and technologies. The course covers topics related to the design, development, deployment, and maintenance of large software systems. Topics change as current approaches and technologies evlove.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CS615 - Software Security

General

Subject Code ~
CS

Course Number ~
615

Course Name (appears on the transcript) ~
Software Security

Content

Description
This course focuses on the fundamental concepts of application security with the aim of providing a foundational level of knowledge, matched with offensive and defensive skills developed through hands-on experience. Students learn the basics of software security, secure development lifecycle, common software vulnerabilities, and both exploitation techniques and practice mechanisms for hardening software. Students also learn how to test for major security vulnerabilities and identify security bugs as the last line of defense before the product is delivered to the customer, as part of the standard Quality Assurance (QA) testing. This course is not a comprehensive introduction to cybersecurity. Rather, the focus is on the design and security of software applications (particularly web applications).

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CS620 - DevOps

General

Subject Code ~
CS

Course Number ~
620

Course Name (appears on the transcript) ~
DevOps

Content

Description
DevOps is revolutionizing the way companies develop, deliver, deploy, and maintain software. DevOps combines development teams and IT operations teams into cross-functional teams to continuously and rapidly deliver software safely, reliably, and with minimal disruption. This course explores DevOps, the challenges it addresses, its culture, and the tools and practices that support it.

Credit Hours

Min
3

CS630 - Operating Systems & Networks

General

Subject Code ~
CS

Course Number ~
630

Course Name (appears on the transcript) ~
Operating Systems & Networks

Content

Description
This course covers the concepts and operation of modern operating systems and networks. Topics include memory and process management, deadlock, virtual memory, networking, and network security.

Credit Hours

Min
3

CS640 - Non-Relational Databases

General

Subject Code ~
CS

Course Number ~
640

Course Name (appears on the transcript) ~
Non-Relational Databases

Content

Description
The rise of the Internet, Web Systems, and Cloud-Computing has driven the need to manage an ever-increasing volume of data. Most agree that traditional relational databases are ill-suited to meet the demands of Big Data and the applications they support, which has led to the emergence of non-relational databases. In this course, students explore non-relational databases: why they exist, the principles they stand on, their architecture and data models, their strengths and weaknesses, how to design for and use them, and tools and best practices that support their use.

Credit Hours

Min
3

CS660 - Algorithms & Computing Theory

General

Subject Code ~
CS

Course Number ~
660

Course Name (appears on the transcript) ~
Algorithms & Computing Theory

Content

Description
This course covers design and analysis of both classic and modern algorithms and computing theory. Selected topics may include randomized algorithms, graph algorithms, network flow algorithms, fast Fourier transforms, number-theoretic algorithms, string matching, computational geometry, and approximation algorithms. Theory topics may include a study of Chomsky's hierarchy of languages, including grammars, automata and computability, the Church-Turing thesis, Turing machines, and decidability and undecidability.

Credit Hours

Min
3

CS670 - Artificial Intelligence & Machine Learn

General

Subject Code ~
CS

Course Number ~
670

Course Name (appears on the transcript) ~
Artificial Intelligence & Mac

Content

Description
This course surveys machine learning, with an emphasis on the various algorithms and techniques available to machine learning practitioners. The course is divided into three units: supervised learning, unsupervised learning, and reinforcement learning. Students complete projects that require implementation, comparison, and analysis of these techniques. By the end of the course, students make informed decisions about which technique(s) will be viable for a particular problem, and identify the tradeoffs between applicable techniques.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CS685 - Computer Science Graduate Capstone

General

Subject Code ~
CS

Course Number ~
685

Course Name (appears on the transcript) ~
Computer Science Grad Capstone

Content

Description
The capstone course provides students with real-world experience contributing to a professional level software project. Students work in teams using leading edge software technologies and gain understanding of both current software development techniques as well as management approaches.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

CS690 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Computer Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

CS691 - Special Topics in Computer Science

General

Subject Code ~
CS

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Computer Sci

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

CUL190 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL191 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL210 - Compar Race Rela: US & South Africa

General

Subject Code ~
CUL

Course Number ~
210

Course Name (appears on the transcript) ~
Comp Race Rel: US & S Afr

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL215 - British Culture & Society

General

Subject Code ~
CUL

Course Number ~
215

Course Name (appears on the transcript) ~
British Culture & Society

Content

Description
This course provides an introduction to modern British culture and society from the Victorian period to the present. The goal of the course is to explore the different elements that make up British culture, to understand that culture in its social context, and to consider how and why cultural values can change over time. We will examine specific examples of both popular culture (film, newspapers, pop music) and high culture (art, literature, drama).This course satisfies the Elements of Culture requirement "CA" and this course is taught in London as part of the Freshman Semester in London.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing -

CUL216 - Cult of English Villages-Fact & Fiction

General

Subject Code ~
CUL

Course Number ~
216

Course Name (appears on the transcript) ~
Cult of English Villages-Fact

Content

Description
Thoughts of England conjure images of a village green, a cricket pitch, the spire of a church, the village hall, and, of course, the local pub. The strong sense of place and tradition that marks village life unfolds, however, against a changing set of economic and demographic factors. Farms remain a key source of employment in rural England, and they face an uncertain future in terms of trade and subsidies because of Brexit. Significant population shifts also have left their mark, with an influx of urban dwellers, as well as immigrants from South Asia and Eastern Europe who bring their own traditions to these communities. This course will explore the rich and evolving culture of English villages and the culture's enduring significance in daily life, both in fact and fiction. The fictional aspect comes courtesy of The Archers, a 13-minute daily BBC radio drama that has depicted English village life in nearly 19,000 episodes since the program's premiere. This course satisfies the Elements of Culture "CA" requirement.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing -

CUL218 - Discovering Nigeria-The Giant of Africa

General

Subject Code ~
CUL

Course Number ~
218

Course Name (appears on the transcript) ~
Discov Nigeria-Giant of Africa

Content

Description
This course focuses our attention of the diverse peoples and experiences of Nigeria. Students examine this important nation's background through a survey of its history, cultural patterns of religious belief and language, as well as appreciating distinctive contributions in the arts, music, literature, cuisine, and sports. Finally, students develop and understanding the contemporary status of Nigeria as it faces the challenges of the 21st Century through a survey of the country's economy, government, and a variety of contemporary issues that are both domestic and international in scope. Students will come to appreciate unique aspects of Nigeria, while also seeing the similarities between Nigerian culture and wider African patterns and in the Developing World, as well as comparisons with American culture and society. This course satisfies Elements of Culture requirement "C".

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing

CUL220 - Discovering India

General

Subject Code ~
CUL

Course Number ~
220

Course Name (appears on the transcript) ~
Discovering India

Content

Description

India is the second largest country in the world by population and the world's largest democracy, besides being one of the most diverse and pluralistic nations in the world in terms of languages, cultures, religions, and social identities. This course will provide a broad-ranging introduction to contemporary India, set in a historical and cultural context. Using Indian literature, film ("Bollywood"), art and architecture, and food, in addition to scholarly writing, the course will examine the key social, political, and economic issues that have faced India since independence, and the challenges she confronts in the 21st century. Because India always has, and still continues, to exercise considerable influence ("soft power") on the world, the course will also examine India's role in the world with particular emphasis on the relationship between India and the United States: the influence of Vedanta on Emerson and Thoreau, the influence of Thoreau on Gandhi, and the influence of Gandhi and the Indian freedom struggle on Martin Luther King, Jr and the US Civil Rights movement. This course satisfies Elements of Culture requirement "C."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL222 - Southeast Asia

General

Subject Code ~
CUL

Course Number ~
222

Course Name (appears on the transcript) ~
Southeast Asia

Content

Description

This course covers the countries of Indonesia, Thailand, the Philippines, Vietnam, Laos and Cambodia. Students study the geography of the area the consequences of being east of India and south of China, as well as issues affecting the environment and natural resources of this region; its history, essential points of nation formation, and the transitions from traditional to modern societies and governments; economics comparison of the situation and policies before World War II to those afterwards, looking at traditional production techniques, and examining the effects of the present financial crisis; its cultures, the intersections of art, language, literature, music, drama, ethnicity and religion; and social and political issues, the causes and impact of migration within and across the region, and ethnic and political conflicts. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL223 - Modern Germany

General

Subject Code ~
CUL

Course Number ~
223

Course Name (appears on the transcript) ~
Modern Germany

Content

Description

This course introduces students to the culture of modern Germany from its unification in 1871 under Bismarck to the fall of the Berlin Wall and the reunification of East and West Germany. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL224 - Italian Culture

General

Subject Code ~
CUL

Course Number ~
224

Course Name (appears on the transcript) ~
Italian Culture

Content

Description
Since the rise and fall of the Roman Empire, a wide range of historical and political events have manifested transformations leading up to the Unification of Italy in 1861. The demographic, economic, sociological differences and complexities leave Italians still attempting to establish a national identity. This course provides students with an understanding of ancient and modern Italy, Italian culture, and the Italians. Students immediately connect American multicultural challenges and diversity as a way of life for Italians for several centuries leading up to today. In addition, the course challenges students to engage in other ways of knowing, thinking, and rethinking about culture and Italy. This course examines political, historical and cultural questions, regionalism, linguistic variations, governance, social and political cultures, mafia and corruption, religion, literature, art, media, music, and film. In addition, students explore Italian migration from the 1800s to 1970s, and contemporary Italy's recent immigration challenges in a multicultural world. This course satisfies Elements of Culture requirement "C."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL225 - Chinese Culture & Society

General

Subject Code ~
CUL

Course Number ~
225

Course Name (appears on the transcript) ~
Chinese Culture & Society

Content

Description
This course examines how Chinese culture and society develop as a result of the interaction of historical, geographic, economic, philosophical, political and religious factors. This course examines how those factors may be reflected in a culture's tradition. The thematic overview in the Chinese culture course focuses on the development of a cultural civilization and how that has evolved over the last and contemporary century. This course satisfies the Element of Culture Requirement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing -

CUL230 - Culture of Iran

General

Subject Code ~
CUL

Course Number ~
230

Course Name (appears on the transcript) ~
Culture of Iran

Content

Description
This course explores the culture(s) of Iran, and Iranian interactions with the rest of the world. Students explore the following areas of the Iranian experience: cultural history, cultural patterns, world view, religion, language, education, art, architecture, poetry/literature, economics, politics/government, and contemporary issues in Iran. This course satisfies Elements of Culture requirement "C."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL231 - Music (sub)cultures in the US & UK

General

Subject Code ~
CUL

Course Number ~
231

Course Name (appears on the transcript) ~
Music (sub)cultures in US &UK

Content

Description
This course examines the historical emergence, socio-political worldviews, and material output of various musical subcultures in the United States and the United Kingdom. An integral aspect of all subcultures is the concept of resistance: the styles of these subcultures can be understood as representing a symbolic challenge to the prevailing social/cultural order. Course participants examine the sociological analysis of culture (and subculture) by comparing a series of examples in the US and the UK: punk, hip-hop, heavy metal, reggae, jazz, and folk. These cases further allow us to explore the relationship between race, socio-economic class, and global politics in both countries. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL232 - Czech Republic: Culture & History

General

Subject Code ~
CUL

Course Number ~
232

Course Name (appears on the transcript) ~
Czech Republic: Cult & Hist

Content

Description
This course is a semester-long immersion into Czech history and culture. Students explore political history, economic forces, and the arts as intertextual dispositions that have given rise to the modern-day Czech Republic. Through a wide-ranging collection of readings and films students analyze the many struggles and triumphs that have forged the Czech national identity. This course satisfies the Elements of Culture requirement, "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL233 - The Magyars: Past and Present

General

Subject Code ~
CUL

Course Number ~
233

Course Name (appears on the transcript) ~
The Magyars: Past and Present

Content

Description
The Magyars were equestrian nomads who migrated from the east into the Carpathian Basis. Bringing their culture, including their unusual language, they eventually adopted Western social, economic and political institutions. This course explores the evolution of Hungarian culture from the origins of the Magyar state to the rise of the Hungarian Kingdom to today's smaller, more homogenous country. Students will examine conflict and cooperation between Hungary and other countries as well as the Magyars' relationships with minority populations within the country . This course also surveys representations of culture in literature and the performing and visual arts. This course is taught as a hybrid course with some class meetings and significant online work. This course satisfies the Elements of Culture requirement, "CA."

Credit Hours

Min
3

CUL235 - The US & International Perspectives

General

Subject Code ~
CUL

Course Number ~
235

Course Name (appears on the transcript) ~
The US & Int'l Perspectives

Content

Description
Open only to non-native speakers of English. This course satisfies the Elements of Culture requirement "CA".

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ENGL 100 or equivalent

CUL240 - Latin American Youth in Revolt

General

Subject Code ~
CUL

Course Number ~
240

Course Name (appears on the transcript) ~
Latin American Youth in Revolt

Content

Description
Will focus on the role played by young people in the production and dissemination of film in Hispanic countries and communities. In this course, students examine films from various Spanish and Lusophone countries and perspectives. As part of this learning process, the course explores what it means to be a young person and how youth has played an integral role in the construction and deconstruction of economics, politics, and social life within this region. Students will be encouraged to engage critically with these films in order to identify the techniques or "visual language" utilized to critique society and challenge simplistic outlooks on identity and political participation. Class time comprises of discussion questions and thematic readings related to weekly film screenings. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Sophomore Standing

CUL243 - Irish Cultures

General

Subject Code ~
CUL

Course Number ~
243

Course Name (appears on the transcript) ~
Irish Cultures

Content

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Sophomore Standing

CUL248 - Russia Then & Now

General

Subject Code ~
CUL

Course Number ~
248

Course Name (appears on the transcript) ~
Russia Then & Now

Content

Description
This course satisfies Elements of Culture requirement C.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL253 - Cuban Cultures

General

Subject Code ~
CUL

Course Number ~
253

Course Name (appears on the transcript) ~
Cuban Cultures

Content

Description
Despite the mere 90 miles separating that nation from the tip of Florida, the interactions between Cuba and the United States-and the rest of the world-have been fraught with conflict since Christopher Columbus landed on the island in 1492. This course examines the complex history and present of Cuba, from the Spanish conquest and colonial rule, to the post-colonial era, to the Cuban Revolution, to the fall of the Soviet Union, and finally to the present day. Through close readings of primary historical texts, Cuban literature and film, and political and cultural criticism, students explore Cubans of all kinds have defined themselves over the years, how the aesthetics of cinema inform that process, and finally, how this relatively small nation has left such an indelible mark on global politics. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL255 - Afr American & Caribbean Cultures

General

Subject Code ~
CUL

Course Number ~
255

Course Name (appears on the transcript) ~
Afr Amer & Carib Cultures

Content

Description
In his seminal piece, Africa for the Africans (1920) Marcus Garvey suggested that there was no difference between Blacks in the United States and Blacks in the Caribbean. He suggested that both African Americans and Caribbean peoples maintain the same heritage and culture despite the fact that each group occupied/s different nation spaces. This course explores to what extent Garvey's assertion is applicable: how similar is the Black culture of the United States to that of the Caribbean. This course examines the major aspects of both cultures: religion(s), philosophy, ethical principles, literature, government, economy, arts, customs, traditions, and ways of life. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing

CUL260 - Japan

General

Subject Code ~
CUL

Course Number ~
260

Course Name (appears on the transcript) ~
Japan

Content

Description
From the outset of the 21st century, worldwide interest in global cultures has grown interactions between people from different cultures have increased profoundly . With changes in technology, political systems, immigration patterns, and the global economy. This course examines the culture of Japan, and its interactions with the United States, focusing on Japanese: cultural history, and cultural patterns, world view, religion, language, education, art, architecture, drama, traditional sports, and contemporary issues. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

CUL261 - Australia & New Zealand

General

Subject Code ~
CUL

Course Number ~
261

Course Name (appears on the transcript) ~
Australia & New Zealand

Content

Description
This course examines the impacts of three waves of colonization to Australia and New Zealand: the development of plants and animals in isolation, the first arrivals of Australian Aboriginals and New Zealand Maori, and the settlements of European prisoners, whalers, missionaries, pastoralists, and gold miners. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL263 - France & French Caribbean Culture

General

Subject Code ~
CUL

Course Number ~
263

Course Name (appears on the transcript) ~
France & French Caribbean

Content

Description
This course introduces the students to the politics and culture of France and their influence on the Francophone Antilles. The course includes the geography and a capsulated history of France, as well as that of Haiti, French Guiana, Martinique, and Guadeloupe. Much emphasis is placed on the impact of the French Revolution of 1789 on the Haitian Independence movement and the political ramifications in Guadeloupe, Martinique, and French Guiana. Students examine the differences between the African and French influences in these countries, socially and economically, and examines the effects of these disparities as reflected in their music, art, and literature. This course satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL273 - East Africa

General

Subject Code ~
CUL

Course Number ~
273

Course Name (appears on the transcript) ~
East Africa

Content

Description
This course discusses pre-colonial, colonial, and post-colonial history, traditional cultures (art, religion, and customs), political organizations, and literature of East Africa. Until recently, East Africa included the following former British territories: Kenya, Tanzania, and Uganda. Today that geographic area includes also two former Belgian territories: Burundi and Rwanda. The East Africa course will focus on a particular country or a comparison of two countries in East Africa. In the Rwanda focus, for example, Rwanda will be used as a case study to illustrate the impact of colonialism on African societies and the increasing importance of human rights in international relations. At other times, the course may focus on Swahili culture in general, or on some other aspect of East Africa. This course satisfies Elements of Culture requirement "C."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL276 - Spain: Nation and Culture

General

Subject Code ~
CUL

Course Number ~
276

Course Name (appears on the transcript) ~
Spain: Nation and Culture

Content

Description
This course examines the complicated and much-debated question of what it means to be Spanish by exploring the diverse cultures and politics of culture that define modern Spain. From a hinterland of the Roman Empire, the region transformed dramatically with 700 years of Islamic rule, 500 years of Catholic monarchy and global empire, a devastating civil war, Franco's 40-year dictatorship, and the return to democracy in the 1970s. We trace how events, interactions, and cultural issues from Spain's past shape the present: religions, gender and family roles, political values, ethnic identities, immigration, and controversies about iconic traditions like bullfighting and flamenco. This course satisfies the Elements of Culture requirement (C) and the History (HIST) requirement for Business and Engineering; satisfies the Global Cultures (CUL) requirement and the History requirement (HIST) for Arts & Sciences. A&S students who take this course to meet the CUL and HIST requirements will need to complete an additional 3 credits of general electives.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL277 - Colombia: Nation and Culture

General

Subject Code ~
CUL

Course Number ~
277

Course Name (appears on the transcript) ~
Colombia: Nation and Culture

Content

Description
Colombia is a complex country of cultural, ethnic, and ecological diversity. This course introduces students to the indigenous, Spanish, and African foundations of modern Colombia's multi-ethnic regional identities. Using scholarship, memoirs, art, and film, we examine Colombians' responses to uneven development, inequality, political conflict, and violence to learn how they have created meaningful ways of life despite these challenges. Topics include: customs, values, and religion; arts, music, and sports; land, labor, and exports (gold, coffee, bananas, flowers, cocaine); violence, displacement, and human rights. This course satisfies Elements of Culture requirement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

CUL290 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics that are not offered on a regular basis are examined. Recent topics have been China, Southeast Asia, and a travel course to Italy and the low countries. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL291 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics that are not offered on a regular basis are examined. Recent topics have been China, Southeast Asia, and a travel course to Italy and the low countries. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL292 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL293 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. Recent topics have been China, Southeast Asia and a travel course to Italy and low countries. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL294 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL295 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
295

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. Recent topics have been China, Southeast Asia and a travel course to Italy and low countries. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL296 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
296

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL297 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
297

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. Recent topics have been China, Southeast Asia and a travel course to Italy and low countries. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL298 - Special Topics in Cultures- C/A

General

Subject Code ~
CUL

Course Number ~
298

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL299 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
299

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

CUL315 - International Practicum

General

Subject Code ~
CUL

Course Number ~
315

Course Name (appears on the transcript) ~
International Practicum

Content

Description
International Practicum involves pre-travel study and travel of 10-14 days duration during school breaks that are chaperoned and supervised by a business faculty member. These trips take students outside the geographic borders of the U.S. and provide learning experiences beyond the classroom environment. Programs and activities enhance the ability of students to comprehend, analyze, and grasp different cultural aspects that impact successful management of organizations in the global work environment. The major goal of the International Practicum is to allow undergraduate students opportunities to enhance their understanding of cross-cultural differences and the globalization of the work environment. The course may be repeated for credit if the location/topic varies. This course is cross-listed as BUS 315 and satisfies Elements of Culture requirement "CA."

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing and consent of instructor

CUL333 - Independent Study in Cultures

General

Subject Code ~
CUL

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Cultures

Content

Description
See "Independent Study" in the catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CUL334 - Indep Study in Cultures

General

Subject Code ~
CUL

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Cultures

Content

Description
See "Independent Study" in the catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

CUL390 - Special Topics in Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Max
3

Min
1

CUL391 - Special Topics Cultures - C/A

General

Subject Code ~
CUL

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Cultures/CA

Content

Description
Topics in cultures that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies the Elements of Culture and Aesthetics "CA" requirement.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

DATA410 - Introduction to Statistical Learning

General

Subject Code ~
DATA

Course Number ~
410

Course Name (appears on the transcript) ~
Intro to Statistical Learning

Content

Description
The primary goal of this course is to introduce the student to the basic concepts of regression and then expand to other models such as Principal Component Analysis, Decision Trees, Cluster Analysis, Classification, Logistic Regressions, and the more general GLM models. Other topics we explore include data exploration, data resolution, and communicating with data (including visualization). The course emphasizes applications and practical implementations of these models. Real data is used to illustrate concepts all throughout the course. Offered: Fall, even years

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete MATH 221 and CS 102 or 171

DATA470 - Data Science & Statistics Capstone

General

Subject Code ~
DATA

Course Number ~
470

Course Name (appears on the transcript) ~
Data Sci & Statistics Capstone

Content

Description
This is a comprehensive, project-based course where students under the guidance of an instructor complete several team projects, handling real data, answering questions, and giving presentations related to their project. Any models learned in previous courses, or new models, can be used and deployed. Students are encouraged and guided to discover new models and tools, as well. It is possible we will have "clients" invited to the class to give students data and questions to explore and work on. Students will present their findings to their clients and the class. Thus, the expectations and the pace of the course may change from time to time to accommodate clients' goals and expectations. Offered: Spring semester.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

EC105 - The Economics of Crime

General

Subject Code ~
EC

Course Number ~
105

Course Name (appears on the transcript) ~
Economics of Crime

Content

Description
This course does not satisfy the economics requirement in the Schools of Business and Engineering. This is an examination at the very basic introductory level of the market relationship between the amount of crime and the money spent on crime prevention and protection. A basic issue discussed in the course is that, given limited resources and an obvious recognition that crime imposes an economic cost, society must make choices involving the trade-off between the economic costs of crime and the costs of purchasing more crime protection. The opportunity cost principle is used to illuminate this and other issues including the impact of criminal activity on the Gross Domestic Product and the impact of changing the legal status of certain goods and services.

Credit Hours

Min
3

EC106 - Economics of Poverty/Discrimination

General

Subject Code ~
EC

Course Number ~
106

Course Name (appears on the transcript) ~
Eco of Poverty/Discrimin

Content

Description
This course does not satisfy the economics requirement in the Colleges of Business and Engineering. This is an introduction to the economic analysis of the problems of poverty and gender and race discrimination in the United States. Competing analytical perspectives are presented and evaluated. The course covers, among other topics, the analysis of government policies such as income maintenance, minimum wages, Affirmative Action, and education policies.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

EC111 - Principles of Microeconomics

General

Subject Code ~
EC

Course Number ~
111

Course Name (appears on the transcript) ~
Princ of Microeconomics

Content

Description
This is a study of the role of money, credit, and financial institutions in the U.S. economy. Topics include policies concerning depository institutions, the role of the Federal Reserve System, and monetary theory.

Credit Hours

Min
3

EC112 - Principles of Macroeconomics

General

Subject Code ~
EC

Course Number ~
112

Course Name (appears on the transcript) ~
Princ of Macroeconomics

Content

Description
Not open to students who have completed EC 117 or EC 205. This course continues the coverage of basic economic principles. Most of the course will focus on the economy as a whole-on macroeconomics. Topics include National Income Accounting, unemployment and inflation, money and banking, the issue of government deficits and the national debt, economic growth, and international trade and finance.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EC 111 or EC 201

EC190 - Special Topics in Economics

General

Subject Code ~
EC

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Economics

Content

Description
Topics in economics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

EC215 - Intermediate Macroeconomics

General

Subject Code ~
EC

Course Number ~
215

Course Name (appears on the transcript) ~
Intermed Macroeconomics

Content

Description
This is a theoretical and applicational view of aggregative economics. A survey of Classical, Keynesian, and neo-Keynesian theory leads into a study of macroeconomics and economic policies, particularly in the United States. Emphasis is on current national economic goals and the macro dynamics of inflation, growth, investment, and consumption as well as the problem. Public policies to promote economic stability and growth are discussed in detail.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete EC 202 or EC 112 or EC 207 or EC 117, and MATH 111 or MATH 123 or MATH 133

EC216 - Intermediate Microeconomics

General

Subject Code ~
EC

Course Number ~
216

Course Name (appears on the transcript) ~
Intermed Microeconomics

Content

Description
This is an intermediate course in economics covering the theoretical bases used by economists in explaining the behavioral patterns of consumers, firms, and industries. Problems, readings, and discussions are directed to the logical development, understanding, and application of theoretical models and concepts rather than pure exposition of static analysis.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EC 112 or EC 117 or EC 111, and MATH 111 or MATH 123 or MATH 133

EC230 - Business & the Global Environment

General

Subject Code ~
EC

Course Number ~
230

Course Name (appears on the transcript) ~
Business & Global Environment

Content

Description
This course focuses on political, cultural, economic, and social elements related to globalization of the business environment and covers a broad spectrum of issues. Learning outcomes are focused on the recognition and understanding of concepts and practices with respect to: the nature of regional economic integration, theories of international trade, the organization of global firms, cross-cultural marketing issues;, international legal frameworks and trade organizations, and ethics and social responsibility.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

EC240 - Football Without Helmets: Soccer/Rugby

General

Subject Code ~
EC

Course Number ~
240

Course Name (appears on the transcript) ~
Football w/o Helmets: Soc/Rug

Content

Description
This course examines two of the most popular professional team sports in the UK, football and rugby, focusing on the structural, cultural, and economics aspects of these two sports and on the differences and similarities to the four major US professional team sports leagues. Topics include, league structure, labor markets including the transfer market, relegation and promotion, and team objectives. No prior knowledge of the sports covered is necessary.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

EC251 - Eco of Soc Pol: Deciding How $ is Spent

General

Subject Code ~
EC

Course Number ~
251

Course Name (appears on the transcript) ~
Eco Soc Pol: Deciding How $

Content

Description
This course examines how economic theory assists in examining and explaining the social policy choices we all make as citizens. This course will cover policy issues such as welfare reform, healthcare, Social Security, and immigration, and their relationship of these issues with macro economics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

EC290 - Special Topics in Economics

General

Subject Code ~
EC

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Economics

Content

Description
Topics in economics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Sophomore Standing

EC292 - Special Topics in Economics

General

Subject Code ~
EC

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Economics

Content

Description
Topics in economics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

EC311 - Money & Banking

General

Subject Code ~
EC

Course Number ~
311

Course Name (appears on the transcript) ~
Money & Banking

Content

Description
This is a study of the role of money, credit, and financial institutions in the U.S. economy. Topics include policies concerning depository institutions, the role of the Federal Reserve System, and monetary theory.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EC 112 or EC 117 and MATH 111 or MATH 123 or MATH 133

EC317 - Management Issues for Professionals

General

Subject Code ~
EC

Course Number ~
317

Course Name (appears on the transcript) ~
Man Issues for Professionals

Content

Description
Managerial economics is part of the education of managers, engineers, and other professionals who are involved in decision-making. It provides a framework for assembling information and analyzing alternative decisions. The principle problems studied are those of optimization, forecasting, risk avoidance, and business decision making. Its principle tools are drawn from economic theory and statistics. Calculus and numerical calculations are used to develop and analyze the data that theory has demonstrated to be relevant.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 111 or MATH 123 or MATH 133

EC321 - Economic Development

General

Subject Code ~
EC

Course Number ~
321

Course Name (appears on the transcript) ~
Economic Development

Content

Description
This is an analysis of the characteristics and causes of underdevelopment in poor nations and of programs designed to stimulate economic growth. Offered in alternate years.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete EC 111 or EC 117

EC333 - Indep Study in Economics

General

Subject Code ~
EC

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Economics

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

EC334 - Indep Study in Economics

General

Subject Code ~
EC

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Economics

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

EC340 - The Economics of Sports

General

Subject Code ~
EC

Course Number ~
340

Course Name (appears on the transcript) ~
The Economics of Sports

Content

Description
This course applies the tools of economic theory to the market for professional sports entertainment. The course examines the market structure of the professional sports industry. Its principle tools are drawn from existing economic models that are used to examine both the hiring of athletes and selling the entertainment product. Issues in the industry that are analyzed include variable and dynamic ticket pricing, revenue sharing and competitive balance, wage determination models, salary caps, free agency, and the government's role in the professional sports industry.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EC 105 or EC 111 or EC 117 or EC 207

EC345 - Pharmaceutical Business Environment

General

Subject Code ~
EC

Course Number ~
345

Course Name (appears on the transcript) ~
Pharmaceutical Bus Enviro

Content

Description
This course will provide a basic overview of the pharmaceutical industry and will include discussion of the market structure and competitive environment, government policy, and the legal/regulatory environment.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete EC 101 or EC 111 or EC 117, and sophomore Standing

EC350 - Economics of Arts & Entertainment

General

Subject Code ~
EC

Course Number ~
350

Course Name (appears on the transcript) ~
Eco of Arts/Entertainment

Content

Description
This course applies the tools of economic theory to an analysis of the arts S entertainment industry. Key learning outcomes focus on the nature of supply and demand for art and artistic services, the contribution of the arts & entertainment sector to the economy, the economic functions of artists, the role of the nonprofit sector, and the role of public policy in providing a basis for cultural activitites and organizations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EC 111 or EC 105 or EC 106 or EC 117

EC355 - Public Finance

General

Subject Code ~
EC

Course Number ~
355

Course Name (appears on the transcript) ~
Public Finance

Content

Description
This course studies the effects of government expenditure, borrowing, and taxation upon resource allocation, national income, employment, and income distribution. Special emphasis is placed on the appropriate types of taxation and current and recent government budgetary choices.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EC 112 or EC 207

EC361 - Urban Economics

General

Subject Code ~
EC

Course Number ~
361

Course Name (appears on the transcript) ~
Urban Economics

Content

Description
This course is a study of the economic aspects of the social and political problems of the modern American city. Offered in alternate years.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete EC 111 or EC 117

EC366 - Labor Economics & Human Capital

General

Subject Code ~
EC

Course Number ~
366

Course Name (appears on the transcript) ~
Labor Eco & Human Capital

Content

Description
The object of the course is to educate students about the general characteristics of the labor market. In particular, students will learn how choices are made in labor markets and why individuals engage in work behavior. Students will be familiar with various human capital theories, in particular with how education, skills, and training help individuals enhance their earning potentials, and finally with the role of unions in labor markets.

Prerequisites are EC 101, 106 or 111.

3 credits

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete EC 111, EC 101 or EC 106

EC371 - International Monetary Economics

General

Subject Code ~
EC

Course Number ~
371

Course Name (appears on the transcript) ~
Intern Monetary Economics

Content

Description
This is an analysis of the balance of payments and the foreign exchange market including the theory of payments adjustment and policies to attain domestic international balance. The course examines the roles of the dollar, other currencies, and the International Monetary Fund in the process of international monetary reform.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EC 112 or EC 117

EC372 - International Trade

General

Subject Code ~
EC

Course Number ~
372

Course Name (appears on the transcript) ~
International Trade

Content

Description
This course studies the theory and practice of international trade and investment. Topics include comparative advantage, determination of the pattern of trade, current problems of commercial policy and trade negotiations, the role of the multinational corporation, and the theory of economic integration with special reference to the European Union.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete EC 111 or EC 117;

EC374 - Environmental Economics

General

Subject Code ~
EC

Course Number ~
374

Course Name (appears on the transcript) ~
Environmental Economics

Content

Description
This course examines the economic aspects of current environmental and natural resource issues. The problems of pollution control and resource management are examined from an economic perspective. Other topics may include the global population problem; energy dependence and the economy; the economics of recycling; and the impact of environmental policy on growth, jobs, and the quality of life.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EC 101 or EC 111 or EC 117

EC386 - Econometrics

General

Subject Code ~
EC

Course Number ~
386

Course Name (appears on the transcript) ~
Econometrics

Content

Description
This course covers methods of detecting and means of remedying violations of the assumptions of classical regression analysis. While only economic models are discussed, the methodology is multidisciplinary in nature.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete EC 111 or EC 112 and MATH 111 or MATH 123; or MATH 133 and BIS 220; or MATH 120; or PSY 207

EC390 - Special Topics in Economics

General

Subject Code ~
EC

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Economics

Content

Description
Topics offered depend upon student interest as well as particular interests of instructors. The course is offered as often as faculty time and student interest permit. Recent topics have included The Economics of Work and Pay, The Economics of Election Issues, Women in the Economy, and Great Ideas in Economics. May be repeated for credit if the topic differs.

Credit Hours

Max
3

Min
1

EC392 - Special Topics in Economics

General

Subject Code ~
EC

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Economics

Content

Description
Topics offered depend upon student interest as well as particular interests of instructors. The course is offered as often as faculty time and student interest permit. Recent topics have included The Economics of Work and Pay, The Economics of Election Issues, Women in the Economy, and Great Ideas in Economics. May be repeated for credit if the topic differs.

Credit Hours

Max
3

Min
1

EC394 - Special Topics in Economics

General

Subject Code ~
EC

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Economics

Content

Description
Topics offered depend upon student interest as well as particular interests of instructors. The course is offered as often as faculty time and student interest permit. Recent topics have included "The Economics of Work and Pay," "The Economics of Election Issues," "Women in the Economy," and "Great Ideas in Economics." May be repeated for credit if the topic differs.

Credit Hours

Max
3

Min
1

EC480 - Internship in Economics

General

Subject Code ~
EC

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Economics

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

EC481 - Internship in Economics

General

Subject Code ~
EC

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Economics

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

EC490 - Sem: Iss Contemporary Economics

General

Subject Code ~
EC

Course Number ~
490

Course Name (appears on the transcript) ~
Seminar: Iss Contemp Econ

Content

Description
This course involves discussions of various topics of interest in economics. Each student prepares a research paper on a topic of choice, under the direct supervision of a faculty member. Majors in other programs are most welcome.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
EC 112 or EC 117, plus six additional credit hours of 200 or 300 level economics

ED100 - Intro to Education: Elementary

General

Subject Code ~
ED

Course Number ~
100

Course Name (appears on the transcript) ~
Intro to Education: Elementary

Content

Description
This course is an introduction to educational practices and professional expectations for students planning to become elementary school teachers. Course content focuses on professional standards and dispositions, effectively teaching diverse student populations, and introduction to theories and strategies used throughout the Elementary Education major.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors only, or permission of instructor

ED120 - Intro to Education

General

Subject Code ~
ED

Course Number ~
120

Course Name (appears on the transcript) ~
Intro to Education

Content

Description
This course is an introduction to educational practices and expectations for students planning to enter the teaching profession. Course content focuses on an introductory overview of lesson planning with a particular focus on the Massachusetts Curriculum Frameworks, teaching diverse student populations, and the Professional Standards for Teachers. Teaching strategies to support learning across disciplines are also be explored. Ten hours of pre-practicum fieldwork and successful completion of fieldwork assignments are required for students intending to complete a Secondary Education Major. Five hours, minimum, for an experiential learning assignment is required for non-majors.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors only, or permission of instructor

ED190 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

ED201 - Principles & Problems of Education

General

Subject Code ~
ED

Course Number ~
201

Course Name (appears on the transcript) ~
Princ & Problems of Educ

Content

Description
This course is an exploration of the principles and issues associated with our educational system at all levels. Exploration will be completed through study within five broad units: history of public education, teaching and learning theories, education policy, meeting needs of all students, and teaching as a profession. Student performance is assessed through varied assignments, presentations, and active class participation.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors only, or permission of instructor

ED202 - Secondary Prepracticum I

General

Subject Code ~
ED

Course Number ~
202

Course Name (appears on the transcript) ~
Secondary Prepracticum I

Content

Description
Prepracticum experiences are designed to provide opportunity for preservice teachers to connect theory to practice, and demonstrate implementation of the Professional Standards for Teachers (PSTs). Students are placed in a local secondary classroom where they work actively with the classroom teacher and students to develop skills in the four PST standards: Curriculum, Planning, and Assessment, Teaching All Students, Family and Community Engagement, and the Professional Culture standard. In addition to active participation in the secondary classroom, students also complete assignments that are designed to develop pedagogical skills and yield data documenting dispositional qualities, and content knowledge. This data is used for guiding students in building the skills needed to be eligible for, and successful in, the full practicum.

In addition to the PSTs, this prepracticum is focused on gaining experience in content area teaching specific to a student's chosen major, grounded in the matching MA Curriculum Framework.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Secondary Education Majors Only, or permission of instructor

ED252 - Survey of Geography

General

Subject Code ~
ED

Course Number ~
252

Course Name (appears on the transcript) ~
Survey of Geography

Content

Description
This course introduces students to the diverse field of geography and resources for effectively implementing the MA Curriculum Framework for History and Social Science and National Geography Standards. Content focuses on physical and human geography with an emphasis on the nature and complexity of the human imprint on the Earth's surface. Coursework addresses major topical issues studied by geographers including: landforms, climate, population, culture, cities and government, and overview of the methods geographers use to interpret the world.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors only, or permission of instructor

ED275 - Teaching English Language Learners

General

Subject Code ~
ED

Course Number ~
275

Course Name (appears on the transcript) ~
Teach Engl Lang Learners

Content

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors Only, or permission of instructor

ED290 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

ED291 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ED301 - Principles & Problems of Education

General

Subject Code ~
ED

Course Number ~
301

Course Name (appears on the transcript) ~
Princ & Problems of Educ

Content

Description
This course is an exploration of the principles and issues associated with our educational system at all levels. Exploration will be completed through study within five broad units: history of public education, teaching and learning theories, education policy, meeting needs of all students, and teaching as a profession. Student performance is assessed through varied assignments, presentations, and active class participation.

Twenty-five hours of pre-practicum fieldwork and successful completion of fieldwork assignments are required for students intending to complete a Secondary Education Major.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors only, or permission of instructor

ED333 - Indep Study in Education

General

Subject Code ~
ED

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Education

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ED334 - Indep Study in Education

General

Subject Code ~
ED

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Education

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ED350 - Reading & Language Arts: Theory & Method

General

Subject Code ~
ED

Course Number ~
350

Course Name (appears on the transcript) ~
Read & Lang Arts:Theory/Meth

Content

Description
This course focuses on the teaching of children's reading, writing, speaking, listening, and viewing skills in grades 1-6. Students learn formal and informal methods of assessing reading development, and significant theories and practices for developing reading skills and comprehension. They gain knowledge of the principles and instructional practices for developing phonemic awareness and phonics. They learn about the development of listening, speaking, and reading vocabulary, and theories on the relationships between beginning writing and reading. Students also gain an understanding of the approaches and practices for developing skills in using writing tools, as well as theories of first and second language education and development. Lesson planning is introduced in the class; the Massachusetts Framework for English Language Arts and Literacy is used as a reference for lesson rationales. Student performance is assessed by exams, written assignments, and lesson plan designs.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrollment in Elementary Education Program or permission of or permission of instructor

ED351 - Elementary Prepracticum I

General

Subject Code ~
ED

Course Number ~
351

Course Name (appears on the transcript) ~
Elementary Prepracticum I

Content

Description
Prepracticum experiences are designed to provide opportunity for preservice teachers to connect theory to practice, and demonstrate implementation of the Professional Standards for Teachers (PSTs). Students are placed in a local elementary classroom where they work actively with the classroom teacher and students to develop skills in the four PST standards: Curriculum, Planning, and Assessment, Teaching All Students, Family and Community Engagement, and the Professional Culture standard. In addition to active participation in the elementary classroom, students also complete assignments that are designed to develop pedagogical skills and yield data documenting dispositional qualities, and content knowledge. This data is used for guiding students in building the skills needed to be eligible for, and successful in, the full practicum.

In addition to the PSTs, this prepracticum is focused on gaining experience with literacy teaching and learning, grounded in the ELA MA Curriculum Framework

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Elementary Education majors only, or permission of instructor

ED361 - Methods for Humanities 5-12

General

Subject Code ~
ED

Course Number ~
361

Course Name (appears on the transcript) ~
Methods for Humanities 5-12

Content

Description
The objectives for this methods course focus on developing a repertoire of teaching strategies, and professional resources for effectively implementing the MA Curriculum Framework for History and Social Science with middle and high school students. Assignments will focus on integrating literacy instruction in content areas drawing from the MA English Language Arts and Literacy Curriculum Framework. Coursework will also emphasize implementation of differentiation, UDL and approaches for meeting the needs of all leaners in developing social science and English curricula.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education majors only, ED 120 or permission of instructors

ED362 - Methods for Mathematics 5-12

General

Subject Code ~
ED

Course Number ~
362

Course Name (appears on the transcript) ~
Methods for Mathematics 5-12

Content

Description
The objectives for this methods course focus on developing a repertoire of teaching strategies, and professional resources for effectively implementing the MA Curriculum Framework for Mathematics with middle and high school students. Assignments will focus on integrating literacy instruction in the content area drawing from the MA English Language Arts and Literacy Curriculum Framework. Coursework will also emphasize implementation of differentiation, UDL and approaches for meeting the needs of all leaners in developing mathematics curriculum.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education majors only, ED 120 or permission of instructor

ED363 - Methods for Sciences 5-12

General

Subject Code ~
ED

Course Number ~
363

Course Name (appears on the transcript) ~
Methods for Sciences 5-12

Content

Description
The objectives for this methods course focus on developing a repertoire of teaching strategies, and professional resources for effectively implementing the MA Curriculum Framework for Science, and Technology /Engineering with middle and high school students. Assignments will also focus on integrating literacy instruction in the content area drawing from the MA English Language Arts and Literacy Curriculum Framework. Coursework will also emphasize implementation of differentiation, UDL and approaches for meeting the needs of all leaners in developing science curriculum.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education majors only, ED 120 or permission of instructor

ED365 - Special Educ: Principles & Practices

General

Subject Code ~
ED

Course Number ~
365

Course Name (appears on the transcript) ~
Sp Ed: Principles & Practices

Content

Description
This education course will engage students in the design and modification of curriculum and instructional materials for students with moderate disabilities in general education classrooms (preK-12). Students will learn ways to prepare preK-12 students with moderate disabilities to be successful in general education classroom environments through assessing and monitoring academic and behavioral progress, and learn to make instructional decisions grounded in evidence. Course content will also include definitions and legal aspects pertaining to special education, their role in general education settings, and the work of outside agencies that support students with moderate disabilities. Performance is assessed through assignments, quizzes, presentations, and active class participation.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Education Majors or Minors only, complete PSY 101, or permission of instructor

ED366 - Secondary Prepracticum II

General

Subject Code ~
ED

Course Number ~
366

Course Name (appears on the transcript) ~
Secondary Prepracticum II

Content

Description
Prepracticum experiences are designed to provide opportunity for preservice teachers to connect theory to practice, and demonstrate implementation of the Professional Standards for Teachers (PSTs). Students are placed in a local secondary classroom where they work actively with the classroom teacher and students to develop skills in the four PST standards: Curriculum, Planning, and Assessment, Teaching All Students, Family and Community Engagement, and the Professional Culture standard. In addition to active participation in the secondary classroom, students also complete assignments that are designed to develop pedagogical skills and yield data documenting dispositional qualities, and content knowledge. This data is used for guiding students in building the skills needed to be eligible for, and successful in, the full practicum. In addition to the PSTs, this prepracticum is focused on gaining experience in content area teaching specific to a student's chosen major, grounded in the matching MA Curriculum Framework.

This preprac requires design, and formally observed, implementation of a lesson reviewed by WNE content faculty, cooperating teacher, and WNE ED faculty.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Secondary Education Majors only, or permission of instructor

ED375 - Humanities, Science & Mathematics Method

General

Subject Code ~
ED

Course Number ~
375

Course Name (appears on the transcript) ~
Humanities/Science/Math Method

Content

Description
This methods course focuses on developing a repertoire of teaching strategies and professional resources for effectively implementing the MA Curriculum Framework for History and Social Science, Science and Technology /Engineering, and Mathematics with elementary and middle school students. Coursework includes development of content specific vocabulary, hands on application of concepts and emphasizes implementation of differentiation, UDL and other approaches for meeting the needs of all leaners when developing content area curriculum. Students are assessed through written assignments, lesson plans, and other discipline specific assignments.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Enrollment in Elementary Education Program or permission of or permission of instructor

ED376 - Elementary Prepracticum II

General

Subject Code ~
ED

Course Number ~
376

Course Name (appears on the transcript) ~
Elementary Prepracticum II

Content

Description
Prepracticum experiences are designed to provide opportunity for preservice teachers to connect theory to practice, and demonstrate implementation of the Professional Standards for Teachers (PSTs). Students are placed in a local elementary classroom where they work actively with the classroom teacher and students to develop skills in the four PST standards: Curriculum, Planning, and Assessment, Teaching All Students, Family and Community Engagement, and the Professional Culture standard. In addition to active participation in the elementary classroom, students also complete assignments that are designed to develop pedagogical skills and yield data documenting dispositional qualities, and content knowledge. This data is used for guiding students in building the skills needed to be eligible for, and successful in, the full practicum. In addition to the PSTs, this prepracticum is focused on gaining experience content area teaching in math science and history teaching and learning, grounded in the matching MA Curriculum Frameworks.

This preprac also requires lesson plan development and implementation of monthly arts integrated lessons with Glickman Elementary students, as well as design and implementation of a math station for the Glickman Family night.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Elementary Education Majors only, or permission of instructor

ED380 - Secondary Education Topics

General

Subject Code ~
ED

Course Number ~
380

Course Name (appears on the transcript) ~
Secondary Education Topics

Content

Description
This course provides a series of in-service professional development meetings for teacher candidates. Topics addresses include the use of technology in the classroom; legal issues in the classroom; student assessment; collaboration and co-teaching with other educators; and other contemporary topics relevant to becoming an effective educator.

Students gain experience with professional reflection by practicing with topics addressed in the course during the teaching practicum.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Secondary Education Majors only, complete ED 120 and ED 275, or permission of instructor

ED390 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

ED391 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ED403 - Methods-Teaching Secondary Schools

General

Subject Code ~
ED

Course Number ~
403

Course Name (appears on the transcript) ~
Meth of Teaching Sec Schl

Content

Description
This course centers on curriculum planning, instructional methods, student assessment, and classroom management for secondary school teaching. The course begins with concentration on the nature of curriculum and the teaching/learning process; students develop lessons grounded in the most current Massachusetts Curriculum Frameworks. Students apply a variety of instructional techniques, including Universal Design for Learning (UDL), culturally sustaining practices, and activities for teaching English Language Learners using the Sheltered Instruction Observation Protocol (SIOP) model. Students demonstrate design of teaching for all learners through microteaching assignments. Students also learn diverse approaches for assessing student learning through diagnostic, formative and summative strategies, and using assessment data to drive instruction decisions. Students examine a number of management tasks faced by teachers, and develop a personalized strategy for classroom management.Concurrent with this course, students complete their third pre-practicum (25 hours).

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Secondary Education Majors only, ED 120 and ED 275, or permission of instructor

ED409 - Practicum in Secondary Teaching

General

Subject Code ~
ED

Course Number ~
409

Course Name (appears on the transcript) ~
Practicum in Secondary Teach

Content

Description
This practicum, student teaching, is where students demonstrate evidence they have met the Professional Teaching Standards (PSTs) required for a Secondary Teacher (grades 5-12 or 8-12). Working with a MA licensed teacher and a WNE University faculty member, each student teacher participates in a minimum of four formal observations and three three-way meetings to support development of effective teaching practices, professional behaviors and participation in school culture during this 300 hour (minimum) experience. The Candidate Assessment of Performance (CAP) rubric is a primary outcome tool for identifying level of PST implementation. Sources of evidence of readiness to teach, and eligibility for licensure generated during this full-time teaching experience include: lesson plans grounded in MA Curriculum Frameworks, demonstration of diverse instructional techniques, equitable and safe classroom environment, assessment and work samples of secondary students, development and implementation of curriculum, communication with family and staff as well as products of other targeted assignments. ED 409 must be taken concurrently with ED 410.

This course and SW 412 may not both be counted toward the minimum 120 credit hours required for the degree. Includes 300 hours of full-time practicum fieldwork (student teaching) at a local elementary school.

Credit Hours

Min
9

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Secondary Education Majors only, ED 120 and ED 275, or permission of instructor

ED410 - Secondary Practicum Seminar

General

Subject Code ~
ED

Course Number ~
410

Course Name (appears on the transcript) ~
Secondary Practicum Seminar

Content

Description
This is a weekly seminar for students completing the secondary teaching practicum (ED 409). As a result of this course, students demonstrate ability to analyze and refine teaching strategies, design curriculum grounded in MA Curriculum Frameworks, classroom management effectiveness, and use of assessment data for making curriculum decisions. Professional issues and preparation for job search are also explored in this course. Students demonstrate above skills and stance as a reflective practitioner, through weekly classroom participation, guided written reflections, and completion of a professional portfolio.

ED 410 must be taken concurrently with ED 409.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Secondary Education Majors only, ED 120 and ED 275, or permission of instructor

ED415 - Moderate Disabilities 5-12 Practicum

General

Subject Code ~
ED

Course Number ~
415

Course Name (appears on the transcript) ~
Moderate Disabilities 5-12 Pra

Content

Credit Hours

Min
9

Requisites

Free Form Requirements
Education major only, or permission of instructor

ED416 - Moderate Disability Practicum Sem 5-12

General

Subject Code ~
ED

Course Number ~
416

Course Name (appears on the transcript) ~
Mod Disability Prac Sem 5-12

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Education major only, or permission of instructor

ED425 - Infusing Curr W/Arts, Health, & Tech

General

Subject Code ~
ED

Course Number ~
425

Course Name (appears on the transcript) ~
Infuse Curr W/Arts/Hlth/Techn

Content

Description
This course focuses on developing a repertoire of teaching strategies and professional resources for effectively integrating the arts, health, physical education, and technology into core subject areas using Massachusetts and National Curriculum Frameworks. Coursework includes hands-on application of concepts, and emphasizes implementation of differentiation, UDL and other approaches for meeting the needs of all leaners when developing curriculum. Students are assessed through written assignments, lesson plans, and other content-specific assignments.

Twenty-five hours of pre-practicum fieldwork and fieldwork assignments must be successfully completed at a local school as partial requirement for students intending to complete the Elementary Education Major.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Education Majors only, and complete ED 275, ED 350, ED 365, ED 375, or permission of instructor

ED471 - Moderate Disabilities Pre-K-8 Practicum

General

Subject Code ~
ED

Course Number ~
471

Course Name (appears on the transcript) ~
Mod Disabilities Pre-K- 8 Pra

Content

Credit Hours

Min
9

Requisites

Free Form Requirements
Education major only, or permission of instructor

ED472 - Moderate Disability Practic Sem Pre-K-8

General

Subject Code ~
ED

Course Number ~
472

Course Name (appears on the transcript) ~
Mod Disability Pra Sem Pre-K-8

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Education major only, or permission of instructor

ED479 - Elementary Teaching Practicum

General

Subject Code ~
ED

Course Number ~
479

Course Name (appears on the transcript) ~
Elementary Teaching Practicum

Content

Description
This practicum, student teaching, is where students demonstrate evidence they have met the Professional Teaching Standards (PSTs) required for an Elementary Teacher (grades 1-6). Working with a MA licensed teacher and a WNE University faculty member, each student teacher participates in a minimum of four formal observations and three three-way meetings to support development of effective teaching practices, professional behaviors and participation in school culture during this 300 hour (minimum) experience. The Candidate Assessment of Performance (CAP) rubric is a primary outcome tool for identifying level of PST implementation. Sources of evidence of readiness to teach, and eligibility for licensure generated during this full-time teaching experience include: lesson plans grounded in MA Curriculum Frameworks, demonstration of diverse instructional techniques, equitable and safe classroom environment, assessment and work samples of elementary students, development and implementation of curriculum, communication with family and staff as well as products of other targeted assignments. ED 479 must be taken concurrently with ED 480.

This course and SW 412 may not both be counted toward the minimum 120 credit hours required for the degree. Includes 300 hours of full-time practicum fieldwork (student teaching) at a local elementary school.

Credit Hours

Min
9

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Elementary Education Majors only, complete ED 275, ED 350, ED 365, and ED 375, or permission of instructor

ED480 - Elementary Practicum Seminar

General

Subject Code ~
ED

Course Number ~
480

Course Name (appears on the transcript) ~
Elementary Practicum Seminar

Content

Description
This is a weekly seminar for students completing the elementary teaching practicum (ED 479). As a result of this course, students demonstrate ability to analyze and refine teaching strategies, design curriculum grounded in MA Curriculum Frameworks, classroom management effectiveness, and use of assessment data for making curriculum decisions. Professional issues and preparation for job search are also explored in this course. Students demonstrate above skills and stance as a reflective practitioner through weekly classroom participation, guided written reflections, and completion of a professional portfolio. ED 480 must be taken concurrently with ED 479.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Elementary Education Majors only, complete ED 275, ED 350, ED 365, and ED 375, or permission of instructor

ED499 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
499

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ED510 - Educational Research

General

Subject Code ~
ED

Course Number ~
510

Course Name (appears on the transcript) ~
Educational Research

Content

Description
This course provides an overview of the salient aspects of educational research. The techniques of conceptualizing and conducting qualitative and quantitative research methodologies will be treated. Students will examine the strengths and weaknesses of different methodologies used in research. A main focus of the course is to help students read, understand, critique, and use published reports of research to design and present an original research project relevant to the student's field. Students will be assessed on collaborative participation measures, examinations, and individual research projects.

Credit Hours

Min
3

ED515 - Assessment: Theory, Strategy & Design

General

Subject Code ~
ED

Course Number ~
515

Course Name (appears on the transcript) ~
Assessmt: Theory, Stat & Desgn

Content

Description
This course is designed to provide in-service teachers with learning theories (constructivism, learning styles, multiple intelligences, and brain-compatible learning) as a foundation for broadening their classroom assessment repertoire. Authentic models of assessment will be compared to more traditional formats, and rubric design will be explored. Current issues in assessment will also be a focus of study and discussion in this class.

Credit Hours

Min
3

ED520 - Administrative Skills & Mentoring

General

Subject Code ~
ED

Course Number ~
520

Course Name (appears on the transcript) ~
Administrative Skills & Mentor

Content

Description
The purpose of this course is to train educators in a range of interpersonal and group process skills that can be utilized in educational organizations. Students will learn techniques for the mentoring relationship, with a focus on the skills that can help nurture another's personal and professional development, and with attention to the professional assessment process introduced by Massachusetts Department of Education regulations. Students will also explore ways to build better working relationships among peers, learn group analysis and facilitation techniques, negotiation skills, and team-building techniques.

Credit Hours

Min
3

ED525 - Adult & Professional Development

General

Subject Code ~
ED

Course Number ~
525

Course Name (appears on the transcript) ~
Adult & Professional Dev

Content

Description
This course examines key elements of adult development and socialization as they relate to an individual's professional life and growth during the early adulthood and middle adulthood periods. A range of developmental perspectives are considered, including the ways adults make meaning intellectually, psychologically, ethically, and socially. Interpersonal relations are examined, as well as issues of gender, ethnicity, and socioeconomic status. Students will be assessed by examinations and written assignments.

Credit Hours

Min
3

ED530 - Philosophy of Education

General

Subject Code ~
ED

Course Number ~
530

Course Name (appears on the transcript) ~
Philosophy of Education

Content

Description
This course is designed to provide an introduction to some of the major philosophical approaches to education, including theories of multicultural education. While exploring a number of schools of philosophy and their implications for education, students will be encouraged to examine each approach in terms of their own experiences. Critical thinking and clarification of a personal philosophy of education are fundamental to the course. Students will analyze the social and cultural elements that have had an impact on education in the modern world, including issues of ethnicity, socioeconomic status, gender, and religion. The conservative and dynamic functions of education will also be considered. Students will be assessed by examinations, class presentations, and written assignments.

Credit Hours

Min
3

ED533 - Indep Study in Education

General

Subject Code ~
ED

Course Number ~
533

Course Name (appears on the transcript) ~
Indep Study in Education

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
1

ED535 - Technology Edu & Intergration Class

General

Subject Code ~
ED

Course Number ~
535

Course Name (appears on the transcript) ~
Tech Edu & Integrat Class

Content

Description
Technology Education and Integration in the Elementary Classroom is a course designed to provide an in-depth analysis of technology uses in the K-6 educational setting. This course will entail telecommunications, computer software, multimedia technologies, and microcomputer technologies, and their use in teaching and learning. Upon completion of the course, students will be able to demonstrate technology uses for classroom instruction, management, and enrichment through all technology mediums, create uses for technology in all facets of the curriculum, and demonstrate technology uses for special needs students.

Credit Hours

Min
3

ED540 - Math Theory & Skill Ele Ed Teachers

General

Subject Code ~
ED

Course Number ~
540

Course Name (appears on the transcript) ~
Math Theory/Skills Elem Ed Tch

Content

Description
This course focuses on the skills and theory in mathematics within the context of problem solving, communication, connections, and reasoning. Different methodologies will be incorporated, including manipulatives, technology, children's literature, and journaling. Student performance will be assessed by written assignments and projects.

Credit Hours

Min
3

ED545 - Concepts & Methods Natural Sciences

General

Subject Code ~
ED

Course Number ~
545

Course Name (appears on the transcript) ~
Concept & Methods Nat Sci

Content

Description
Open only to students in MEEE program. This course examines the principal ideas and theories of the natural sciences. It begins with an introduction to the approach used by the natural sciences to study the universe, the scientific method. Eight major ideas in the natural sciences: the basic laws of physics governing forces and motion, atomic and kinetic theory, the big bang theory of the origin of the universe, patterns of chemical change and the periodic table, the structure of the earth and plate tectonics, biological evolution, the unity of all living things from cells to ecosystems, and DNA structure and function are then examined in the context of their historical development and the scientific method. Finally, the interaction between science and the real world through technology will be explored and the method of benefit/risk analysis will be introduced. Laboratory experiments, group work, and problem solving will be emphasized.

Credit Hours

Min
3

ED550 - Strat Teaching Reading & Lang Arts

General

Subject Code ~
ED

Course Number ~
550

Course Name (appears on the transcript) ~
Stra Teach Read/Lang Art

Content

Description
In this course students will develop a repertoire of effective strategies to assess and support language arts learning for elementary aged leaners, especially those struggling to meet grade level expectations. Participants will practice using a variety of assessments, analyzing data and matching assessment data to lessons that most strategically facilitate students? literacy skill development. Attention will be given to cultural, cognitive, and linguistic factors that impact literacy learning.

Credit Hours

Min
3

ED590 - Special Topics in Education

General

Subject Code ~
ED

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Education

Content

Description
Topics in education that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ED601 - Research for Teachers

General

Subject Code ~
ED

Course Number ~
601

Course Name (appears on the transcript) ~
Research for Teachers

Content

Description
This course will provide students with an overview on reading, critiquin2 and conducting educational research. The techniques of designing and conducting both qualitative and quantitative research methodologies will be studied and applied. Students will examine the strengths and weaknesses of different methodologies used in conducting and presenting educational research. Students will design, conduct and present an original research project relevant to the field of education.

Credit Hours

Min
3

ED602 - Principles Differentiating Instruct

General

Subject Code ~
ED

Course Number ~
602

Course Name (appears on the transcript) ~
Princ Differentiating Instruct

Content

Description
After defining the concept of differentiation, this course will focus on developing a model for differentiating instruction. Students will identify reasons for differentiating instruction; examine which aspects of curriculum should be differentiated, and develop criteria for determining fairness and effectiveness of differentiated instruction for all learners.

Credit Hours

Min
3

ED603 - Contemporary Learning Theories

General

Subject Code ~
ED

Course Number ~
603

Course Name (appears on the transcript) ~
Contemporary Learning Theories

Content

Description
This course is designed to engage students in studying learning theory as a foundation for understanding the teaching /learning process. Contemporary theory including: constructivism, learning styles, multiple intelligences, and brain-compatible learning, as well as more traditional theory such as behaviorism will be examined.

Credit Hours

Min
3

ED604 - Mentoring & Professional Developmen

General

Subject Code ~
ED

Course Number ~
604

Course Name (appears on the transcript) ~
Mentoring & Professional Dev

Content

Description
The purpose of this course is to examine approaches to mentoring and other forms of professional development that are utilized in educational organizations. Students will learn techniques of clinical supervision (data collection, constructive feedback...), strategies for initiating and sustaining a mentoring relationship, and other skills that support induction to the profession of teaching. Students will also explore effective resources and approaches

Credit Hours

Min
3

ED605 - Designing Culturally Sustaining Pedagogy

General

Subject Code ~
ED

Course Number ~
605

Course Name (appears on the transcript) ~
Designing Culturally Sust Peda

Content

Description
This course is designed to engage students in exploring the philosophical, historical, and theoretical . foundations of multicultural/ multilingual teaching and learning. Students will learn to develop curriculum and other instructional strategies that are responsive to racial, cultural, linguistic, and social class differences and that facilitate learning for all learners. Coursework will also investigate and apply a social justice perspective to the teaching/learning process.

Credit Hours

Min
3

ED606 - Assessment Theory & Design

General

Subject Code ~
ED

Course Number ~
606

Course Name (appears on the transcript) ~
Assessment Theory & Desig

Content

Description
This course is designed to provide as a foundation for broadening students' classroom assessment repertoire. Authentic models of assessment will be compared to more traditional formats; summative and formative assessment strategies will be examined. Students will learn to critique benefits and drawbacks of available assessment tools, as well as design their own. Current issues in assessment will also be a focus of study and discussion in this class.

Credit Hours

Min
3

ED610 - Literacy Strategy Struggling Reader

General

Subject Code ~
ED

Course Number ~
610

Course Name (appears on the transcript) ~
Literacy Strat Struggl Reader

Content

Description
In this course students will learn how to collect and analyze student data during literacy events. They will build a repertoire of strategies for fostering and strengthening children's abilities to fully participate in the processes of communicating and meaning making that fluent reading requires. Students will also examine cognitive, linguistic and cultural impacts on the literacy learning process.

Credit Hours

Min
3

ED611 - Integrate Curr Through Child's Lit

General

Subject Code ~
ED

Course Number ~
611

Course Name (appears on the transcript) ~
Integrate Curr Child's Lit

Content

Description
This course focuses on identifying quality children's literature to use in classroom settings from both a literary and issues approach. Students will develop a repertoire of strategies for using quality children's literature throughout the curriculum (e.g. math, science, social studies) and will learn to read children's literature with a content learning lens. Students will also practice creating lessons that effectively use literature to support and deepen content area learning.

Credit Hours

Min
3

ED612 - Infusing Content Areas w/Art-Elemen

General

Subject Code ~
ED

Course Number ~
612

Course Name (appears on the transcript) ~
Infuse Content w/Art-Elem

Content

Description
In this course students will develop a repertoire of activities that they can integrate into the elementary class curriculum allowing their students to experience art as another way to see, represent and interpret the world around them; another language in which to express their thoughts, ideas and feelings. Students will also experience ways to incorporate the purposes of art in societies, the contributions of various artists, and interpretation of art in to meet content area objectives.

Credit Hours

Min
3

ED613 - Deep Mathematical Content Knowledge

General

Subject Code ~
ED

Course Number ~
613

Course Name (appears on the transcript) ~
Mathematical Content Know

Content

Description
This course focuses on the concepts and skills key to the elementary mathematics curriculum . Students will engage in activities that will strengthen their own conceptual and factual mathematical knowledge. They will also practice designing lesson plans and assessment tools that effectively support and monitor development of students' mathematical understandings.

Credit Hours

Min
3

ED614 - Read/Write in Content Areas

General

Subject Code ~
ED

Course Number ~
614

Course Name (appears on the transcript) ~
Read/Write Content Areas

Content

Description
This course will engage students in reviewing content area learning objectives identified by local, state and national organizations. Students will then learn about and apply literacy best practices (primarily reading and writing, but other language arts will also be addressed) that best support students' achievement in meeting content area objectives.

Credit Hours

Min
3

ED615 - Ethics in Educational Practices

General

Subject Code ~
ED

Course Number ~
615

Course Name (appears on the transcript) ~
Ethics in Educational Pra

Content

Description
The focus of this course is contemporary issues in education, especially those involving adolescents and young adults, teacher employment and curriculum decisions. Using a case study approach students will learn about school law, applied ethics and educational policy

Credit Hours

Min
3

ED616 - Adolescent Literacy/Young Adult Lit

General

Subject Code ~
ED

Course Number ~
616

Course Name (appears on the transcript) ~
Adol Literacy/Young Adult

Content

Description
This course is designed to support students in examining the unique needs of the adolescent literacy leaner. Students will develop a repertoire of criteria for selecting appropriate literature for adolescents using both a literary and issues approach. Students will practice integrating literacy strategies and objectives with themes and issues present in selected young adult literature.

Credit Hours

Min
3

ED617 - Infusing Content Areas w/Art-Second

General

Subject Code ~
ED

Course Number ~
617

Course Name (appears on the transcript) ~
Infuse Content w/Art-Sec

Content

Description
In this course students will develop a repertoire of activities that they can integrate into the curriculum allowing their students to experience art as another way to see, represent and interpret the world around them; another language in which to express their thoughts, ideas and feelings. Students will also identify ways to incorporate the purposes of art in societies, the contributions of various artists, and interpretation of art in to meet content area objectives. Identification of characteristic features of art works from various historical periods, cultures, and genres can be incorporated in their content area will be another focus of course content

Credit Hours

Min
3

ED633 - Indep Study in Education

General

Subject Code ~
ED

Course Number ~
633

Course Name (appears on the transcript) ~
Indep Study in Education

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
1

EE205 - Electrical Engineering I

General

Subject Code ~
EE

Course Number ~
205

Course Name (appears on the transcript) ~
Electrical Engineering I

Content

Description
Students will learn about the static and dynamic behavior of resistors, capacitors, and inductors, the types of electrical energy sources used, the rules used to analyze electrical circuits, to analyze DC and AC circuits for power flow and response characteristics, how to analyze and design op amp circuits used in instrumentation applications, and how to analyze and test Combinational Logic Circuits as applicable to simple industrial and domestic control settings. Students will be able to model and mathematically describe circuit behavior under either static or dynamic conditions. To facilitate learning, this course makes extensive use of a circuit simulator and has a strong laboratory component (with a design project) to reinforce course material and develop laboratory skills with electronic instruments. Three class hours, three lab/ tutorial hours.

Credit Hours

Min
4

Requisites

Free Form Requirements
Pre- or corequisite: MATH 134, PHYS 134

EE206 - Electrical Engineering II

General

Subject Code ~
EE

Course Number ~
206

Course Name (appears on the transcript) ~
Electrical Engineering II

Content

Description
This course builds on the knowledge gained and analytical skills developed in EE 205. Students learn to analyze circuits in steady state with alternating voltages and currents including determining frequency responses of circuits and analyzing resonant circuits. Students learn to model transformers and include them in steady state analysis of AC circuits. Students use computer simulation as a tool for both transient and AC steady state analysis and use electrical test equipment to verify the theory learned. The methods of assessing student learning in this course are homework assignments, quizzes, tests, laboratory experiments, and short reports on experiments. Three class hours, three lab/tutorial hours.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE 205 or HONE 205
Pre- or Corequisite- MATH 326

EE212 - Fundamentals of Electro-Optics

General

Subject Code ~
EE

Course Number ~
212

Course Name (appears on the transcript) ~
Fundamentals of Electro-Optics

Content

Description
This course provides an in-depth exploration of the principles, operation, and applications of modern semiconductor devices. Students will learn about the fundamental physical concepts that govern semiconductor behavior, the design and function of various semiconductor devices, and the latest advancements in semiconductor technology. Key topics include basic semiconductor physics, energy bands, charge carriers, and the distinctions between intrinsic and extrinsic semiconductors as well as the theory and applications of PN junction diodes and nanoscale transistors. The course concludes with an overview of emerging trends in semiconductor technology, such as nanoelectronics, quantum devices, electro-optic devices, and semiconductor devices for renewable energy.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 236 or take concurrently

EE285 - Computational Techniques in C

General

Subject Code ~
EE

Course Number ~
285

Course Name (appears on the transcript) ~
Computational Techniques in C

Content

Description
This course provides an introduction to C programming and its application for solving problems in Electrical and Computer Engineering. The application topics include digital signal processing, controls, computational methods, finite difference analysis, root finding, optimization methods, and matrix methods. The course focuses predominantly on applications of the methods, and students are required to solve real world, engineering problem utilizing the C language to implement algorithms. Students will gain practical experience with these techniques dealing with real applications.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ENGR 105/HONE 105 or equivalent, and MATH 134

EE290 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
1

EE301 - Signals & Systems

General

Subject Code ~
EE

Course Number ~
301

Course Name (appears on the transcript) ~
Signals & Systems

Content

Description
This is the first of a sequence of two courses that is developed to introduce students to the concepts of signal modeling and the interaction of signals and linear systems. The focus is on the continuous-time cases such as voice and music. Students learn signal and system modeling concepts; time-domain analysis including concepts of convolution and superposition; system response to different stimuli including impulse and step; frequency-domain analysis including concepts of Fourier series, Fourier transforms, and

Laplace transforms; and applications of analytical tools such as signal representations, transfer functions, and filtering. Throughout the semester, MATLAB, a computational software program, is used to emphasize and to help in understanding important concepts of the course as well as a tool for solving homework problems. The methods of assessing student learning in this course are homework assignments, quizzes, in class exams, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 236
Pre- or Corequisite- EE 206

EE302 - Intro to Digital Signal Process

General

Subject Code ~
EE

Course Number ~
302

Course Name (appears on the transcript) ~
Intro to Digi Signal Process

Content

Description
This is essentially the continuation of EE 301 (Signals & Systems), which deals with continuous time signals and systems. In EE 302 (Introduction to Digital Signal Processing (DSP)) students develop the ability to apply mathematical techniques to analyze discrete time signals and systems. Students learn the fundamentals of sampling and the representation of discrete-time systems and signals, the z-transform, inverse z-transformation, discrete convolution, difference equations, discrete-time transfer functions, discrete Fourier transform (DFT), and its realization through the use of fast Fourier transform (FFT) algorithms. Students also learn to analyze discrete-time systems and design digital filters - Infinite Impulse Response (IIR), and Finite duration Impulse Response (FIR) digital filters. Additionally, students are also introduced to the random nature of signals. Throughout the semester, MATLAB, a computational software program, will be used to help in understanding important DSP concepts and for solving homework problems.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE 301

EE303 - Electronic Circuits

General

Subject Code ~
EE

Course Number ~
303

Course Name (appears on the transcript) ~
Electronic Circuits

Content

Description
This course is designed to introduce the behavior and modeling of nonlinear circuits and elements including operational amplifiers, diodes, bipolar junction transistors, and field-effect transistors. Students will learn the different methodologies to analyze circuits containing these components as well as design basic circuital building blocks in both analog and digital circuits. Computer aided simulation tools such as LTSpice will be used to reinforce key concepts. The primary methods of assessing student learning will be homework assignments, quizzes, exams, and design projects.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete EE 206 or equivalent
Corequisite- EE 319

EE312 - Fundamentals of Electro-Optics

General

Subject Code ~
EE

Course Number ~
312

Course Name (appears on the transcript) ~
Fundamentals of Electro-Optics

Content

Description
This course is designed to give the student an introduction to the electrical and optical physics of semiconductor devices. The goals of this course are to provide the student with (1) a working knowledge of semiconductor physics; (2) an understanding of the physical principles behind the most common semiconductor devices: pn-junction, field effect transistor, and bipolar transistor; (3) an understanding of the relationship between the circuit behavior and technological limitation of the scaling devices; (4) an understanding of the move to optical circuitry and its benefits to emerging technology fields such as silicon photonics; (5) explore how nano structures are used to generate, guide, and detect light for applications in communication systems, sensor design, and biomedical devices manufactured using semiconductor foundry techniques. Throughout the semester, the course will utilize the state of the art design software Lumerical to aid in learning and understanding of key concepts. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE-303 and EE-314

EE314 - Electromagnetic Fields & Waves

General

Subject Code ~
EE

Course Number ~
314

Course Name (appears on the transcript) ~
Electromag Fields & Waves

Content

Description
This is a one-semester introductory course in engineering electromagnetics. Emphasis is placed on time varying topics, such as transmission lines, Maxwell's equations, plane wave propagation, rectangular waveguides, and antennas. The basic concepts of electromagnetic fields, including field vectors, potentials, energy, boundary conditions and material effects will be discussed. Modern RF & microwave CAD such as Advanced Design System (ADS) or ANSYS DesignerRF will be used to design microstrip impedance matching networks. The primary methods of assessing student learning are homework assignments, exams, and a design project.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete EE 206 or equivalent

EE319 - Electrical Engineering Laboratory I

General

Subject Code ~
EE

Course Number ~
319

Course Name (appears on the transcript) ~
Elec Engineering Lab I

Content

Description
This course is the first of the three course sequence designed to give students hands-on experience in the use of laboratory instruments, collection and interpretation of data, and design and debugging of electrical analog and digital circuits. The course also serves to develop technical writing skills. Students investigate device characteristics according to the instructions given and compare with those expected from theory. They also design and build digital and analog electronic circuits and demonstrate by appropriate measurements that the circuits perform and meet the design specifications. Students prepare engineering reports for every laboratory experiment. The assessment is based on the quality of collected data and the written report.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Take EE 303 concurrently

EE320 - Analog Intregrated Circuits

General

Subject Code ~
EE

Course Number ~
320

Course Name (appears on the transcript) ~
Analog Intregrated Circuits

Content

Description
This course is designed to study the building blocks of analog integrated circuits utilizing both BJT and CMOS implementations. Students will learn to analyze and design basic reference circuits, current mirrors, gain cells, multistage amplifiers, differential amplifiers, and feedback amplifiers. Feedback and frequency analysis of amplifiers is emphasized. Students will utilize Cadence Electronic Design Automation tools to aid in the design and implementation of integrated circuit architectures. The primary methods of assessing student learning include homework, exams, and design projects.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE 303 or equivalent

EE322 - Elect Engineering Laboratory II

General

Subject Code ~
EE

Course Number ~
322

Course Name (appears on the transcript) ~
Elect Engineering Lab II

Content

Description
Required of all Electrical Engineering majors (electrical and computer concentrations). The course builds on the skills developed in EE 319 and the material learned in junior level courses. Students design, build, and test electronic circuits. Students also study the societal impact of electrical engineering, and contemporary issues related to electrical engineering. The assessment in this course is based on the quality of work done in the lab and the quality of the students' reports.

Credit Hours

Min
2

Requisites

Free Form Requirements
Complete EE 303 and EE 319 or take concurrently

EE323 - Electrical Engineering Lab IIA

General

Subject Code ~
EE

Course Number ~
323

Course Name (appears on the transcript) ~
Electrical Engine Lab IIA

Content

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE 303 and EE 319 or take concurrently

EE324 - Electrical Engineering Lab IIB

General

Subject Code ~
EE

Course Number ~
324

Course Name (appears on the transcript) ~
Electrical Engine Lab IIB

Content

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EE 303 and EE 319 or concurrently

EE333 - Indep Study in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Elect Engr

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

EE336 - Electrical Energy Systems

General

Subject Code ~
EE

Course Number ~
336

Course Name (appears on the transcript) ~
Electrical Energy Systems

Content

Description
This is an introductory level course in the generation, distribution, and management of electrical energy in the context of Green Engineering. This course presents the essential components and operating features of the power industry so that those components and features can be used effectively with emerging technologies of energy capture (i.e. solar, wind, geothermal, etc.). Upon successful completion of this course, students should have a firm understanding of the structure and components of an electrical power system and be able to model such systems and determine associated power flows, efficiencies, and energy budgets. Methods of assessment include homework, quizzes, tests, and a short paper on one of the topics related to the course.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 205 or HONE 205

EE338 - Electric Drives

General

Subject Code ~
EE

Course Number ~
338

Course Name (appears on the transcript) ~
Electric Drives

Content

Description
This is an introductory level course in electric drive systems. Advances in power electronics has permitted the development of adjustable-speed drives which provide significant performance and efficiency improvements in such areas as pumps and compressors, precision motion control in automated factories, wind-electric systems in generating electricity, and hybrid-electric vehicles, to name a few. To understand what a variable-speed drive is and how it works we will study such things as mechanical models related to rotating machines, review of associated electric circuits? theory, overview of electric converter operation, electro-mechanical energy conversion principles, and what needs to be considered in controlling the various types of electrical machines available to us. Successful completion of this course should provide the student with a strong background at the systems integration level of electric drives. Methods of assessment include homework, quizzes, and tests.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 205 or HONE 205

EE390 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE411 - Random Signals & Noise

General

Subject Code ~
EE

Course Number ~
411

Course Name (appears on the transcript) ~
Random Signals & Noise

Content

Description
This is a study of signals, both random and non-random. Topics include spectrum analysis, auto-correlation and cross-correlation functions, network analysis of systems with random signals and noise, applications to reception of radar, and space signals. A design project is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 301 or IE 212

EE414 - Microwave Engineering

General

Subject Code ~
EE

Course Number ~
414

Course Name (appears on the transcript) ~
Microwave Engineering

Content

Description
Fundamentals of modern microwave engineering with emphasis on microwave network analysis and circuit design. Microwave transmission lines, including waveguide, coax, microstrip, and stripline. Microwave circuit theory, including S-parameters, ABCD matrices, equivalent circuits, and signal flow graphs. Upon completion of this class the student will be able to analyze and design passive microwave circuits and components such as matching networks and microwave resonators, power dividers, directional couplers, and filters. Modern RF & microwave CAD such as ANSYS HFSS, ANSYS DesignerRF, Advanced Design System (ADS), and MATLAB will be used to emphasize and to help in understanding important concepts of the course. The primary methods of assessing student learning are homework assignments, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314 or equivalent

EE416 - Electromagnetic Compatibility

General

Subject Code ~
EE

Course Number ~
416

Course Name (appears on the transcript) ~
Electromagnetic Compatibility

Content

Description
Senior/graduate level course focusing on the application of electromagnetic field and wave principles to equipment and system design practices for the control of Electromagnetic Interference (EMI) and the achievement of Electromagnetic Compatibility (EMC). EMI requirements for electronic equipment, EMI measurements, non-ideal behavior of components, spectrum analysis, radiated emissions and susceptibility, conducted emissions, crosstalk, field-to-cable and cable-to-field coupling, electrostatic discharge, grounding, and system configuration. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 301 and EE 314 or the equivalents

EE421 - Electronics of Radio

General

Subject Code ~
EE

Course Number ~
421

Course Name (appears on the transcript) ~
Electronics of Radio

Content

Description
Design of a radio system for transmission of information; types of receivers, matching techniques, oscillators, design using 2-port network parameters, receiver and antenna noise, nonlinear effects, frequency synthesis. The goal of this course is to teach electrical engineering students the basic principles of radio-frequency circuit design and to illustrate how such circuits are used in communication systems. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 303

EE422 - Control Systems

General

Subject Code ~
EE

Course Number ~
422

Course Name (appears on the transcript) ~
Control Systems

Content

Description
This is an introductory course in analysis and design of linear control systems. Students learn to analyze mathematical models, systems representation and reduction, steady-state errors, time domain and frequency domain system performance and specifications, methods of testing for stability, Bode, root locus, and frequency domain response methods of linear time invariant systems. They also learn to design lead, lag, and lead-lag compensation techniques. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement system analysis and design techniques. The methods of assessing student learning in the course are quizzes, exams, homework assignments, and a project.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete EE 301 or ME 320 or BME 202

EE423 - Electronic Communication I

General

Subject Code ~
EE

Course Number ~
423

Course Name (appears on the transcript) ~
Electronic Communication I

Content

Description
This is an undergraduate level course in electronic (analog and digital) communication fundamentals. After successfully completing this course students know what analog and digital signaling methods (PAM, PCM, AM, PM, and FM) are available; know how to model, analyze, and design a basic communication link; know how to model, analyze, and design signals that go with the various signaling methods (including the theories on information measure, signal types and their measure, encoding schemes and Fourier analysis); are familiar with the various types of modulation and demodulation schemes available and are familiar with some of the practical applications of modulation/demodulation theory. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, a research project, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 302 and EE 303

EE425 - Linear Systems Theory

General

Subject Code ~
EE

Course Number ~
425

Course Name (appears on the transcript) ~
Linear Systems Theory

Content

Description

Students learn the fundamentals of the state space approach to systems modeling, analysis, and design. They also learn how to find the state space model of electrical, mechanical, and electromechanical systems. In addition students learn how to represent a system in the Jordan, first canonical, and phase variable forms, and to apply state space techniques to find zero input, zero state, and complete solution from state space system equations. In addition students learn to perform system stability, controllability, and observability tests and to design state and output feedback techniques as well as observer design technique. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement system analysis and design techniques. The methods of assessment of student learning in this course are homework assignments, quizzes, tests, and a design project.

Credit Hours

Min
3

Requisites

Free Form Requirements

Complete EE 301 or concurrently

EE427 - Electrical Engineering Lab III

General

Subject Code ~
EE

Course Number ~
427

Course Name (appears on the transcript) ~
Electrical Engineering Lab III

Content

Description

This is the third of a three-course laboratory sequence. The course consists of several experimental projects designed to provide students with hands-on experience in analysis and design of electronic circuits and systems. After successfully completing this course the students are able to design, construct, and test sensor, relay, and motor interface circuits. They will design these circuits as part of an interdisciplinary project where the team designs, constructs, and tests a vehicle. They will build a prototype circuit board and interface it to the sensors, relay circuit, motor, and power source on the vehicle and to the microprocessor prototype circuit board. Additional experiments in control theory will be performed. These experiments include modeling and simulation of a control system, and designing, building, and testing an analog PID motor speed controller. The students reinforce their technical writing ability by writing an engineering report on the results of each project. The assessment in this course is based on the quality of the work done in the laboratory and the written reports.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements

Complete EE 322

EE428 - Design of Analog Cmos

General

Subject Code ~
EE

Course Number ~
428

Course Name (appears on the transcript) ~
Design of Analog Cmos

Content

Description
The general objective of the course is to introduce students to the building blocks of analog integrated circuits; such as differential amplifiers, current sources and mirrors, gain stages, level shifters, active loads, and output stages. Throughout the semester, Spice will be used to emphasize and to help in understanding important concepts of the course as well as a tool for solving homework problems. The primary methods of assessing student learning are homework assignments, quizzes, exams, and a term project.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 303 or equivalent

EE430 - Nanoelectronics

General

Subject Code ~
EE

Course Number ~
430

Course Name (appears on the transcript) ~
Nanoelectronics

Content

Description
This course is a sequence in the study of microelectronic circuits by introducing students to the electrical properties of nanoscale CMOS transistors including both planar and FinFet MOSFETs as well as introduce students to the physical design of such technologies. The goals of this course are to provide the student with (1) a working knowledge of short channel effects in nanoscale transistors; (2) an understanding of the non-linear models used to capture quantum effects in transistors; (3) a perspective in electronic design automation (EDA) principles for the physical design of complex integrated circuits consisting of billions of nanoscale transistors; (4) an exposure to semiconductor foundry process design kits (PDKs) that aid and govern circuit designers in creating physical integrated circuit designs. Throughout the semester, the course will utilize the state of the art electronic design automation software Cadence to aid in learning and understanding of key concepts. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete EE 303

EE431 - Semi Conductor Dev Modeling Vlsi

General

Subject Code ~
EE

Course Number ~
431

Course Name (appears on the transcript) ~
Semi Cond Dev Mod Vlsi

Content

Description
This course will describe the operation and characteristics of high speed devices: submicron silicon MOSFETS and Silicon Bipolar Transistors for high frequency and VLSI applications. It will also cover the basics of MESFETS and some high speed devices using compound semiconductors (HEMTs and HBTs).

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 212 or equivalent

EE432 - Wireless Communication Techniques

General

Subject Code ~
EE

Course Number ~
432

Course Name (appears on the transcript) ~
Wireless Comm Techniques

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE-423

EE434 - Electri Energy Converters/Inverters

General

Subject Code ~
EE

Course Number ~
434

Course Name (appears on the transcript) ~
Ele Energy Convert/Invert

Content

Description
This is an introductory level course in electrical energy conversion devices such as generators, motors, and transformers. Students, on successful completion of this course, understand the structure and components of an electrical power system and are able to calculate MMF, flux, and flux density in electro-magnetic circuits as used in transformers and rotating electrical machines. Students develop good understanding of the causes of energy losses and are able to calculate these. They learn the need for power transformation; the constructional features of a power transformer; how to use test data for developing circuit model; and how to calculate regulation and efficiency of transformers. They understand principles of energy conversion and are able to calculate force, torque, and mechanical power and its relationship to electrical voltage current and power in generators and motors. Methods of assessment include homework, quizzes, tests, and a short paper on one of the topics related to the course.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 206 and EE 303

EE435 - Fuzzy Logic

General

Subject Code ~
EE

Course Number ~
435

Course Name (appears on the transcript) ~
Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. Students learn to analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and apply fuzzy logic theory to a variety of practical applications. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior or Senior Standing

EE436 - Project Research, Innovation & Dev

General

Subject Code ~
EE

Course Number ~
436

Course Name (appears on the transcript) ~
Pro Research, Innov & Dev

Content

Description
This course is designed to enable students to select and get started on the year-long senior project. Students are guided in formulating a proposal for a Senior Design Project in preparation for project completion in EE 440. Faculty and representatives from industry present ideas for Senior Design Projects and each student chooses a project, and develops and writes a project proposal with the supervision and guidance of a faculty advisor. In the process of completing this course, students learn about the product development process - they learn about researching the problem being addressed, how to innovate and develop products. Students will also learn about needs analysis, identifying business opportunities and assessing market potential. The assessment in this course is based primarily on measurements related to making progress towards project completion. This includes maintaining a log book, submitting brief reports and making a presentation at the end of the semester that documents the project status. Additionally, short papers on some of the issues discussed in presentations will also be graded and counted to the final grade.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior Standing

EE437 - Design Projects

General

Subject Code ~
EE

Course Number ~
437

Course Name (appears on the transcript) ~
Design Projects

Content

Description
Selected students work on an independent design project in the semester prior to enrolling in EE 440. This course is intended to provide students with the opportunity for a two-semester project sequence culminating with EE 440.

Credit Hours

Min
3

Requisites

Free Form Requirements
Corequisite EE 439, and approval of the department

EE438 - Project Research, Innovat & Develop

General

Subject Code ~
EE

Course Number ~
438

Course Name (appears on the transcript) ~
Project Res, Innov & Dev

Content

Credit Hours

Min
2

EE439 - Professional Preparation

General

Subject Code ~
EE

Course Number ~
439

Course Name (appears on the transcript) ~
Professional Preparation

Content

Description
This course is designed to make students aware of some of the problems, concerns, and responsibilities of an engineer as a professional. In addition, students are guided in formulating a proposal for a Senior Design Project in preparation for project work in EE 440. Students participate in discussions, led by invited speakers, on topics that enable students to write a professional resume, interview for a job, generate an effective and substantive report, and make an effective technical oral presentation. Students are exposed to ethical issues in engineering environments, made aware of the necessity of protecting their work with either patents, copyrights, trademarks, and trade secrets and of not infringing on the similar rights of others; and apprised of issues of safety in the work place, product liability, and the importance of professional registration. Faculty and representatives from industry present ideas for Senior Design Projects and each student chooses a project, and develops and writes a project proposal with the supervision and guidance of a faculty advisor. The assessment in this course is based on students' participation in discussions, the submission of short papers on some of the issues raised in the presentations, and the quality of project proposal and the oral presentation. One class hour.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior Standing

EE440 - Senior Design Projects

General

Subject Code ~
EE

Course Number ~
440

Course Name (appears on the transcript) ~
Senior Design Projects

Content

Description
This is a capstone design course that prepares students for entry-level positions. In this course each student works on an independent engineering project under the supervision of a faculty advisor. Students apply the design process and communicate the results of their project work in both oral and written form. Oral reports are presented before an assembly of faculty and students. Students apply engineering design principles either by working on a product, improving a product, or designing experiments to investigate causes of either an observed phenomenon or a problem in engineering. Students are required to demonstrate their achievements using appropriate laboratory exhibits. Students who select industry-sponsored projects have the opportunity of working with the industrial advisor in an actual engineering environment. The assessment in this course is based on the student's level of commitment demonstrated throughout the semester, the level of achievement attained, the recording of activities in a log book, and the quality of the written report and oral presentation. Meeting hours by arrangement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 439 and EE 436

EE445 - Neural Networks - Deep Learning

General

Subject Code ~
EE

Course Number ~
445

Course Name (appears on the transcript) ~
Neural Networks-Deep Learning

Content

Description
This is a study of the basic concepts of neural networks and its application in engineering. In this course students learn the single layer and multilayer neural network architectures; understand linear and nonlinear activation functions; and analyze and implement McCulloch-Pitts, Hebbian, Hopfield, Perceptron, Widrow-Hoff, ADALINE, delta, and back propagation, learning techniques with ample practical applications. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement neural network rules and paradigms. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 236 or concurrently

EE448 - Silicon Photonics

General

Subject Code ~
EE

Course Number ~
448

Course Name (appears on the transcript) ~
Silicon Photonics

Content

Description
This course is designed to introduce electrical engineering students to the emerging field of silicon photonics. Maxwell's equations at optical frequencies are the foundation for photonic integrated circuit design. This course will specifically explore how nano structures are used to generate, guide, and detect light for applications in communication systems, sensor design, and biomedical devices manufactured using silicon foundry techniques. Throughout the Semester the course will utilize the state-ofthe-art photonics integrated circuit design software Lumerical to aid in learning and understanding of key concepts. Upon completion of the course, students will be proficient in photonic integrated circuits from theory to practical design and implementation. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects

Cross-listed with EE 548

Credit Hours

Min
3

EE449 - Optical Engineering

General

Subject Code ~
EE

Course Number ~
449

Course Name (appears on the transcript) ~
Optical Engineering

Content

Description
This course introduces fundamental principles of classical and modern optics as well as key principles in optical design used in the engineering of optical systems. The course offers students an exposure to practical aspects of optical materials and devices. Key topics discussed include the propagation of light, lenses/aberrations, diffraction, interference, holography, and fiber optics. Active optical components are also discussed including light modulators, photodetectors, and LASERs. Key assessment techniques will include homework assignments, exams, and design projects. Project based learning will be a key component of the course ands student outcomes.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314 or equivalent

EE450 - Power Electronic

General

Subject Code ~
EE

Course Number ~
450

Course Name (appears on the transcript) ~
Power Electronic

Content

Description
This is a graduate level course- in the component's and systems used in power electronics, After successfully completing this course students will be familiar with the types and uses of electronic power components as well as understanding and using the various analytical methods (including state space and piecewise linear) that model components and systems that manage, control and convert electrical energy. Topics include (but are not limited to) semiconductor power devices (such as diodes, SCRs, power FETs, etc.), energy conversion methods (such as ac-dc, dc-dc, dc-ac, etc.), converter electronics (such as buck, boost, etc.), conversion efficiency, and output regulation. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussion, a research project and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 303 or equivalent

EE455 - RF + Microwave Wireless Systems

General

Subject Code ~
EE

Course Number ~
455

Course Name (appears on the transcript) ~
RF + Microwave Wireless

Content

Description
This course provides an introduction to various RF and microwave system parameters, architectures and applications; theory, implementation, and design of RF and microwave systems for communications, radar, sensor, surveillance; navigation, medical and optical applications. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE-314 or equivalent

EE456 - RF + Microwave Active Circuit Design

General

Subject Code ~
EE

Course Number ~
456

Course Name (appears on the transcript) ~
RF + Microwave Active Circ

Content

Description
The general objective of the course is to introduce students to the principles, processes and techniques used in the design and realization of modern microwave and wireless active circuits. The emphasis of the course is on the design of narrow band, broadband and low noise amplifiers employing three terminal devices such as HEMETs and HBTs. Detailed study of noise figure, noise parameters and stability of RF and microwave circuits using S-parameters. Modern RF & microwave CAD such as Advanced Design System (ADS), ANSYS DesignerRF, and MATLAB will be used to emphasize and to help in understanding important concepts of the course. The primary methods of assessing student learning are homework assignments, quizzes, exams, and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314 or equivalent

EE457 - Wave Transmission & Reception

General

Subject Code ~
EE

Course Number ~
457

Course Name (appears on the transcript) ~
Wave Transmission & Reception

Content

Description
This course is designed to provide seniors/first year graduate students in electrical engineering with a solid foundation in applied electromagnetics. A review of transmission lines and the design of impedance-matching techniques will be explored. The application of Maxwell's equations to guided waves and radiation will also be explored. The rectangular waveguide is studied. Following this an introduction to basic antenna theory is given. Basic properties of transmitting and receiving antennas and antenna arrays will be introduced. Applications in such diverse fields as wireless communication systems, Radar and microwave imaging will be emphasized. Modern RF & microwave CAD such as ANSYS HFSS, ANSYS DesignerRF, and MATLAB will be used to emphasize and to help in understanding important concepts of the course as well as a tool for solving homework problems. The primary methods of assessing student learning are homework assignments, exams, and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314

EE467 - Solid-State Electronic Devices

General

Subject Code ~
EE

Course Number ~
467

Course Name (appears on the transcript) ~
Solid-State Electronic Devices

Content

Description
The electrical behavior of solids, or the transport of charge through a metal or semiconductor, is determined by the properties of the electrons and the arrangement of atoms in the solid. Through a study of the crystal structure of electronic materials and the fundamentals of quantum electronics, students understand the band theory of solids, particle statistics, transport phenomena, and conductivity. Further study of equilibrium distributions in semiconductor carriers and p-n junctions leads to an understanding of solid state device operation. The investigation of practical devices such as diodes, IMPATT diodes, bipolar and junction field-effect transistors, and MOS

devices enhance students' knowledge of the design and analysis techniques used in real-world applications. A design project is required. Upon completion of this course students should be proficient in the use of solid-state component and system design techniques and are familiar with a wide variety of semiconductor device applications. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Cross-listed as EE-567

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 212

EE470 - Computer Control Systems

General

Subject Code ~
EE

Course Number ~
470

Course Name (appears on the transcript) ~
Computer Control Systems

Content

Description
Students learn the fundamentals of the state space approach to discrete systems modeling, analysis, and design. They also learn to find the discrete state space model of mechanical, electrical, and electromechanical systems, and learn how to solve zero input, zero state, and complete responses of a system represented in discrete state space form. In addition students learn to analyze stability, controllability, and observability of sampled data system and to design computer controlled feedback systems to improve performance of a discrete time systems as well as learning to design observers. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement discrete system analysis and design techniques.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete or concurrent EE 302
Corequisite- MATH 326

EE480 - Internship in Electrial Engineer

General

Subject Code ~
EE

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Electrial Engr

Content

Description
See "Internships".

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

EE482 - Electrical Engineering Research

General

Subject Code ~
EE

Course Number ~
482

Course Name (appears on the transcript) ~
Electrical Engineering Resrch

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing

EE485 - Signal Processing

General

Subject Code ~
EE

Course Number ~
485

Course Name (appears on the transcript) ~
Signal Processing

Content

Description
This is an introductory course in digital signal processing. It provides the requisite background for an entry-level position in signal processing or for advanced study. After successfully completing this course, students are familiar with the basic theory and practice of digital signal processing. The course covers the theory of digital signal processing with emphasis on the frequency domain description of digital filtering: discrete Fourier transforms, flowgraph and matrix representation of digital filters, digital filter design, fast Fourier transform, and effects of finite register length. Classroom lectures are supplemented with implementation exercises using MATLAB and the DSP Hardware.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 302 and MATH 236

EE490 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE491 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE495 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
495

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE501 - Adv Electrical Engr Analysis

General

Subject Code ~
EE

Course Number ~
501

Course Name (appears on the transcript) ~
Adv Electrical Engr Analysis

Content

Description
This course presents the underlying analysis techniques necessary for advanced study in electrical engineering. Topics include vector spaces, parametric equations, linear algebra, systems of differential equations, Fourier transforms, and the theory of functions of a complex variable including Taylor and Laurent series and residues and poles.

Credit Hours

Min
3

EE511 - Random Signals & Noise

General

Subject Code ~
EE

Course Number ~
511

Course Name (appears on the transcript) ~
Random Signals & Noise

Content

Description
This is a study of signals, both random and non-random. Topics include spectrum analysis, auto-correlation and cross-correlation functions, network analysis of systems with random signals and noise, applications to reception of radar, and space signals. A design project is required.

Credit Hours

Min
3

EE514 - Microwave Engineering

General

Subject Code ~
EE

Course Number ~
514

Course Name (appears on the transcript) ~
Microwave Engineering

Content

Description
Fundamentals of modern microwave engineering with emphasis on microwave network analysis and circuit design. Microwave transmission lines, including waveguide, coax, microstrip, and stripline. Microwave circuit theory, including S-parameters, ABCD matrices, equivalent circuits, and signal flow graphs. Upon completion of this class the student will be able to analyze and design passive microwave circuits and components such as matching networks and microwave resonators, power dividers, directional couplers, and filters. Throughout the semester, 5erenadeSV, Sonnet Lite and MATLAB will be used to emphasize and to help in understanding important concepts of the course as well as a tool for solving homework problems. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314, or equivalent

EE516 - Electromagnetic Compatibility

General

Subject Code ~
EE

Course Number ~
516

Course Name (appears on the transcript) ~
Electromagnetic Compatibility

Content

Description
Senior/graduate level course focusing on the application of electromagnetic field and wave principles to equipment and system design practices for the control of Electromagnetic Interference (EMI) and the achievement of Electromagnetic Compatibility (EMC). EMI requirements for electronic equipment, EMI measurements, non-ideal behavior of components, spectrum analysis, radiated emissions and susceptibility, conducted emissions, crosstalk, field-to-cable and cable-to-field coupling, electrostatic discharge, grounding, and system configuration. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

EE520 - Image Processing

General

Subject Code ~
EE

Course Number ~
520

Course Name (appears on the transcript) ~
Image Processing

Content

Credit Hours

Min
3

EE523 - Communications

General

Subject Code ~
EE

Course Number ~
523

Course Name (appears on the transcript) ~
Communications

Content

Description
This is a course in electronic (analog and digital) communication fundamentals. After successfully completing this course students know what analog and digital signaling methods (PAM, PCM, AM, PM, and FM) are available; know how to model, analyze, and design a basic communication link; know how to model, analyze, and design signals that go with the various signaling methods (including the theories on information measure, signal types and their measure, encoding schemes and Fourier analysis); are familiar with the various types of modulation and demodulation schemes available and are familiar with some of the practical applications of modulation/demodulation theory. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, a research project, and a final exam.

Cross-listed as EE 423

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 302 and EE 320

EE525 - Linear Systems Theory

General

Subject Code ~
EE

Course Number ~
525

Course Name (appears on the transcript) ~
Linear Systems Theory

Content

Description
Students learn the fundamentals of the state space approach to systems modeling, analysis, and design. They also learn how to find the state space model of electrical, mechanical, and electromechanical systems. In addition students learn how to represent a system in the Jordan, first canonical, and phase variable forms, and to apply state space techniques to find zero input, zero state, and complete solution from state space system equations. In addition students learn to perform system stability, controllability, and observability tests and to design state and output feedback techniques as well as observer design technique. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement system analysis and design techniques. The methods of assessment of student learning in this course are homework assignments, quizzes, tests, and a design project.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 301 or concurrently

EE528 - Design of Analog Cmos

General

Subject Code ~
EE

Course Number ~
528

Course Name (appears on the transcript) ~
Design of Analog Cmos

Content

Description
This course is a sequence in the study of microelectronic circuits by introducing students to the electrical properties of nanoscale CMOS transistors including both planar and FinFet MOSFETs as well as introduce students to the physical design of such technologies. The goals of this course are to provide the student with (1) a working knowledge of short channel effects in nanoscale transistors; (2) an understanding of the non-linear models used to capture quantum effects in transistors; (3) a perspective in electronic design automation (EDA) principles for the physical design of complex integrated circuits consisting of billions of nanoscale transistors; (4) an exposure to semiconductor foundry process design kits (PDKs) that aid and govern circuit designers in creating physical integrated circuit designs. Throughout the semester, the course will utilize the state of the art electronic design automation software Cadence to aid in learning and understanding of key concepts. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Cross-listed as EE-428

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 303 or equivalent

EE530 - Nanoelectronics

General

Subject Code ~
EE

Course Number ~
530

Course Name (appears on the transcript) ~
Nanoelectronics

Content

Description
This course is a sequence in the study of microelectronic circuits by introducing students to the electrical properties of nanoscale CMOS transistors including both planar and FinFet MOSFETs as well as introduce students to the physical design of such technologies. The goals of this course are to provide the student with (1) a working knowledge of short channel effects in nanoscale transistors; (2) an understanding of the non-linear models used to capture quantum effects in transistors; (3) a perspective in electronic design automation (EDA) principles for the physical design of complex integrated circuits consisting of billions of nanoscale transistors; (4) an exposure to semiconductor foundry process design kits (PDKs) that aid and govern circuit designers in creating physical integrated circuit designs. Throughout the semester, the course will utilize the state of the art electronic design automation software Cadence to aid in learning and understanding of key concepts. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 312 and EE 320;

EE531 - Semi Conductor Dev Modeling VLSI

General

Subject Code ~
EE

Course Number ~
531

Course Name (appears on the transcript) ~
Semi Conduct Dev Mod VLSI

Content

Description
This course will describe the operation and characteristics of high speed devices: submicron silicon MOSFETS and Silicon Bipolar Transistors for high frequency and VLSI applications. It will also cover the basics of MESFETS and some high speed devices using compound semiconductors (HEMTs and HBTs).

Credit Hours

Min
3

EE532 - Intro to Robotics

General

Subject Code ~
EE

Course Number ~
532

Course Name (appears on the transcript) ~
Intro to Robotics

Content

Credit Hours

Min
3

EE535 - Fuzzy Logic

General

Subject Code ~
EE

Course Number ~
535

Course Name (appears on the transcript) ~
Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. Students learn to analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and apply fuzzy logic theory to a variety of practical applications. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior or Senior Standing

EE544 - Analog Filter Design

General

Subject Code ~
EE

Course Number ~
544

Course Name (appears on the transcript) ~
Analog Filter Design

Content

Credit Hours

Min
3

EE545 - Neural Networks - Deep Learning

General

Subject Code ~
EE

Course Number ~
545

Course Name (appears on the transcript) ~
Neural Networks-Deep Learning

Content

Description
This is a study of the basic concepts of neural networks and its application in engineering. In this course students learn the single layer and multilayer neural network architectures; understand linear and nonlinear activation functions; and analyze and implement McCulloch-Pitts, Hebbian, Hopfield, Perceptron, Widrow-Hoff, ADALINE, delta, and back propagation, learning techniques with ample practical applications. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement neural network rules and paradigms. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 236 or concurrently

EE546 - Dynamics Systems

General

Subject Code ~
EE

Course Number ~
546

Course Name (appears on the transcript) ~
Dynamics Systems

Content

Credit Hours

Min
3

EE548 - Silicon Photonics

General

Subject Code ~
EE

Course Number ~
548

Course Name (appears on the transcript) ~
Silicon Photonics

Content

Description
This course is designed to introduce electrical engineering students to the emerging field of silicon photonics. Maxwell's equations at optical frequencies are the foundation for photonic integrated circuit design. This course will specifically explore how nano structures are used to generate, guide, and detect light for applications in communication systems, sensor design, and biomedical devices manufactured using silicon foundry techniques. Throughout the semester the course will utilize the state-ofthe-art photonics integrated circuit design software Lumerical to aid in learning and understanding of key concepts. Upon completion of the course, students will be proficient in photonic integrated circuits from theory to practical design and implementation. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

EE549 - Optical Engineering

General

Subject Code ~
EE

Course Number ~
549

Course Name (appears on the transcript) ~
Optical Engineering

Content

Description
This course introduces fundamental principles of classical and modern optics as well as key principles in optical design used in the engineering of optical systems. The course offers students an exposure to practical aspects of optical materials and devices. Key topics discussed include the propagation of light, lenses/aberrations, diffraction, interference, holography, and fiber optics. Active optical components are also discussed including light modulators, photodetectors, and LASERs. Key assessment techniques will include homework assignments, exams, and design projects. Project based learning will be a key component of the course ands student outcomes.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314 or equivalent

EE550 - Power Electronic

General

Subject Code ~
EE

Course Number ~
550

Course Name (appears on the transcript) ~
Power Electronic

Content

Description
This is a graduate level course in the component's and systems used in power electronics. After successfully completing this course students will be familiar with the types and uses of electronic power components as well as understanding and using the various analytical methods (including state space and piecewise linear) that model components and systems that manage, control, and convert electrical energy. Topics include (but are not limited to) semiconductor power devices (such as diodes, SCRs, power FETs, etc.), energy conversion methods (such as ac-dc, dc-dc, dc-ac, etc.), converter electronics (such as buck, boost, etc.), conversion efficiency, and output regulation. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussion, a research project, and a final exam.

Credit Hours

Min
3

EE555 - RF + Microwave Wireless Systems

General

Subject Code ~
EE

Course Number ~
555

Course Name (appears on the transcript) ~
RF + Microwave Wireless

Content

Description
This course provides an introduction to various RF and microwave system parameters, architectures and applications; theory, implementation, and design of RF and microwave systems for communications, radar, sensor, surveillance; navigation, medical and optical applications. The primary methods of assessing student learning are homework assignments, quizzes, exams and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314, or equivalent

EE556 - RF + Microwave Active Circuit Design

General

Subject Code ~
EE

Course Number ~
556

Course Name (appears on the transcript) ~
RF + Microwave Active Circ

Content

Description
The general objective of the course is to introduce students to the principles, processes and techniques used in the design and realization of modern microwave and wireless active circuits. The emphasis of the course is on the design of narrow band, broadband and low noise amplifiers employing three terminal devices such as HEMETs and HBTs. Detailed study of noise figure, noise parameters and stability of RF and microwave circuits using S-parameters. Modern RF & microwave CAD such as Advanced Design System (ADS), ANSYS DesignerRF, and MATLAB will be used to emphasize and to help in understanding important concepts of the course. The primary methods of assessing student learning are homework assignments, quizzes, exams, and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE-314, or equivalent

EE557 - Wave Transmission & Reception

General

Subject Code ~
EE

Course Number ~
557

Course Name (appears on the transcript) ~
Wave Transmission & Recep

Content

Description
This course is designed to provide seniors/first year graduate students in electrical engineering with a solid foundation in applied electromagnetics. A review of transmission lines and the design of impedance-matching techniques will be explored. The application of Maxwell's equations to guided waves and radiation will also be explored. The rectangular waveguide is studied. Following this an introduction to basic antenna theory is given. Basic properties of transmitting and receiving antennas and antenna arrays will be introduced. Applications in such diverse fields as wireless communication systems, Radar and microwave imaging will be emphasized. Modern RF & microwave CAD such as ANSYS HFSS, ANSYS DesignerRF, and MATLAB will be used to emphasize and to help in understanding important concepts of the course as well as a tool for solving homework problems. The primary methods of assessing student learning are homework assignments, exams, and design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314

EE567 - Solid-State Electronic Devices

General

Subject Code ~
EE

Course Number ~
567

Course Name (appears on the transcript) ~
Solid-State Electronic Devices

Content

Description
The electrical behavior of solids, or the transport of charge through a metal or semiconductor, is determined by the properties of the electrons and the arrangement of atoms in the solid. Through a study of the crystal structure of electronic materials and the fundamentals of quantum electronics, students understand the band theory of solids, particle statistics, transport phenomena, and conductivity. Further study of equilibrium distributions in semiconductor carriers and p-n junctions leads to an understanding of solid state device operation. The investigation of practical devices such as diodes, IMPATT diodes, bipolar and junction field-effect transistors, and MOS devices enhance students' knowledge of the design and analysis techniques used in real-world applications. A design project is required. Upon completion of this course students should be proficient in the use of solid-state component and system design techniques and are familiar with a wide variety of semiconductor device applications. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 212

EE570 - Computer-Controlled Systems

General

Subject Code ~
EE

Course Number ~
570

Course Name (appears on the transcript) ~
Computer Control Systems

Content

Description
Students learn the fundamentals of the state space approach to discrete systems modeling, analysis, and design. They also learn to find the discrete state space model of mechanical, electrical, and electromechanical systems, and learn how to solve zero input, zero state, and complete responses of a system represented in discrete state space form. In addition students learn to analyze stability, controllability, and observability of sampled data system and to design computer controlled feedback systems to improve performance of a discrete time systems as well as learning to design observers. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement discrete system analysis and design techniques.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete or concurrent EE-302
Corequisite- MATH 326

EE575 - Adv Motion Controls

General

Subject Code ~
EE

Course Number ~
575

Course Name (appears on the transcript) ~
Adv Motion Controls

Content

Description
This course studies advanced industrial motion control using various types of drives. Motor sizing, driver selection and electro mechanical systems design is the main emphases of this course: Topics covered include: . design of motion control systems based on DC motors, brushless DC motors, Indueiion motors, three phase motors and stepper motors. the operating principles of these motors, their control dhd pros and cons for different applications are discussed. Variety of motor drive hardware and software including variable frequency drives are discussed and demonstrated.

Credit Hours

Min
3

EE580 - Signal Processing

General

Subject Code ~
EE

Course Number ~
580

Course Name (appears on the transcript) ~
Signal Processing

Content

Credit Hours

Min
3

EE590 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE591 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE601 - Adv Electrical Engineering Analysis

General

Subject Code ~
EE

Course Number ~
601

Course Name (appears on the transcript) ~
Adv Electrical Engr Analy

Content

Description
This course presents the underlying analysis techniques necessary for advanced study in electrical engineering. Topics include vector spaces, parametric equations, linear algebra, systems of differential equations, Fourier transforms, and the theory of functions of a complex variable including Taylor and Laurent series and residues and poles.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EE614 - Advanced Electromagnetics

General

Subject Code ~
EE

Course Number ~
614

Course Name (appears on the transcript) ~
Adv Electromagnetics

Content

Description
This is a study of the microscopic and macroscopic properties of magnetic and insulating materials. Topics include gyromagnetism, permeability tensor, reflection and refraction, skin effect, antenna analysis, and relativistic electrodynamics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314, or equivalent

EE615 - Antenna Theory & Design

General

Subject Code ~
EE

Course Number ~
615

Course Name (appears on the transcript) ~
Antenna Theory & Design

Content

Description
The course introduces the fundamental principles of antenna theory and applies them to antennas used in wireless communications systems and other advanced antenna systems. Topics include: An introduction to EM wave equations and their solutions in unbounded space as plane and spherical waves; EM radiation; antenna concepts such as radiated power, gain, pattern, radiation resistance; basic antenna elements including dipoles, loops, microstrip antennas, and traveling-wave antennas; antenna arrays; microwave aperture antennas; and receiving antenna theory.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE-457 or equivalent

EE616 - Intro to Numerical Electromagnetics

General

Subject Code ~
EE

Course Number ~
616

Course Name (appears on the transcript) ~
Intro to Numer Electromag

Content

Description
Introduction to numerical methods in electromagnetics including finite difference, finite element, and integral equation; methods for static, harmonic and time dependent fields; use of commercial software for analysis and design purposes; and applications to open and shielded transmission lines, antennas, cavity resonances, and scattering.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 614

EE621 - Coherent Optics

General

Subject Code ~
EE

Course Number ~
621

Course Name (appears on the transcript) ~
Coherent Optics

Content

Description
Modern optical techniques rely heavily on the analysis of the coherent properties of light and the Fourier transform to explain the diffraction and interference associated with optical wave propagation and image formation. Beginning with a review of basic electromagnetic wave principles and Maxwell's equations, students develop an understanding of those modern optical techniques used to analyze coherence, polarization, interference, and diffraction. A study of light quanta and optical spectra leads to an understanding of laser operation, and throughout the course, theoretical analysis is supplemented with discussions of such applications as holography, optical data processing, optical sensing, fiber lasers, and other current topics. A design project is required. Upon completion of the course, students should be able to understand the theory and analysis techniques used in modern optical systems and develop some proficiency in the design and implementation of simple optical systems for applications. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 314 or equivalent

EE625 - Stochastic Processes/Kalman Filter

General

Subject Code ~
EE

Course Number ~
625

Course Name (appears on the transcript) ~
Stochastic Proc/Kalman Filter

Content

Description
This course covers the basic principles of stochastic processes and control systems. Students learn and review summary state space representations for continued and discrete systems, random variables, and processes. In addition they learn random processes, moments of random processes, and statistical properties of outputs of stochastic systems as well as analysis and design of Kalman filters. Students also learn to use MATLAB computational software to understand new concepts and to perform and implement system analysis and design techniques. The methods of assessing student learning in this course are homework assignments, classroom discussions, design projects, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EE650 - Adv Digital Signal

General

Subject Code ~
EE

Course Number ~
650

Course Name (appears on the transcript) ~
Adv Digital Signal

Content

Description
This is an advanced study of digital signal processing and its applications to speech, radar, and image processing. Topics include least squares filter design, adaptive filters, time and frequency-domain analysis of two-dimensional (2D) signals and systems; 2D DFT and Z-transform; theory; and design of 2D filters; homomorphic signal processing; and spectral estimation. Some computer programming and simulation required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ENGR-212 or IE-212; EE-485 or equivalent

EE651 - Power Electronics

General

Subject Code ~
EE

Course Number ~
651

Course Name (appears on the transcript) ~
Power Electronics

Content

Description
This is a course in the components and systems used in power electronics, After successfully completing this course students will be familiar with the types and uses of electronic power components as well as understanding and using the various analytical methods (including state space and piecewise linear) that model components and systems that manage, control, and convert electrical energy. Topics include (but are not limited to) semiconductor power devices (such as diodes, SCRs, power FETs, etc.), energy conversion methods (such as ac-dc, dc-dc, dc-ac, etc.), converter electronics (such as buck, boost, etc.), conversion efficiency, and output regulation. The methods of assessing student learning in this course are homework assignments, quizzes, classroom discussion, a research project, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE 303 or equivalent

EE667 - Adv Electrical Materials

General

Subject Code ~
EE

Course Number ~
667

Course Name (appears on the transcript) ~
Adv Elect Materials

Content

Description
This is a study of electrical materials. Topics include crystal structure of solids, quantum theory and mechanics of solids, semiconductor physics, magnetic theory and materials, modern devices, integrated electronic materials and devices, and materials and devices for direct energy conversion. A design project is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EE-212, EE-302 and EE-314; or equivalent

EE670 - AI: Applied Neural Networks and Machine

General

Subject Code ~
EE

Course Number ~
670

Course Name (appears on the transcript) ~
AI: Applied Neural Networks

Content

Description
This course concentrates on application of neural networks in the field of engineering. In this course students will learn vision-based applications of Perceptron algorithm as well as back propagation. Linearly and nonlinearly separable clustering and classification problems will be covered. This course is project based and concentrates on the latest applied Neural Networks and Machine Learning algorithms. All concepts are heavily reinforced using MATLAB, the main computational platform.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EE671 - AI: Machine Learning - Concepts

General

Subject Code ~
EE

Course Number ~
671

Course Name (appears on the transcript) ~
AI: Machine Learning - Concep

Content

Description
This course focuses on AI concepts such as Data Exploration, Single and Multivariate Parametric and Non-Parametric methods of regression and classification tasks. Students will learn the theory that underlies these algorithms and implement them using popular machine learning packages such as Python with scikit-learn and MATLAB. During the final project, students will implement multiple algorithms and learn how to select the best algorithm with the optimized hyperparameters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EE672 - AI: Machine Learning - Applications

General

Subject Code ~
EE

Course Number ~
672

Course Name (appears on the transcript) ~
AI: Machine Learning - Applic

Content

Description
This course focuses on Artificial Intelligence application packages such as Data exploration, Natural Language Processing, Support Vector Machine, Reinforcement Learning, Artificial Neural Networks (ANNs) and Computer Vision and Deep Learning. Students will learn the theory and applications of a variety of algorithms. These algorithms will be implemented using Python and MATLAB software. As the final project, students will apply a combination of algorithms to a specific application and develop an end to end solution

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EE675 - Adv Motion Controls

General

Subject Code ~
EE

Course Number ~
675

Course Name (appears on the transcript) ~
Adv Motion Controls

Content

Description
This course studies advanced industrial motion control using various types of drives. Motor sizing, driver selection and electro mechanical systems design is the main emphases of this course: Topics covered include: . design of motion control systems based on DC motors, brushless DC motors, Indueiion motors, three phase motors and stepper motors. the operating principles of these motors, their control dhd pros and cons for different applications are discussed. Variety of motor drive hardware and software including variable frequency drives are discussed and demonstrated.

Credit Hours

Min
3

EE676 - AI: Applied Fuzzy Logic AI: Applied Fuzzy Logic

General

Subject Code ~
EE

Course Number ~
676

Course Name (appears on the transcript) ~
AI: Applied Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. In this course students will learn to analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and will learn to apply fuzzy logic theory to a variety of practical applications. Students will also learn to use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. Machine Controls will be the application.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

EE677 - Adv Cont Discret Syst Analy & Contr

General

Subject Code ~
EE

Course Number ~
677

Course Name (appears on the transcript) ~
Adv Cont Disc Syst Analy

Content

Description
In modern control theory, the dynamics of the processes are described by a series of first-order differential equations in matrix form as compared to the transfer functions in classical control theory (frequency domain approach to analysis and design). State-space concepts (modern control theory) have made an enormous impact on the analysis and design of controllers for complex multi-input/multi-output systems. In recent years, modern control theory has advanced rapidly and is now recognized as an indispensable and practical technique for the design and analysis of feedback control problems. In this course students learn continuous and discrete modern state space analysis and design techniques as applied to a variety of mechatronic systems. This course introduces students to: modeling; eigenvalues and eigenvectors; controllability and observability; design of controllers using state and output feedback; and observer design. This Course will be offered as an on line / optional in class course. The course will count towards one of the required EE courses for the Mechatronics concentration.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Engineering Standing

EE678 - Lin/Nonlin System Modeling & Simul

General

Subject Code ~
EE

Course Number ~
678

Course Name (appears on the transcript) ~
Lin/Nonlin Syst Mod & Sim

Content

Description
In this course students learn the fundamentals of modeling mechanical, electrical and electromechanical systems. MATLAB and Simulink will be used to model linear and nonlinear systems. Simulink is a multi-domain environment for modeling complex systems and is used nationally and internationally by many companies. A variety of techniques including frequency domain and state space methods will be utilized to model mechanical and electromechanical systems. Many different feedback control techniques including gain scheduling will be studied to modify and improve systems performance and stability. This course will be offered as an on line/ optional in class course. The course will count towards one of the required EE courses for the Mechatronics concentration.

Credit Hours

Min
3

Requisites

Free Form Requirements
Gradudate Standing

EE685 - Electrical Engineering Project

General

Subject Code ~
EE

Course Number ~
685

Course Name (appears on the transcript) ~
Electrical Engineer Proj

Content

Description
Students must select a project faculty advisor and obtain topic approval prior to registration for this course. This is an independent engineering project under the supervision of a project faculty advisor. The design process is emphasized. Progress reports and a final written report are required. An oral presentation and defense of the project is made before a faculty committee.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EMGT 605 or EMGT 648; and 12 credit hours in program

EE690 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE691 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE692 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE693 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE694 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
694

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE695 - Special Topics in Electrical Engineering

General

Subject Code ~
EE

Course Number ~
695

Course Name (appears on the transcript) ~
Special Topics in Elect Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to electrical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

EE698 - Thesis Research

General

Subject Code ~
EE

Course Number ~
698

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to electrical engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

EE699 - Thesis Research

General

Subject Code ~
EE

Course Number ~
699

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to electrical engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

EMGT501 - Fundamental Methods for Engineering

General

Subject Code ~
EMGT

Course Number ~
501

Course Name (appears on the transcript) ~
Fundamental Methods for Engin

Content

Description
This course is specifically structured for newly admitted international students whom have no previous education in US-based higher educational institutes. The purpose of the course is to develop a baseline of knowledge in the tools and techniques that are essential for success at Western New England University. The course will cover materials ranging from general expectations for demonstrating competence in course student outcomes (including submitted work), to demonstration of common software applications as tools for implementing IEEM oriented processes and procedures.

Credit Hours

Min
3

Requisites

Free Form Requirements
MS International Engineering Students

EMGT512 - Intermediate Probability & Statistics

General

Subject Code ~
EMGT

Course Number ~
512

Course Name (appears on the transcript) ~
Intermediate Prob & Statistics

Content

Description
This course starts with a review of the subject in an undergraduate engineering program (Introduction to Probability and Statistics), and builds from there to include deeper utilization of these methods for industrial applications, as well as: 1) exploration of underlying methods within software applications Excel and R, and 2) expansion in the subject with study of regression analysis for industrial applications. Students who have a strong grasp of Introductory Prob/Stats are not recommended to take this course, but are rather directed to take IE 612 (Advanced Probability and Statistics for Industrial Applications. Not to be taken for credit by students who have completed IE 212 or equivalent.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT522 - Occupational Safety and Health

General

Subject Code ~
EMGT

Course Number ~
522

Course Name (appears on the transcript) ~
Occupational Safety and Health

Content

Description
This course covers foundational programs related to health and safety from an occupational/industrial perspective to build the knowledge and skills needed to create and support Industrial and occupational environments that are free of safety and health hazards. The curriculum will focus on building skills and competencies to promote detection, analysis, and correction of unsafe conditions and procedures. The course is structure to align with OSHA requirements so that the student will be well suited for OSHA 30 hour certification and other occupational safety and health certifications

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT590 - Special Topics in Engineering Mgmt

General

Subject Code ~
EMGT

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

EMGT591 - Special Topics in Engineering Mgmt

General

Subject Code ~
EMGT

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

EMGT602 - Engr Crisis, Disaster & Risk Mmgt

General

Subject Code ~
EMGT

Course Number ~
602

Course Name (appears on the transcript) ~
Engr Crisis, Disaster & Risk M

Content

Description
This course provides an overview of decision and risk analysis techniques including risk based planning and risk management. It covers modeling uncertainty, the principles of rational decision-making, representing and solving decision problems using influence diagrams and decision trees, deductive and inductive reasoning, and objective and subjective probabilities associated with new and existing engineering based products, processes and projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT605 - Engineering Management

General

Subject Code ~
EMGT

Course Number ~
605

Course Name (appears on the transcript) ~
Engineering Management

Content

Description
This is a study of the major management functions of the firm with emphasis on engineering and research. Topics include organization, planning, coordination, and control of operations; corporate objectives; managerial decision making; human relations; and product development.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT607 - Quality Engineering

General

Subject Code ~
EMGT

Course Number ~
607

Course Name (appears on the transcript) ~
Quality Engineering

Content

Description
This course covers the fundamental concepts of quality management including the management philosophy underlying BIS. Product quality and care of customers, management leadership, teamwork, constant improvement and innovation, and the influence of human performance in product quality and inspection are included.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT609 - Strategic Engineering Economics

General

Subject Code ~
EMGT

Course Number ~
609

Course Name (appears on the transcript) ~
Strateg Engineering Economics

Content

Description
This is a study of the economic aspects of engineering decisions. Topics include comparison of alternatives in engineering programs and economic factors in selecting and replacing machinery, equipment, and structure.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT615 - Statistical Quality Control

General

Subject Code ~
EMGT

Course Number ~
615

Course Name (appears on the transcript) ~
Statistical Quality Control

Content

Description
This is an overview of popular statistical methods as applied to quality assurance. Topics include a review of data analysis and hypothesis testing, coverage of statistical process control (variable and attribute control charts), process capability analysis, and acceptance sampling (lot-by-lot and continuous).

Credit Hours

Min
3

Requisites

Free Form Requirements
Probability & Statistics background

EMGT619 - Engineering Supply Chain

General

Subject Code ~
EMGT

Course Number ~
619

Course Name (appears on the transcript) ~
Engineering Supply Chain

Content

Description
This course provides a broad introduction to many core elements of Supply Chain Management. It focuses on the study of Supply Chain as it is supported by a logistics effort. Coverage includes: models, concepts, and solution methods that are important for the design, control, operation, and management of Supply Chain systems. Emphasis will be placed on challenges related to providing. logistical support for procurement, manufacturing and market-distribution. The topics studied will span supply chain strategy, segmental positioning, service provider relationship development and maintenance, value-added services,

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT620 - Multi-Criteria Decision Analysis

General

Subject Code ~
EMGT

Course Number ~
620

Course Name (appears on the transcript) ~
Multi-Criteria Dec Analys

Content

Description
This course surveys multi-criteria and multi-objective choice problem modeling methodologies including: stakeholder engagement, criteria selection and weighting methodologies, alternative ranking and outranking methodologies. Specific methodologies reviewed include Multi-Attribute Utility Theory, Analytic Hierarchy Process, TOPSIS, ELECTRE, DEMATEL, PROMETHEE and extensions into choice decisions using uncertain and fuzzy data, as well as Multi-Objective ?GOAL? Programming.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing, and Probability & Statistics

EMGT622 - Lean Production Systems

General

Subject Code ~
EMGT

Course Number ~
622

Course Name (appears on the transcript) ~
Lean Production Systems

Content

Description
This is a study of the problems, analytical techniques, and recent developments that relate to the traditional production systems and lean production systems. Topics include forecasting, inventory control, production planning, scheduling, and the relationships between manufacturing and other functions of the firm. Emphasis is on pull/demand based production systems

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT626 - Discrete Event Simulation

General

Subject Code ~
EMGT

Course Number ~
626

Course Name (appears on the transcript) ~
Discrete Event Simulation

Content

Description
This is a study of the computer simulation applied to queuing networks, inventory and production control, and material handling systems.

Credit Hours

Min
3

Requisites

Free Form Requirements
FORTRAN or BASIC Complete ENGR-212 or IE-212; or equivalent

EMGT627 - Legal & Ethical Issues of Engineering

General

Subject Code ~
EMGT

Course Number ~
627

Course Name (appears on the transcript) ~
Legal & Ethical Issues of Engi

Content

Description
This course presents the ethical and legal issues faced by engineers and engineering managers with a focus on practical applications and case studies that highlight these issues. Students who complete this course will have a practical framework for addressing the ethical aspects of engineering and engineering management practice. Topics covered include the evolution of engineering ethics, professional responsibilities and codes of conduct, the relationship between ethics and the law, engineering ethics in the global context, and the ethical considerations of engineering's environmental impacts.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT629 - Adv Manufacturing Engr Systems

General

Subject Code ~
EMGT

Course Number ~
629

Course Name (appears on the transcript) ~
Adv Manufacturing Engr Systems

Content

Description
This is a study of manufacturing systems techniques with special emphasis on cost estimating, automation, group technology, expert systems, flexible assembly, cellular manufacturing, and other related special topics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT631 - Production & Inventory Modeling

General

Subject Code ~
EMGT

Course Number ~
631

Course Name (appears on the transcript) ~
Production & Inventory Model

Content

Description
This course provides the theory and application of forecasting and modeling aggregate demand, fragmented demand and consumer behavior using statistical methods for analysis for services and products. Resulting models are correlated to engineering and management decisions made with respect to product, process and systems design. The theory and practice of production and inventory modeling will be covered

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT635 - Operations Research

General

Subject Code ~
EMGT

Course Number ~
635

Course Name (appears on the transcript) ~
Operations Research

Content

Description
This course provides the theory and application of deterministic optimization models. Topics include problem formulation, the simplex method, duality and primal dual relationships, complementary slackness, revised simplex and interior point algorithms. Solution approaches will be done traditionally and using contemporary software

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EMGT 620, or equivalent

EMGT637 - Ergonomics & Occupational Safety

General

Subject Code ~
EMGT

Course Number ~
637

Course Name (appears on the transcript) ~
Ergonomics & Occup Safety

Content

Description
This is a study of research related to the interface of human beings and machines. Topics include human factors, product and equipment design, capabilities and limitations of the human sensory-motor system, design of displays, and interaction between individual groups and machine systems.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT643 - Design of Experiments

General

Subject Code ~
EMGT

Course Number ~
643

Course Name (appears on the transcript) ~
Design of Experiments

Content

Description
This is an overview of statistical methods for design of products and processes. Topics include experimental design and analysis, regression analysis, robust design, and Taguschi's methods. Currently popular methods are surveyed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing, and Probability & Statistics

EMGT644 - Quality Systems/Process Improvement

General

Subject Code ~
EMGT

Course Number ~
644

Course Name (appears on the transcript) ~
Quality Syst/Process Impr

Content

Description
This is a quantitative course covering an analysis of quality system structures in industry today and the process improvement tools used in quality systems. Process and quality tools such as SPC, Gage R & R, ISO 9000, 6 Sigma, Benchmarking, and the Malcolm Baldrige National Quality Award are studied. The course is based on applications of these quality principles.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT647 - Facility Planning

General

Subject Code ~
EMGT

Course Number ~
647

Course Name (appears on the transcript) ~
Facility Planning

Content

Description
This is a study of techniques for facility location, design, and planning. Other related topics include materials handling, warehousing, computer-aided designs, and maintenance considerations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT648 - Project Management

General

Subject Code ~
EMGT

Course Number ~
648

Course Name (appears on the transcript) ~
Project Management

Content

Description
This course examines project techniques which place emphasis on organizational and behavioral issues. It provides hands-on project management experience developing project plans with the use of computer software.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT650 - Systems Integration

General

Subject Code ~
EMGT

Course Number ~
650

Course Name (appears on the transcript) ~
Systems Integration

Content

Description
This course is an introduction to the relevant issues and required techniques for successful systems design development, integration, management, and implementation. The principles and methods for system lifecycle analysis, system planning and management, systems integration, and strategic decision making will be covered in this course. The interfaces between the system, subsystems, the environment, and people will be part of the course materials. Students will learn the factors to control the total system development process designed to ensure a high quality and effective system.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT680 - Engineering Management Project

General

Subject Code ~
EMGT

Course Number ~
680

Course Name (appears on the transcript) ~
Engineering Managemt Proj

Content

Description
Students must select a project faculty advisor and obtain topic approval prior to registration for this course. This is an independent engineering project under the supervision of a project faculty advisor. The design process is emphasized. Progress reports and a final written report are required. An oral presentation and defense of the project is made before a faculty committee.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EMGT 605 or EMGT 648; and 12 credits hours in the program

EMGT690 - Special Topics in Engineering Mgt

General

Subject Code ~
EMGT

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

EMGT691 - Special Topics in Engineering Mgt

General

Subject Code ~
EMGT

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT693 - Special Topics in Engineering Mgt

General

Subject Code ~
EMGT

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

EMGT695 - Special Topics in Engineering Mgt

General

Subject Code ~
EMGT

Course Number ~
695

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
1

EMGT698 - Thesis Research

General

Subject Code ~
EMGT

Course Number ~
698

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to engineering management graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

EMGT699 - Thesis Research

General

Subject Code ~
EMGT

Course Number ~
699

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to engineering management graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

EMGT701 - Seminar/Research Methods for Engr Mgt

General

Subject Code ~
EMGT

Course Number ~
701

Course Name (appears on the transcript) ~
Sem/Research Meth Emgt

Content

Description
This course provides tools and techniques employed to be used in engineering management research. Topics covered include: program/faculty overview, literature review methods and tools, hierarchy of research questions, research ethics, and visual display of quantitative information.

Credit Hours

Min
3

Requisites

Free Form Requirements
Enrollment as EMGT PhD student

EMGT702 - Risk Assessment

General

Subject Code ~
EMGT

Course Number ~
702

Course Name (appears on the transcript) ~
Risk Assessment

Content

Description
This course provides an understanding of systems engineering and complex systems. It emphasizes the development of the fundamentals of systems engineering, engineering life cycle models and phases, systems design for operational feasibility, and an introduction to planning for systems engineering and management.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

EMGT709 - Adv Engr Cost Estimation

General

Subject Code ~
EMGT

Course Number ~
709

Course Name (appears on the transcript) ~
Adv Engr Cost Estimation

Content

Description
This course is a study of the mechanics of project cost estimating and project evaluation from a cost benefit perspective. The goal is for the student to develop a robust knowledge of current methods for project cost estimating, equipment costing and replacement analysis, as well as project cost/benefit and effectiveness analysis for private and public sector projects. Breakeven analyses are leverage to aid the buy/rent/lease/outsource decision process. A case study approach is adopted through which the student will develop understanding of drivers for cost overruns of existing infrastructure projects. A risk perspective to cost estimating is integrated.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EMGT 609 or equivalent

EMGT735 - Optimization Methods II

General

Subject Code ~
EMGT

Course Number ~
735

Course Name (appears on the transcript) ~
Optimization Methods II

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing Complete EMGT-635 or equivalent

EMGT765 - Special Topics in Engineer Mgt

General

Subject Code ~
EMGT

Course Number ~
765

Course Name (appears on the transcript) ~
Special Topics in Eng Mgt

Content

Description
This is a study of an advanced topic in engineering of special interest to engineering management majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

EMGT770 - Dissertation Research

General

Subject Code ~
EMGT

Course Number ~
770

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701

EMGT771 - Dissertation Research

General

Subject Code ~
EMGT

Course Number ~
771

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701

EMGT772 - Dissertation Research

General

Subject Code ~
EMGT

Course Number ~
772

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701

EMGT773 - Dissertation Research

General

Subject Code ~
EMGT

Course Number ~
773

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701

EMGT774 - Dissertation Research

General

Subject Code ~
EMGT

Course Number ~
774

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EMGT 701

EMGT775 - Dissertation Research

General

Subject Code ~
EMGT

Course Number ~
775

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

EMS110 - Emergency Medical Technician Training

General

Subject Code ~
EMS

Course Number ~
110

Course Name (appears on the transcript) ~
Emergency Medical Tech Train

Content

Description
Students will explore the roles and responsibilities of the EMT, EMS systems and communications, documentation, ethics, ambulance operations, MCI command, terrorism, and crime scene awareness. Examination of major organ systems anatomy and physiology will provide students the foundational knowledge needed to understand the pathophysiology, assessment, and management of emergency conditions affecting the cardiovascular, respiratory endocrine, neurologic, genitourinary, renal, immunologic, and abdominal systems. Special population topics reviews obstetrics and gynecology, pediatrics, gerontology, psychiatric and behavioral emergencies, trauma, and patients with special challenges. Students will examine the pharmacodynamics and pharmacokinetics of medications, administration techniques, and therapeutic communications. Students will integrate cognitive knowledge into psychomotor learning in the assessment and management of the depth and breadth of patient types, conditions and age groups. Students will gain experience though simulation, laboratory activities, and field service in the assessment and management of patients. Students will incorporate appropriate skills in the management of the variety of patient presenting complaints, communicating appropriately and serving as a team leader. They will demonstrate appropriate written and verbal communications and team skills. Students will take part in field experience to augment simulated and lab activities.

Credit Hours

Min
6

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Complete BIO 107 and BIO 108 or equivalent, plus permission required

ENGL102 - Culture, Conversation & Discourse

General

Subject Code ~
ENGL

Course Number ~
102

Course Name (appears on the transcript) ~
Culture, Conv & Discourse

Content

Description
The objective of the course is for students to be able to interact more fully with Americans in various settings. Students will listen to and study the discourse of various social institutions in order to engage in conversation with people from various discourse communities.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL103 - Grammar & Writing Mechanics

General

Subject Code ~
ENGL

Course Number ~
103

Course Name (appears on the transcript) ~
Grammar & Writing Mechanics

Content

Description
The content of the course will focus on grammatical patterns in English and appropriate mechanics. Through peer review and instructor guidance, students will learn to edit and proofread their own writing and the written work of others.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL104 - Listening, Speaking & Vocabulary

General

Subject Code ~
ENGL

Course Number ~
104

Course Name (appears on the transcript) ~
Listening, Speak & Vocab

Content

Description
The course will focus on the development of communication skills for various academic and social settings. Students will interact extensively in English and study recorded materials to develop knowledge of the vocabulary, usage, and discourses embedded in American culture.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL105 - Academic Reading & Writing

General

Subject Code ~
ENGL

Course Number ~
105

Course Name (appears on the transcript) ~
Academic Reading & Writing

Content

Description
The course focuses on the reading and writing of academic texts. Students will learn appropriate rhetorical strategies and to synthesize the ideas of others, and acquire drafting, revision, and editing skills for the purpose of constructing clear, coherent and grammatically correct papers for an academic audience.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL106 - Listening & Speaking in Context

General

Subject Code ~
ENGL

Course Number ~
106

Course Name (appears on the transcript) ~
Listen & Speak in Contex

Content

Description
This course is designed to build on the competencies developed in English 104. The objective of the course is for students to further develop listening and speaking skills necessary for various academic and social settings. Students will interact extensively in English with their teacher and other students. In addition, students will listen to authentic recorded material taken from the American culture, as well as academic lectures from across the curriculum. There will be focused listening exercises and note-taking practice. In addition, students will be given opportunities for authentic practice by sitting in on lectures across the curriculum (4 hours per week).

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL107 - Adv Reading & Writing

General

Subject Code ~
ENGL

Course Number ~
107

Course Name (appears on the transcript) ~
Adv Reading & Writing

Content

Description
The course is designed to build on the competencies developed in English 105. Students will read academic texts that will provide an introduction to content across the curriculum, and they will respond to the readings through writing and discussion activities. The course will focus on reading strategies such as reading for detail, main idea and inference. Emphasis will also be given to learning rhetorical strategies appropriate for a North American academic audience, and learning how to synthesize the ideas of others into an academic paper without plagiarizing.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL108 - Presentation & Conversation

General

Subject Code ~
ENGL

Course Number ~
108

Course Name (appears on the transcript) ~
Presentation & Conversation

Content

Description
The course is designed to build on the competencies developed in English 102. The objective of this course is for students to be able to interact more fully with American students and professors in academic settings. Students will have conversations with the instructor about various discourses across the curriculum. Students will receive instruction and feedback on pronunciation issues. Students will learn to participate in class conversations and to give formal and informal presentations.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL109 - Grammar, Editing & Mechanics

General

Subject Code ~
ENGL

Course Number ~
109

Course Name (appears on the transcript) ~
Grammar, Editing & Mechanics

Content

Description
The course is designed to build on the competencies developed in English 103. The objective of this course is for students to further develop their ability to edit and proofread their own written work by learning about grammatical patterns in English as well as appropriate mechanics. The content of the course will cover verb tenses, syntactical structures, and English morphology. Application of the content of the course will occur through the student editing his or her own written work and through peer editing.

Credit Hours

Min
0

Requisites

Free Form Requirements
Preliminary acceptance

ENGL130 - English Composition IA

General

Subject Code ~
ENGL

Course Number ~
130

Course Name (appears on the transcript) ~
English Composition IA

Content

Description
This course is designed for students needing preparatory work in key elements of college-level writing and reading. Topics include sentence and paragraph development, fundamentals of grammar, the writing of expository essays, integration of sources, and strategies for the critical reading of prose non-fiction. Note: Students placed in ENGL 130 may have to take additional credits to fulfill graduation requirements in some programs.

Students who need supplemental instruction in grammar, mechanics, and usage take, on recommendation, a concurrent lab in writing fundamentals, LA 150 or LA 151.

Credit Hours

Min
3

Requisites

Free Form Requirements
Permission of instructor

ENGL132 - English Composition I

General

Subject Code ~
ENGL

Course Number ~
132

Course Name (appears on the transcript) ~
English Composition I

Content

Description
This is a standard course in the techniques of critical reading and academic writing. The purposes of the course are to develop skill in reading prose nonfiction from a variety of disciplines, to develop skill in writing accurate and effective informative prose on a variety of subjects, using a variety of techniques, to develop sensitivity to language and writing, to understand conventions of citation and documentation, and to develop critical judgment of one's own writing and that of others. Particular attention is given to the importance of thesis, evidence, audience, and thoughtful revision. Students who need supplemental instruction in grammar, mechanics, and usage take, on recommendation, a concurrent lab in writing fundamentals, LA 150.

Credit Hours

Min
3

Requisites

Free Form Requirements
A grade of "C-" or better in ENGL 130, or successful performance on WNEU English placement exam

ENGL133 - English Composition II

General

Subject Code ~
ENGL

Course Number ~
133

Course Name (appears on the transcript) ~
English Composition II

Content

Description
This course explores the many ways in which human experience is shaped by language and culture. Focused on a semester-long theme, English 133 emphasizes both close reading and expository writing as students hone critical thinking skills. This course stresses the analytic reading of literary texts in a cultural context and the writing of accurate, effective, and persuasive prose using evidence from primary and secondary sources. English 133 courses consider literature and other cultural texts from underrepresented populations and/or discuss a wide range of cultural issues including those of racial and ethnic diversity and gender politics.

Credit Hours

Min
3

Requisites

Free Form Requirements
A grade of C- or better in ENGL 131, ENGL 132, or ENGL 140-level, or the equivalent

ENGL139 - Writing for Special Purposes

General

Subject Code ~
ENGL

Course Number ~
139

Course Name (appears on the transcript) ~
Writing Special Purposes

Content

Description
Building on the work taught in ENGL 132 or ENGL 133, students work under the guidance of a professor to communicate a central idea and organize a substantial amount of supporting material in a format different than those stressed in the introductory courses. A B in this course will offset the C- in the 100 level course, allowing the student to satisfy one General College Requirement of a C in a 100 level English course. May be taken more than once.

Credit Hours

Min
1

Requisites

Free Form Requirements
A grade of "C-" or lower, in ENGL 132 or ENGL 133 Not open to student who receives a grade above a "C-" in ENGL 132 or ENGL 133

ENGL190 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ENGL191 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ENGL195 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
195

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ENGL206 - Writing for Business

General

Subject Code ~
ENGL

Course Number ~
206

Course Name (appears on the transcript) ~
Writing for Business

Content

Description
This course is designed to give students a comprehensive view of communication, its impact and importance in business, and the role of written communication in establishing a favorable outside environment, as well as effective internal communications skills. The various types of business communication are covered. This course also develops an awareness of the importance of succinct and clear written communication in the modern business world. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ENGL 133 with minimum grade of C- or permission of the English chair

ENGL214 - World Literature I

General

Subject Code ~
ENGL

Course Number ~
214

Course Name (appears on the transcript) ~
World Literature I

Content

Description
Students read selections from the time of Homer to the nineteenth century. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Sophomore Standing, with minimum grade of C- in ENGL 133 or permission of English chair

ENGL215 - World Literature II

General

Subject Code ~
ENGL

Course Number ~
215

Course Name (appears on the transcript) ~
World Literature II

Content

Description
Students read selections from significant writers of the last 200 years. satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Sophomore Standing, and minimum grade of C- in ENGL 133 or permission of English chair

ENGL223 - African-American Literature I

General

Subject Code ~
ENGL

Course Number ~
223

Course Name (appears on the transcript) ~
African-American Lit I

Content

Description
An introduction to African American literature from colonial times to 1865, covering poetry, fiction, drama, and nonfiction prose such as slave narratives, memoirs, sermons, and speeches. The cultural context of the literary period will be explored. The course will cover such authors as Wheatley, Truth, Douglass, Turner, and others.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL224 - African-American Literature II

General

Subject Code ~
ENGL

Course Number ~
224

Course Name (appears on the transcript) ~
African-American Lit II

Content

Description
An introduction to African American literature from the era of Reconstruction to the present, covering poetry, fiction, drama, and nonfiction prose such as memoirs, sermons, and speeches. The cultural context of literary periods will be explored. The course will cover such authors as Washington, DuBois, Hughes, Cullen, Brooks, Hurston, Ellison, Wright, Angelou, Baldwin, Morrison, Malcolm X, and Martin Luther King Jr.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133 or permission of English chair

ENGL231 - Masterpieces-British Literature I

General

Subject Code ~
ENGL

Course Number ~
231

Course Name (appears on the transcript) ~
British Literature I

Content

Description
This is a critical survey of selected texts in British literature from its origins to 1780. Emphasis is on major traditions and on major writers such as Chaucer, Marlowe, Donne, Jonson, Milton, Dryden, Swift, and Johnson. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission or English chair

ENGL232 - Masterpieces-British Literature II

General

Subject Code ~
ENGL

Course Number ~
232

Course Name (appears on the transcript) ~
British Literature II

Content

Description
This is a critical survey of selected texts in British literature from the Romantic period to 1945. Emphasis is on major traditions and on major authors such as Wordsworth, Coleridge, Byron, Keats, Shelley, Austen, Tennyson, Browning, Arnold, Dickens, Conrad, Lawrence, Shaw, and Yeats. This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL237 - Creative Writing

General

Subject Code ~
ENGL

Course Number ~
237

Course Name (appears on the transcript) ~
Creative Writing

Content

Description
This is a course designed for students who wish to write "creatively." Emphasis is on writing poetry and short fiction. Students will develop and refine their writing skills and start to develop a writing portfolio. Open to all majors. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL240 - Editing

General

Subject Code ~
ENGL

Course Number ~
240

Course Name (appears on the transcript) ~
Editing

Content

Description
This course will train writers in editing their own texts for good grammar, punctuation, organization, length and tone, in a variety of media. In addition, they will develop their ability to recognize and correct errors in others' writing, as well as revise those texts for the requirements of whatever publication may be involved. The goal of editing is to ensure that the end result is the best it can be before it goes public, with quality of content and delivery meeting high technical and ethical standards.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL249 - Tutoring Practicum: Writing/Grammar

General

Subject Code ~
ENGL

Course Number ~
249

Course Name (appears on the transcript) ~
Tutor Pract: Writing/Grammar

Content

Description
With a focus on presenting tutoring as formalized academic support, this course is designed to develop interpersonal teaching, communication skills, and English grammar knowledge essential for writing tutors as well as for students preparing for a career in secondary education.

Students will study and analyze current writing theories, various writing genres, revision strategies, documentation style systems, and a variety of tutoring and teaching methods. The course will also address the history and structure of the English language and focus on the rules and conventions of standard written and spoken English including concepts such as form, meaning, knowledge, and usage of English grammar structures at the advanced level. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL251 - American Literature I

General

Subject Code ~
ENGL

Course Number ~
251

Course Name (appears on the transcript) ~
American Literature I

Content

Description
This is a study of American literature in the following periods: Colonial, Revolutionary, Nationalism, Romanticism, and the American Renaissance. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL252 - American Literature II

General

Subject Code ~
ENGL

Course Number ~
252

Course Name (appears on the transcript) ~
American Literature II

Content

Description
This is a study of American literature 1860- the present. This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Sophomore Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL255 - LGBTQIA+ Literature

General

Subject Code ~
ENGL

Course Number ~
255

Course Name (appears on the transcript) ~
LGBTQIA+ Literature

Content

Description
This course will examine literature and cultural texts by, for, and about the LGBTQIA+ community. Students will engage with the representation and experiences of individuals whose daily lives and identities are inextricably interwoven into the contexts of their families and society. Texts may include novels, short stories, poetry and other popular texts. This course fulfills the writing intensive requirement for the College of Arts and Sciences.

Credit Hours

Min
3

ENGL260 - Literary Horizons

General

Subject Code ~
ENGL

Course Number ~
260

Course Name (appears on the transcript) ~
Literary Horizons

Content

Description
Required in Elementary Education Program. This course is an introduction to the learning standards in the literature strand of the Massachusetts Curriculum Frameworks and to the application of those standards to literary works. It will present potential elementary teachers with the background information necessary to apply the standards to works from our Common Literary Heritage, as suggested by the Massachusetts Department of Education.

This course satisfies one of the Writing Intensive course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
"C-" or better in ENGL 133, or permission of English chair

ENGL270 - Writing for the Web

General

Subject Code ~
ENGL

Course Number ~
270

Course Name (appears on the transcript) ~
Writing for the Web

Content

Description
This course will provide students with skills to build content on websites, blogs, and social media. Students will begin by performing rhetorical analyses of various posts and websites to examine how one determines one's purpose, audience, focus, development, and organization for a particular post on a specific site. Students will explore the art of crafting compelling narratives tailored to web audiences while upholding ethical writing principles. They will delve into the nuances of audience analysis and the impact of multimedia in contemporary discourse. Course instruction will focus on the development of critical thinking and communication skills while honing the ability to create persuasive, engaging online content. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
"C-" or better in ENGL 133, or permission of English chair

ENGL281 - Drama of English

General

Subject Code ~
ENGL

Course Number ~
281

Course Name (appears on the transcript) ~
Drama of English

Content

Description
This course introduces students to the richness and variety of English Renaissance drama beyond the plays of Shakespeare. Class meetings will include lecture, discussion, student performances, and the analysis and interpretation of scenes viewed on video. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
"C-" or better in ENGL 133, or permission of English chair

ENGL290 - Special Topics in English - Wrtg Intens

General

Subject Code ~
ENGL

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in English-WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 200 level.

Credit Hours

Max
3

Min
1

ENGL291 - Special Topics in English - WIC

General

Subject Code ~
ENGL

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in English/WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 200 level.

Credit Hours

Max
3

Min
1

ENGL292 - Practicum:

General

Subject Code ~
ENGL

Course Number ~
292

Course Name (appears on the transcript) ~
Practicum:

Content

Credit Hours

Min
1

ENGL293 - Special Topics in English - WIC

General

Subject Code ~
ENGL

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in English/WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 200 level.

Credit Hours

Max
3

Min
1

ENGL294 - Special Topics in English - WIC

General

Subject Code ~
ENGL

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in English/WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 200 level.

Credit Hours

Max
3

Min
1

ENGL295 - Special Topics in English - WIC

General

Subject Code ~
ENGL

Course Number ~
295

Course Name (appears on the transcript) ~
Special Topics in English/WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 200 level.

Credit Hours

Max
3

Min
1

ENGL298 - Special Topics in English - WIC

General

Subject Code ~
ENGL

Course Number ~
298

Course Name (appears on the transcript) ~
Special Topics in English/WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 200 level.

Credit Hours

Max
3

Min
1

ENGL302 - Approaches to Study of Literature

General

Subject Code ~
ENGL

Course Number ~
302

Course Name (appears on the transcript) ~
Approaches to Study Lit

Content

Description
This course will explore contemporary literacy and cultural studies. Students will read primary texts that have had a major influence on the interpretation of literature (Freud, Marx, and others), explore the development of major critical "schools" of thought, and learn to consider texts from a variety of perspectives. This course will have students study, share, and question contemporary approaches to literature and the literary term associated with those critical approaches, while also creating and sharing a close analysis of a particular literary work.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133 and one literary survey, or permission of English Chair

ENGL310 - Modern Drama

General

Subject Code ~
ENGL

Course Number ~
310

Course Name (appears on the transcript) ~
Modern Drama

Content

Description
This is a study of 19th and 20th century drama including dramatists such as Ibsen, Chekhov, Shaw, Strindberg, Sartre, Beckett, Ionesco, Brecht, Pirandello, Williams, Albee, Garcia, Lorca, and Genet. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL311 - The English Language

General

Subject Code ~
ENGL

Course Number ~
311

Course Name (appears on the transcript) ~
The English Language

Content

Description
This is an overview of the structure and history of the English language, and of its variation in different speech communities. Dual listed as COMM 311.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL312 - Chaucer & His Age

General

Subject Code ~
ENGL

Course Number ~
312

Course Name (appears on the transcript) ~
Chaucer & His Age

Content

Description
This is a study of Chaucer as literary artist and critic of his age. Emphasis is on The Canterbury Tales, materials describing the world of the fourteenth century, and the oral presentation of Chaucer's verse rather than a linguistic analysis of Middle English. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL314 - Shakespeare: Plays & Poems

General

Subject Code ~
ENGL

Course Number ~
314

Course Name (appears on the transcript) ~
Shakespeare: Plays & Poems

Content

Description
This course surveys all of Shakespeare's work. Plays from all four dramatic genres (history, comedy, tragedy, and romance), representative sonnets, and selections from the two narrative poems will be read and discussed. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL315 - Shakespeare: the Tragedies

General

Subject Code ~
ENGL

Course Number ~
315

Course Name (appears on the transcript) ~
Shakespeare: the Tragedies

Content

Description
This course consists of intensive reading and discussion of Shakespeare's major tragedies. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL316 - Shakespeare: Comedies & Histories

General

Subject Code ~
ENGL

Course Number ~
316

Course Name (appears on the transcript) ~
Shakespeare: Comedies & Hist

Content

Description
This course consists of intensive reading and discussion of Shakespeare's major comedies and history plays.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL319 - Early 17th Cent Prose & Poetry

General

Subject Code ~
ENGL

Course Number ~
319

Course Name (appears on the transcript) ~
Early 17th Cent Prose & Poetry

Content

Description
This is a study of non-dramatic poetry and prose from 1600 to 1660 including works by authors such as Bacon, Donne, Herbert, Marvell, and the young Milton. The political, intellectual, and religious currents of the period are included. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL322 - 19th Cent American Literature

General

Subject Code ~
ENGL

Course Number ~
322

Course Name (appears on the transcript) ~
19th Cent Amer Literature

Content

Description
This is a critical survey of nineteenth century American fiction and poetry. Readings cover major writers such as Cooper, Emerson, Hawthorne, Melville, Dickinson, Whitman, Jewett, James, Wharton, and Twain amidst other significant authors. The course will give students an understanding of major literary trends of the period including the transcendentalist, romantic, and regionalist traditions in the context of important cultural developments of the period. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL324 - Memoirs - Signature of the Self

General

Subject Code ~
ENGL

Course Number ~
324

Course Name (appears on the transcript) ~
Memoirs-Sign of the Self

Content

Description
Sign of the Self introduces students to the genre of memoir. Students will consider the definition of memoir, conventional prompts for the writing of memoir, and reading strategies specific to the genre. The focus will be on written texts, though memoir in other media such as photography, graphic novels, film and video may be considered. With each text, the class will trace the ways the personal intersects with broader social and political categories like family, nation, gender, race and class.

This course satisfies one of the Writing Intensive course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL327 - Lit & Culture in England 1788-1832

General

Subject Code ~
ENGL

Course Number ~
327

Course Name (appears on the transcript) ~
Lit & Cult Engl 1788-1832

Content

Description
This course examines the literary movement known as "romanticism" with attention to relevant cultural contexts (French Revolution, industrial development in England, British Nationalism/Imperialism). Students will read poetry, essays, and fiction by authors such as Burke, Wollstonecraft, Barbauld, Wordsworth, Coleridge, Austen, Keats, and Shelley.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL328 - Lit & Culture in England 1832-1890

General

Subject Code ~
ENGL

Course Number ~
328

Course Name (appears on the transcript) ~
Lit & Cult Engl 1832-1890

Content

Description
This is a continued study of the significant attitudes and problems of the nineteenth century as expressed in poetry and prose. Readings are drawn from authors such as Carlyle, Mill, Tennyson, Dickens, Arnold, Hardy, and others. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL329 - Readings in 20th Cent Brit Lit

General

Subject Code ~
ENGL

Course Number ~
329

Course Name (appears on the transcript) ~
Read 20th Cent Brit Lit

Content

Description
This course is a study of selected authors, writings, issues, and ideas that have been associated with British modernism. The focus is on both texts and contexts, recognizing and including in the analysis the sociopolitical, philosophical, religious, and literary influences at play in the early 20th century. Students will read poetry, essays, and fiction by authors such as Wilde, Yeats, Joyce, Eliot, Woolf, and others. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL333 - Indep Study in English

General

Subject Code ~
ENGL

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in English

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ENGL334 - Independent Study in English

General

Subject Code ~
ENGL

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in English

Content

Description
See "Independent Study".

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ENGL336 - Ethnic American Literature

General

Subject Code ~
ENGL

Course Number ~
336

Course Name (appears on the transcript) ~
Ethnic American Literatur

Content

Description
This is a critical study of the literature from American underrepresented writers: Black, Native, Hispanic, Asian, and Jewish Americans.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL338 - Major Authors:

General

Subject Code ~
ENGL

Course Number ~
338

Course Name (appears on the transcript) ~
Major Authors:

Content

Description
Investigating the important work of one to three major authors, this course will focus on the close reading of texts with attention, where appropriate, to the intellectual and cultural milieu. This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
"C-" or better in ENGL 133, or permission of English chair
Junior Standing

ENGL339 - Children's & Young Adult Literature

General

Subject Code ~
ENGL

Course Number ~
339

Course Name (appears on the transcript) ~
Children's & Young Adult Lit

Content

Description
The course is an introduction to the field of children's literature. Its focus is primarily literary in nature, exploring the diverse literature written for children and young adults through reading, storytelling, meeting authors, and discussing works in class. Students are also introduced to the graphic artistry accompanying much of the literature and to a variety of cultures and traditions depicted in word and picture. The course furthers students' understanding of children and of the important role of home and school in literacy development. This course satisfies Area I Literature requirement for all majors - an elective for ENGL majors. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair.

ENGL341 - Caribbean Writers

General

Subject Code ~
ENGL

Course Number ~
341

Course Name (appears on the transcript) ~
Caribbean Writers

Content

Description
A survey of major Caribbean writers in both English and translation. Poetry, fiction, drama, and the oral traditions will be studied. Where appropriate, the cultural context of the works of literature will be explored. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL343 - Literature of Africa & Afr Diaspora

General

Subject Code ~
ENGL

Course Number ~
343

Course Name (appears on the transcript) ~
Lit Africa & Afr Diaspora

Content

Description
The African continent encompasses many traditions; this course will introduce and study some of the major figures as well as the contexts in which they wrote. The relationship between African writers and writers of the African Diaspora (African American literature, Caribbean literature, Black British literature, etc.) will be delineated comparatively. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL345 - Major African American Writers

General

Subject Code ~
ENGL

Course Number ~
345

Course Name (appears on the transcript) ~
Major African Amer Writer

Content

Description
This course will concentrate on African American writers such as Wright, Ellison, Morrison, Bambara, and others who have contributed significantly to the African American Literature. Most readings will be novels but the short fiction of these writers will also be selectively read.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL351 - Fiction Workshop

General

Subject Code ~
ENGL

Course Number ~
351

Course Name (appears on the transcript) ~
Fiction Workshop

Content

Description
This course is an advanced creative writing course that places an emphasis on the craft of fiction. In this class, students will discuss works by contemporary writers, write and revise their own fiction, and respond to their peers' drafts. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL352 - Poetry Workshop

General

Subject Code ~
ENGL

Course Number ~
352

Course Name (appears on the transcript) ~
Poetry Workshop

Content

Description
This course is an upper level poetry workshop, concentrating on methods of creating and revising original poems to publishable quality. The objective is to encourage imagination; to learn what has already been tried and to play with new approaches, sources of inspiration, twists, and spins rather than repeating old ways; to understand and use different techniques of writing imaginatively in your own work and in analyzing creative work by others. The goal is to enlarge a critical vocabulary as well as an everyday one; to gain an ability to use poetic devices and poetic forms and to determine where, why, and how they are most useful. The workshop also seeks to increase knowledge of the historic development of poetry in the English and American traditions and to add to that tradition in your writing.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

This course can be repeated for credit with Chair's permission.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL353 - Twentieth Cent Poetry

General

Subject Code ~
ENGL

Course Number ~
353

Course Name (appears on the transcript) ~
Twentieth Cent Poetry

Content

Description
This is a study of the dominant themes and innovative techniques in British and American poetry from 1900 to 1950 with particular attention to Yeats, Eliot, and Frost. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
"C-" or better in ENGL 133, or permission of English chair
Junior Standing

ENGL354 - Creative Nonfiction Workshop

General

Subject Code ~
ENGL

Course Number ~
354

Course Name (appears on the transcript) ~
Creative Nonfiction Wksp

Content

Description
This course focuses on the reading and writing of creative nonfiction, which uses literary techniques to write about factual events, real people, and actual places. It can include nature and travel-writing, memoir, essay, biography, and literary journalism, as well as scripts for documentary films. Students will practice a variety of nonfiction writing skills such as researching, interviewing, drafting, and revising, with the aim of completing a portfolio of publishable quality work; they will also consider how to tailor their writing in order to submit it to an appropriate publication. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students. This course can be repeated for credit with Chair's permission.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL355 - The Development of the Novel

General

Subject Code ~
ENGL

Course Number ~
355

Course Name (appears on the transcript) ~
Development of the Novel

Content

Description
This course is a critical examination of the novel as an art form, from its origins to the twentieth century. Emphasis is on major writers of the nineteenth and twentieth centuries: American, British, and European. Works selected are by major authors such as Fielding, Austen, Bronte, Dickens, Eliot, Hawthorne, Flaubert, Dostoevsky, Tolstoy, Melville, Hardy, James, Conrad, Forster, Hemingway, and Faulkner. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C" or better in ENGL 133, or permission of English chair

ENGL357 - Twentieth Cent American Lit

General

Subject Code ~
ENGL

Course Number ~
357

Course Name (appears on the transcript) ~
20th Cent American Lit

Content

Description
This is a critical survey of twentieth century American fiction, poetry, and drama. Emphasis is on major writers such as Pound, Eliot, Frost, Stevens, Roethke, Lowell, Fitzgerald, Hemingway, Steinbeck, Faulkner, Cather, Morrison, and Miller. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English Chair

ENGL358 - Women in Literature

General

Subject Code ~
ENGL

Course Number ~
358

Course Name (appears on the transcript) ~
Women in Literature

Content

Description
The purpose of the course is to introduce students to a rich representation of women's writing from a variety of genres and periods, when only few women wrote. Through the careful study of works by women with courage and eloquence, this course may become an experience of discovery for all of us - men and women alike. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English Chair

ENGL366 - Crime & Punishment

General

Subject Code ~
ENGL

Course Number ~
366

Course Name (appears on the transcript) ~
Crime & Punishment

Content

Description
This course examines a diversity of crimes and their punishments in selected works of Western Literature. Unlike popular detectives and TV shows where the emphasis is on whodunit, literature often identifies the criminal at the outset and explores, in unparalleled depth and richness, his or her inner landscape: motives, conscience, reckoning, and growth. Through the study of crime in literary works spanning centuries, from Biblical stories and Greek tragedy through Shakespeare and Dostoevsky to contemporary literary criminals, this course will enhance our understanding of the psychological and moral complexity of crime in its diverse human and literary dimensions. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English Chair

ENGL370 - Writing About TV & Film

General

Subject Code ~
ENGL

Course Number ~
370

Course Name (appears on the transcript) ~
Writing About TV & Film

Content

Description
In this course students will learn various approaches to writing about film and television, including evaluative reviews and scholarly essays. As a Writing for the Web course, students will also learn to publish their own writing online with aesthetic and intellectual competence. Primary texts draw from a variety of film and television genres, historical periods, and subjects. Secondary sources include a writers' guide, movie and TV reviews, student writing, and scholarly essays. Because this is a Writing Intensive course, students will produce over 20 pages of revised writing. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL371 - Narrative & Digital Media

General

Subject Code ~
ENGL

Course Number ~
371

Course Name (appears on the transcript) ~
Narrative & Digital Media

Content

Description
In this course students will study the intersection of narrative theory and digital media. The course begins with an introduction to core concepts in narratology ? the study of how stories work.

The course will explore the ways that these concepts provide an understanding of how stories are told through old and new media, including video games and other materially interactive forms. The course will also consider the ways that new media require revisions and additions to existing understandings of how narrative operates. Students will both study and produce online writing about video games and other new media forms. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English Chair

ENGL376 - World Short Stories

General

Subject Code ~
ENGL

Course Number ~
376

Course Name (appears on the transcript) ~
World Short Stories

Content

Description
This course examines stories written from a variety of cultures from around the world.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English Chair

ENGL386 - Biblical Heroes

General

Subject Code ~
ENGL

Course Number ~
386

Course Name (appears on the transcript) ~
Biblical Heroes

Content

Description
This course studies heroes and their families from the Hebrew Bible (in English). This course satisfies the Humanities/literature requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English Chair

ENGL390 - Special Topics in English - Wrtg Intens

General

Subject Code ~
ENGL

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in English-WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

This course satisfies a Writing Intensive Requirement at the 300 level.

Credit Hours

Min
3

ENGL391 - Images of Business in Literature

General

Subject Code ~
ENGL

Course Number ~
391

Course Name (appears on the transcript) ~
Images of Business in Lit

Content

Credit Hours

Min
3

ENGL392 - Special Topics in English-WIC

General

Subject Code ~
ENGL

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in English-WIC

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

ENGL393 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in English

Content

Credit Hours

Min
3

ENGL394 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ENGL395 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ENGL396 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ENGL397 - Creative Writing

General

Subject Code ~
ENGL

Course Number ~
397

Course Name (appears on the transcript) ~
Creative Writing

Content

Description
This is a course designed for students who wish to write "creatively." Emphasis is on writing poetry and short fiction. Students will develop and refine their writing skills and start to develop a writing portfolio. Satisfies one of the Writing Intensive course requirements for Arts and Sciences students.

Credit Hours

Min
3

ENGL398 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
398

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ENGL399 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
399

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ENGL410 - English Seminar

General

Subject Code ~
ENGL

Course Number ~
410

Course Name (appears on the transcript) ~
English Seminar

Content

Description
Intended primarily for English literature majors, this course is designed to enlarge and deepen the students' understanding of literary form and to enlarge their understanding of the human concerns that literature may treat.

This course satisfies one of the Writing Intensive course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing, and 2 courses in ENGL writing with grades of C- or better

ENGL411 - Major Authors:

General

Subject Code ~
ENGL

Course Number ~
411

Course Name (appears on the transcript) ~
Major Authors:

Content

Description
Investigating the important work of one to three major authors, this course will focus on the close reading of texts with attention, where appropriate, to the intellectual and cultural milieu.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and "C-" or better in ENGL 133, or permission of English chair

ENGL480 - Internship in English

General

Subject Code ~
ENGL

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in English

Content

Description
See "Internships".

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
At least junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

ENGL481 - Internship in English

General

Subject Code ~
ENGL

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in English

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

ENGL491 - Special Topics in English

General

Subject Code ~
ENGL

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in English

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

ENGL500 - Pronunciation, Intonation & Speech

General

Subject Code ~
ENGL

Course Number ~
500

Course Name (appears on the transcript) ~
Pronunc, Intonat & Speech

Content

Description
The content of the course will focus on American English sounds, stress, and intonation patterns. Students will listen to and study speeches given by native speakers of English for the purpose of becoming aware of phonological, rhetorical, and cultural patterns in American communities. Students will also practice academic presentation skills appropriate for graduate students in a North American academic environment

Credit Hours

Min
0

ENGL501 - Writing for North Amer Acad Audience

General

Subject Code ~
ENGL

Course Number ~
501

Course Name (appears on the transcript) ~
Writing N Amer Acad Aud

Content

Description
The primary goal of the course is to prepare international graduate students to write academic papers for a North American audience. Specifically, the course will focus on contrastive rhetoric, structure, conventions, organization, and documentation that is necessary when writing academic papers in a North American context. Students will learn how to revise, edit, and proofread their own papers, which will include a grammar review that is contextualized

Credit Hours

Min
0

ENGL502 - Acad Literacies Int'l Grad Students

General

Subject Code ~
ENGL

Course Number ~
502

Course Name (appears on the transcript) ~
Acad Lit Int'l Grd Student

Content

Description
The focus of the course is to introduce students to academic sources from a variety of disciplines. Students will learn to sum-marize, critique, and synthesize the content that they read with their own ideas through discussion and writing. Awareness of aca-demic language structures in various disciplines will be introduced as well as the appropriate use of sources when writing academic papers.

Credit Hours

Min
0

ENGL503 - Conversation for Graduate Students

General

Subject Code ~
ENGL

Course Number ~
503

Course Name (appears on the transcript) ~
Conversation Grad Student

Content

Description
The focus of the course is to enhance fluency in conversation in both academic and informal settings. Students will become aware of various discourses embedded in the culture so that they can in-teract effectively with native speakers in a variety of academic and informal settings. Strategies to enhance intercultural communica-tion skills will also be emphasized

Credit Hours

Min
0

ENGL550 - Fiction Workshop

General

Subject Code ~
ENGL

Course Number ~
550

Course Name (appears on the transcript) ~
Fiction Workshop

Content

Description
What is the purpose of analyzing a form? Comprehension of the form. Before students can create in a given form, they must struggle to know it, and re-reading is the first step toward such knowledge. To this end, we will read and study the work of masters in the short story. We will read the 19c master of the short story, Anton Chekhov, then leap forward to 20th and 21st century stylists.

This course is a hands-on workshop in which students will learn how a story is made by doing it. We will begin with stories written in first person, which allows for direct representation of inner consciousness, and move on to third person and the use of free indirect style, one of most important aspects of fiction writing. We will work on how to balance dialogue and scene with exposition. We will discuss and analyze plot-lines, trace curves and arcs, try out alternate beginnings, find new endings, looking for the best shape to each story. And all along, students will practice writing a variety of sentences, from the simple to the complex, the interrupted to the periodic and labyrinthine.

Credit Hours

Min
3

Requisites

Free Form Requirements
Formal acceptance into graduate program

ENGL555 - The Craft of Fiction

General

Subject Code ~
ENGL

Course Number ~
555

Course Name (appears on the transcript) ~
The Craft of Fiction

Content

Description
This course, which will begin during each of the two yearly residencies, will be taught by a different visiting instructor/author each term. It is a class for writers, taught by writers, about the craft of writing. Students will perform close reading of exemplary literary work and look at how they are made. The class will ask questions about where the story begins, how this influences the writing, the important of the first line. The class will trace how the story is put together, how time passes, how character is presented, what kinds of sentences the writer tends toward, the texture her prose evokes, her disposition toward scene and narrative, how exposition she offers, and how much resolution. This craft seminar will serve as a complement to ENGL 550, Fiction Workshop. The course will begin in person during each residency and then will be taught on-line by the instructor/mentor over the course of two consecutive 11-week graduate terms. The curriculum will be individualized to best meet the literary aspirations of the student. A narrative evaluation of the student?s work will be given after each term along with a Pass/Fail grade.

The course can and should be repeated with each new residency and with new instructors/mentors who bring a new approach to the craft of fiction to the students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Formal acceptance into graduate program

ENGL590 - Special Topics in Creative Writing

General

Subject Code ~
ENGL

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics Creative Writ

Content

Description
Topics in English that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Formal acceptance to program

ENGR100 - Engr Seminar & College Success Skills

General

Subject Code ~
ENGR

Course Number ~
100

Course Name (appears on the transcript) ~
Engr Sem & Coll Success Skills

Content

Description
This is a course designed to introduce first-year pre-engineering students both to the engineering profession and to the practice of engineering as it relates to their university experience. Furthermore, the course is designed to assist students in promoting their academic success and personal development in college. Topics include goal setting and decision making, time management, communication, note taking, test taking, and study skills. Students will be assessed through performance on homework, written reports, and by participation in course activities.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Freshman status in Pre-Engineering

ENGR102 - First Year Engineering Seminar

General

Subject Code ~
ENGR

Course Number ~
102

Course Name (appears on the transcript) ~
First Year Engineering Seminar

Content

Description
This is a course designed to introduce first-year engineering students both to the engineering profession and to the practice of engineering as it relates to their university experience. It enables students to further develop academic and life management skills and to learn how to use University resources. Students will be assessed through performance on homework, written reports, and by participation in course activities.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Freshman Engineering major

ENGR103 - Intro to Engineering

General

Subject Code ~
ENGR

Course Number ~
103

Course Name (appears on the transcript) ~
Intro to Engineering

Content

Description
This course is designed to introduce first-year engineering students to the engineering profession and its practices. The students complete various projects, including a major design project. Through these projects and other activities, the students learn about computer aided visualization, engineering analysis, sketching, critical thinking, ethical decision making, the design process, how to work in a team environment, problem formulation, design evaluation and selection, teamwork, oral presentation skills, and effective writing. Students are assessed through performance on projects, exams, quizzes, homework, written reports, and oral presentations.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Freshman Engineering major

ENGR105 - Computer Programming for Engineers

General

Subject Code ~
ENGR

Course Number ~
105

Course Name (appears on the transcript) ~
Computer Program Engr

Content

Description
This is an introductory course in the design of software solutions to engineering problems using software capable of being programmed by the user. Students learn procedural approaches to designing small to medium-scale programs. After successfully completing this course, students understand the issues involved in moving from a general problem statement to a software solution. Students learn a variety of software design solution techniques. They develop skills in logic, algorithm design, and data structure design and debugging. They apply these skills to a variety of engineering, mathematical, and numerical method problem areas. The methods of assessing student learning in the course are homework assignments; weekly quizzes; in-class, project-type programming assignments; and exams.

Credit Hours

Min
2

Requisites

Free Form Requirements
College of Engineering student

ENGR110 - Data Acquisition & Processing

General

Subject Code ~
ENGR

Course Number ~
110

Course Name (appears on the transcript) ~
Data Acquisition & Processing

Content

Description
This is an introductory course in computer - aided data acquisition and processing. Through a series of studio experiences, students will learn the principles necessary to design, implement, and analyze computer- controlled experiments. Industry standard LabVIEW along with programmable hardware will be the learning platform for this course. Additionally, students will be introduced to the concepts of product innovation and development as well as associated elements of entrepreneurship. Competency in the knowledge gained will be demonstrated by developing and demonstrating a fully functional ?smart product?. The methods of assessing student learning in the course will be homework assignments, weekly quizzes, laboratory experiments, exams, and a final project.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ENGR 103

ENGR333 - Indep Study in Engineering

General

Subject Code ~
ENGR

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Engineering

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ENGR490 - Special Topics in Engineering

General

Subject Code ~
ENGR

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Engineering

Content

Description
Topics in engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

ENTR190 - Special Topics in Entreprenuership

General

Subject Code ~
ENTR

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Entreprenuer

Content

Description
This course is a study of topics in entreprenuership, but not carried in the catalog on a regular basis.

Credit Hours

Max
3

Min
1

ENTR251 - Entrepreneurship & Innovation

General

Subject Code ~
ENTR

Course Number ~
251

Course Name (appears on the transcript) ~
Entrepreneurship & Innovation

Content

Description
This is a basic course on entrepreneurship from which students will learn the role of entrepreneurial organizations in the U.S. economy and the entrepreneurial process of identifying problem opportunities, developing raw ideas or solutions, evaluating and selecting the best ideas, and developing business plans to the launch new products and innovations. The students will also learn the concepts, practices, and policies employed by successful entrepreneurs. The students will form Entrepreneurial Teams (E-Teams) to experience the entrepreneurial process. The E-Teams will conduct several analyses and make several presentations to the class throughout the process. This experience will teach the students the skills needed to create and launch new innovations for start-up, corporations, family businesses, government, or social organizations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ENTR333 - Indep Study in Entrepreneurship

General

Subject Code ~
ENTR

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Entrepreneur

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ENTR334 - Indep Study in Entrepreneurship

General

Subject Code ~
ENTR

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Entrepreneur

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ENTR480 - Internship in Entrepreneurship

General

Subject Code ~
ENTR

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Entrepreneurship

Content

Description
See "Internships" in the Catalog.

For this internship students would be required to spend 120 hours during the semester for a start-up business (in operation for less than 3 years) and submit a performance-learning report to their Faculty Sponsor and Site Supervisor.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

ENTR481 - Internship in Entrepreneurship

General

Subject Code ~
ENTR

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Entrepreneurship

Content

Description
See "Internships" in the Catalog.

For this internship students would be required to spend 120 hours during the semester for a start-up business (in operation for less than 3 years) and submit a performance-learning report to their Faculty Sponsor and Site Supervisor.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

FALL101 - New Student Course Placeholder - 12

General

Subject Code ~
FALL

Course Number ~
101

Course Name (appears on the transcript) ~
New Student Course Placeholder

Content

Description
New Student Course Placeholder - 12 credits

Credit Hours

Min
12

Session Cycle ~
FLO - Fall Only

FALL102 - New TR Student Course Placeholder-6 cr

General

Subject Code ~
FALL

Course Number ~
102

Course Name (appears on the transcript) ~
New Student Course Placeholder

Content

Description
New Transfer Student Course Placeholder - 6 cr credits

Credit Hours

Min
6

Session Cycle ~
FLO - Fall Only

FILM102 - The History of Film

General

Subject Code ~
FILM

Course Number ~
102

Course Name (appears on the transcript) ~
The History of Film

Content

Description
This course is an introduction to the history of film from its beginnings to the present moment, with a concentration on the American context. We will examine changes in fi lm form and content as the medium reacts to the cultural, political, social, and technological changes in the world of which it is a part

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

FILM103 - The Art of Film

General

Subject Code ~
FILM

Course Number ~
103

Course Name (appears on the transcript) ~
The Art of Film

Content

Description
This course is an introduction to film and its narrative and formal components. Students analyze the basic elements of film including narrative form, mise-en-scene, cinematography, editing and sound with focus on the way specific formal choices shape content.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

FILM201 - Studies in Mainstream Film

General

Subject Code ~
FILM

Course Number ~
201

Course Name (appears on the transcript) ~
Studies Mainstream Film

Content

Description
This course focuses on a single film genre that is historically significant. The course considers genres like the Western, Melodrama, Film Noir, and Romantic Comedy. The class will focus on both enduring and evolving generic features.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Sophomore Standing

FILM202 - The Haunted Screen

General

Subject Code ~
FILM

Course Number ~
202

Course Name (appears on the transcript) ~
The Haunted Screen

Content

Description
A cinematic investigation of good, evil, nature, science, and gender through narratives of monstrous transformations. Films may include Frankenstein, Alien, Them, Dracula, The Exorcist, and The Silence of the Lambs.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Sophomore Standing

FILM210 - Mass Media & Pop Culture

General

Subject Code ~
FILM

Course Number ~
210

Course Name (appears on the transcript) ~
Mass Media & Pop Culture

Content

Description
A critical investigation of how mass media are portrayed in such films a Citizen Kane, Radio Days, Atomic CafE9, Quiz Show, Network, and the Truman Show.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

FILM290 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Sophomore Standing

FILM292 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

FILM304 - Science Fiction Film

General

Subject Code ~
FILM

Course Number ~
304

Course Name (appears on the transcript) ~
Science Fiction Film

Content

Description
This course introduces students to the history and critical reception of science fiction as a cinematic genre. As we take in the spectacle of imagined future worlds, encounter aliens and androids, and explore the reaches of space, we'll find that these films which seem so obviously oriented toward the future tell us most, in fact, about the moments from which they come. Critical readings explore the ways these popular films reflect and shape the concerns of the cultures which produce them, reveal subconscious hopes and fears, and push the limits of cinema's distinctive modes of expression.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

FILM312 - International Cinema

General

Subject Code ~
FILM

Course Number ~
312

Course Name (appears on the transcript) ~
International Cinema

Content

Description
This course studies films made in a variety of countries outside the United States.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing, or permission of English chair

FILM320 - Intro to Cinema Production

General

Subject Code ~
FILM

Course Number ~
320

Course Name (appears on the transcript) ~
Intro to Cinema Production

Content

Description
An introduction to the fundamentals of motion picture production, including dramatic development, visual storytelling, editing, and directing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing, or permission of English chair

FILM321 - Intro to Screenwriting

General

Subject Code ~
FILM

Course Number ~
321

Course Name (appears on the transcript) ~
Intro to Screenwriting

Content

Description
An introduction to writing for the screen. Topics include 3-act structure characterization, dialogue, theme and pitching.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing, or permission of English chair

FILM333 - Indep Study in Film

General

Subject Code ~
FILM

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Film

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

FILM334 - Indep Study in Film

General

Subject Code ~
FILM

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Film

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

FILM340 - Director's Signature

General

Subject Code ~
FILM

Course Number ~
340

Course Name (appears on the transcript) ~
Director's Signature

Content

Description
In depth profiling of the formal and stylistic contributions of a director's filmography through viewing and analysis of his/her principal works within the context of personal biography, the history of filmmaking, and the history of viewing and criticism.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing, or permission of English chair

FILM370 - Women & Film

General

Subject Code ~
FILM

Course Number ~
370

Course Name (appears on the transcript) ~
Women & Film

Content

Description
This course examines the representation of women and gender in different cinemas and the filmic structures that shape the way viewers see women and gender on screen. Students analyze the representation of women and gender in mainstream, independent, and experimental film. Course readings draw from film criticism, feminist film theory, and feminist/LGBTQ+ writing to develop a critical vocabulary for analysis. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

FILM390 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FILM391 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FILM392 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FILM393 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

FILM395 - Special Topics in Film

General

Subject Code ~
FILM

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in Film

Content

Description
Topics in film that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FIN190 - Special Topics in Finance

General

Subject Code ~
FIN

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Finance

Content

Description
This is a study of advanced topics in finance of special interest to finance majors but not offered on a regular basis.

Credit Hours

Max
3

Min
1

FIN214 - Intro to Finance

General

Subject Code ~
FIN

Course Number ~
214

Course Name (appears on the transcript) ~
Intro to Finance

Content

Description
This course introduces students to the broad financial world consisting of financial management, financial markets, and investments. Key outcomes include a basic understanding of investment vehicles such as stocks, bonds, and mutual funds, the ability to value future cash flows emanating from securities and projects, the ability to analyze financial statements and the ability to apply elementary working capital management concepts.

Additionally, all students will apply their knowledge in a realistic, simulated stock market trading exercise.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 111 or MATH 123 or MATH 133

Pre or Corequisite- AC 201 or HONB 203

FIN290 - Special Topics in Finance

General

Subject Code ~
FIN

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Finance

Content

Description
This is a study of advanced topics in finance of special interest to finance majors but not offered on a regular basis.

Credit Hours

Max
3

Min
1

FIN300 - Insurance & Risk

General

Subject Code ~
FIN

Course Number ~
300

Course Name (appears on the transcript) ~
Insurance & Risk

Content

Description
This is an analysis of the principles and practices of insurance and risk management. Topics include personal, business, and social aspects of life, health, property, and liability risks.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing

FIN312 - Financial Markets & Institutions

General

Subject Code ~
FIN

Course Number ~
312

Course Name (appears on the transcript) ~
Financial Markets & Inst

Content

Description
This course studies how markets and institutions in the financial system gather and allocate resources. Key outcomes include understanding how financial intermediaries operate, the flow of funds among them, financial policy, the regulatory environment, and the ethical standards of conduct among agents of the financial system.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete FIN 214 and EC 111

FIN317 - Investments

General

Subject Code ~
FIN

Course Number ~
317

Course Name (appears on the transcript) ~
Investments

Content

Description
This course is intended to introduce students to the core concepts of Investments and Portfolio Management. To that end, the course will cover various classes of financial assets, the basic institutional background for trading securities, and asset valuation concepts. Further, the course will cover basic aspects of portfolio management including portfolio risk and return, efficient portfolio, and portfolio performance measurement. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FIN 214

FIN318 - Security Analysis

General

Subject Code ~
FIN

Course Number ~
318

Course Name (appears on the transcript) ~
Security Analysis

Content

Description
This course is intended to introduce students to the security analysis and investment decision making. To that end, the course will cover various classes of financial assets, the basicmacroeconomic and microeconomic environment analysis, international financial alternative, financial institutional background, industry analysis, and specific security analysis. Further, the course will cover basic aspects of derivatives, including futures and options, to complete the entire spectrum of financial markets. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FIN 317 with minimum grade of C-

FIN320 - Intermediate Corporate Finance

General

Subject Code ~
FIN

Course Number ~
320

Course Name (appears on the transcript) ~
Intermediate Corporate Finance

Content

Description
This course provides the student with an understanding of finance theory and a working knowledge of financial strategies. Key outcomes include the ability to perform corporate-level financial analysis, to pursue value-based management, to perform capital budgeting, to determine cost of capital, and to make both short-term and long-term financing decisions.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FIN 214

FIN322 - International Finance

General

Subject Code ~
FIN

Course Number ~
322

Course Name (appears on the transcript) ~
International Finance

Content

Description
This is a study of the international dimensions of financial management. Key outcomes include a knowledge of international financial markets; the ability to measure and control economic, contractual, and translation risk; the ability to engage in international working capital management; and a knowledge of how funds are secured internationally.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete FIN-214, EC-111 and EC-112

FIN330 - Financing Entrepreneurial Ventures

General

Subject Code ~
FIN

Course Number ~
330

Course Name (appears on the transcript) ~
Finance Entrepre Ventures

Content

Description
This course covers various aspects of finance in an entrepreneurial venture. Major topics include attracting seed and growth capital from sources such as venture capital, investment banking, government, and commercial banks. Among the issues discussed are different legal forms of organization, taxes, valuing a company, and exit strategies (going public, selling out, acquisitions and bankruptcy).

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete FIN 214

FIN333 - Indep Study in Finance

General

Subject Code ~
FIN

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Finance

Content

Description
See Independent Study on p. 32 of catalogue

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

FIN334 - Indep Study in Finance

General

Subject Code ~
FIN

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Finance

Content

Description
See "Independent Study" in the Catalogue.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

FIN340 - Intro to Financial Planning

General

Subject Code ~
FIN

Course Number ~
340

Course Name (appears on the transcript) ~
Intro to Financial Planning

Content

Description
This course is an overview of how comprehensive plans for families and individuals are formulated by professional financial planners. Topics include developing client relationships, risk management through insurance planning, investment planning, retirement planning, tax planning and estate planning.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EC 111, AC201/HONB 203, and FIN 214

FIN350 - Advanced Corporate Finance

General

Subject Code ~
FIN

Course Number ~
350

Course Name (appears on the transcript) ~
Advanced Corporate Finance

Content

Description
Advanced Corporate Finance builds directly upon the basic valuation tools developed in Intermediate Corporate Finance and extends to new theories and practical tool. First, the course introduces more advanced concepts into valuation allowing students to analyze more complex and realistic capital structures, dividend policies and other corporate transactions. Second, the course explores short-term corporate decision making through the introduction to working capital management and the analysis of short-term financing. As with earlier finance courses, Advanced Corporate Finance will place a large emphasis on corporate decision making.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FIN 320 with grade of "C" or better

FIN382 - Health Care Finance

General

Subject Code ~
FIN

Course Number ~
382

Course Name (appears on the transcript) ~
Health Care Finance

Content

Description
This course seeks to accomplish two general objectives. First, it will introduce students to the most crucial accounting and financial management principals and concepts relative to healthcare providing institutions. Secondly, we will examine the financial planning, management, and control process of healthcare institutions.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete FIN 214 and AC 202

FIN390 - Special Topics in Finance

General

Subject Code ~
FIN

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Finance

Content

Description
This is a study of advanced topics in finance of special interest to finance majors but not offered on a regular basis.

Credit Hours

Min
3

FIN391 - Special Topics in Finance

General

Subject Code ~
FIN

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Finance

Content

Description
This is a study of advanced topics in finance of special interest to finance majors but not offered on a regular basis.

Credit Hours

Max
3

Min
1

FIN393 - Special Topics in Finance

General

Subject Code ~
FIN

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Finance

Content

Description
This is a study of advanced topics in finance of special interest to finance majors but not offered on a regular basis.

Credit Hours

Max
5

Min
3

Requisites

Free Form Requirements
Junior Standing

FIN405 - Financial Statement Analysis

General

Subject Code ~
FIN

Course Number ~
405

Course Name (appears on the transcript) ~
Financial Statement Analysis

Content

Description
This course is a study of generally accepted accounting practices with a goal of developing skills in interpreting and analyzing financial reports from an external point of view. The main focus is on the value of financial statements in making investment and credit decisions. The course begins with an overview of how financial statements are generated, followed by the canon of analytical techniques. The course will conclude with a discussion of how managers choose among acceptable techniques and a comparison between U.S. and International standards.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete FIN 214, and AC-305 or FIN 320

FIN425 - Portfolio Management

General

Subject Code ~
FIN

Course Number ~
425

Course Name (appears on the transcript) ~
Portfolio Management

Content

Description
This is a course in equity portfolio management that applies financial theory and conventionally accepted practice to the management and assessment of a diversified portfolio designed to outperform a broad-based index such as the S & P 500 index. Students perform economic, industry and company analysis to select companies to include in portfolio. The portfolio is maintained and monitored by conventional metrics including attribution analysis.Offered: Fall and SpringStudents cannot take both FIN 425 and HONB 425 for credit.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete FIN 317 with minimum grade of C-

FIN480 - Internship in Finance

General

Subject Code ~
FIN

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Finance

Content

Description
See Internships on p. 33 of the catalogue

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

FIN481 - Internship in Finance

General

Subject Code ~
FIN

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Finance

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

FIN610 - Financial Tax Planning

General

Subject Code ~
FIN

Course Number ~
610

Course Name (appears on the transcript) ~
Financial Tax Planning

Content

Description
The effectiveness of an organization's tax planning is defined by the amount of tax burden that falls on a business. Optimization of an organization's tax situation is the minimization of the tax burden within the confines of legal requirements and ethical expectations of society. The objectives of the course are to study the theoretical framework of US corporate taxation, to introduce, apply, and extend methods of tax accounting and planning in this system to optimize an organization's tax burden, and to use the obtained theoretical and practical knowledge to assess a company's tax risks, to calculate tax liabilities, and to create effective corporate tax planning.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

FIN612 - Business Analysis & Valuation

General

Subject Code ~
FIN

Course Number ~
612

Course Name (appears on the transcript) ~
Business Analysis & Valuation

Content

Description
The objective of this course is to provide hands-on experience in the analysis of financial and non-financial information, including developing understanding of its creation and use within the firm's economic and strategic environments. By the end of the course, students are expected to be well-versed in reading firms' financial statements and understanding how financial statement analysis can be used in a variety of business contexts.

Credit Hours

Min
3

FIN617 - Investment Theory & Practice

General

Subject Code ~
FIN

Course Number ~
617

Course Name (appears on the transcript) ~
Investment Theory & Practice

Content

Description
This course is an introduction to the investment process from the institutional perspective including asset management, fund development, and corporate financial investments. Key outputs include the ability to assess the risk and return trade-offs of the major investment alternatives, and the ability to develop, implement, evaluate and explain asset allocation strategies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

FIN630 - Managerial Finance

General

Subject Code ~
FIN

Course Number ~
630

Course Name (appears on the transcript) ~
Managerial Finance

Content

Description
This course examines how corporations benefit society by raising funds in the financial markets and employing them in productive activity. Key outcomes include the ability to apply the basic tools of ratio analysis, proforma analysis, time value of money, elementary security analysis, capital budgeting, and working capital management techniques to maximize owner value. Financial structure and capital risk management are also considered.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

FIN690 - Special Topics in Finance

General

Subject Code ~
FIN

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Finance

Content

Description
This is a study of advanced topics in finance of special interest to finance majors but not offered on a regular basis.

Credit Hours

Min
3

FLAN190 - Special Topics in Foreign Languages

General

Subject Code ~
FLAN

Course Number ~
190

Course Name (appears on the transcript) ~
ST: Foreign Languages

Content

Description
This is a study of advanced topics in foreign language but not offered on a regular basis.

Credit Hours

Max
3

Min
1

FLAN191 - Special Topics in Foreign Languages

General

Subject Code ~
FLAN

Course Number ~
191

Course Name (appears on the transcript) ~
ST: Foreign Languages

Content

Description
This is a study of advanced topics in foreign language but not offered on a regular basis.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete FLAN 190 Elem Italian I, or instructor's permission

FR101 - Elementary French Conversat I

General

Subject Code ~
FR

Course Number ~
101

Course Name (appears on the transcript) ~
Elementary French Conversat I

Content

Description
This is an immersion course in French language and culture using the innovative Capretz French in Action method that combines video, audio, and print materials. Digital audio program on CD-ROM used. One hour of lab per week. Offered every fall.

Credit Hours

Min
3

FR102 - Elementary French Conversat II

General

Subject Code ~
FR

Course Number ~
102

Course Name (appears on the transcript) ~
Elementary French Conversat II

Content

Description
This is a continuation of French in Action. Digital audio program on CD-ROM used. One hour of lab per week. Offered every spring.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FR 101 or the equivalent

FR190 - Special Topics in French

General

Subject Code ~
FR

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in French

Content

Description
Topics in French that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

FR203 - Intermed French Conversat I

General

Subject Code ~
FR

Course Number ~
203

Course Name (appears on the transcript) ~
Intermed French Conversat I

Content

Description
This is a continuation of French in Action. Digital audio program on CD-ROM used. Offered every fall.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FR 102 or the equivalent

FR204 - Intermed French Conversat II

General

Subject Code ~
FR

Course Number ~
204

Course Name (appears on the transcript) ~
Intermed French Conversat II

Content

Description
This is a continuation of French in Action. The emphasis is on fluent oral reports based on articles from current French publications. Digital audio program on CD-ROM used. Offered every spring.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete FR 203 or the equivalent

FR290 - Special Topics in French

General

Subject Code ~
FR

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in French

Content

Description
Topics in French that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FR333 - Indep Study in French

General

Subject Code ~
FR

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in French

Content

Credit Hours

Min
1

FR334 - Indep Study in French

General

Subject Code ~
FR

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in French

Content

Credit Hours

Min
1

FR390 - Special Topics in French

General

Subject Code ~
FR

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in French

Content

Description
Topics in French that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

FS190 - Special Topics in Forensic Science

General

Subject Code ~
FS

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Forensic Sci

Content

Description
Topics in forensic science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FS201 - Introduction to Forensics

General

Subject Code ~
FS

Course Number ~
201

Course Name (appears on the transcript) ~
Intro to Forensics

Content

Description
This course introduces students to the criminalistics concepts of crime scene procedures, techniques, and reconstruction pattern analysis. Even though this course is designed for students who have little or no science background, basic scientific measurements will assist in understanding the methods behind forensic science and its application to the legal system. Usually associated with law enforcement, the forensic scientist plays an increasingly active role in the civil and criminal justice arenas.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CJ 101, and FB or FC major, or permission

FS240 - Scientific Evidence

General

Subject Code ~
FS

Course Number ~
240

Course Name (appears on the transcript) ~
Scientific Evidence

Content

Description
This course introduces the forensic science major to the theories of scientific evidence. After a brief study of the history, theory and application of the rules of evidence in complex civil and criminal matters, the course will specifically focus on the procedures of qua-lification of expert witnesses and various scientific disciplines relative to the admissibility of expert testimony and scientifically-based evidence through the each stage of a legal proceedings. The course will include both the civil and criminal trial processes, definitions of scientific evidence, and qualification of expert witnesses. These topics and the procedures for validating scientific evidence disciplines will be studied in detail through actual case studies from various U. S. judicial jurisdictions. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete FS 201, BIO 107, BIO 117, and CJ 101;
Corequisite- CHEM 209

FS290 - Special Topics in Forensic Science

General

Subject Code ~
FS

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Forensic Sci

Content

Description
Topics in forensic science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FS310 - Crime Scene Processing

General

Subject Code ~
FS

Course Number ~
310

Course Name (appears on the transcript) ~
Crime Scene Processing

Content

Description
This course presents a detailed study of crime scene investigation through the eyes of the forensic scientist. The course, for the forensic science major, illustrates the role of the forensic scientist in responding to the crime scene and follows an investigation through the trial process. A major focus will be evidence recognition, documentation, and collection techniques at the crime scene. A detailed analysis of the developing common law is included so that the student will be immersed in the legal processes of major criminal investigations.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete FS 201 and FS 240
Corequisite- CHEM 209
Forensic Biology and Forensic Chemistry Majors ONLY

FS325 - Pattern Analysis

General

Subject Code ~
FS

Course Number ~
325

Course Name (appears on the transcript) ~
Pattern Analysis

Content

Description
This is an in-depth study of the recognition, collection, processing, and examination pattern evidence typically found at crime scenes. Emphasis is placed on the laboratory techniques used in studying physical evidence such as fingerprints, footprint, tool marks, trace evidence, etc. Three lecture hours, one three-hour lab.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete FS 100 or 201 and Jr Standing

FS333 - Indep Study in Forensic Science

General

Subject Code ~
FS

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Forensic Sci

Content

Description
See "Independent Study" (p. 23)

Laboratory fees may be required.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

FS334 - Indep Study in Forensic Science

General

Subject Code ~
FS

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Forensic Sci

Content

Description
See "Independent Study" (p. 23)

Laboratory fees may be required.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

FS390 - Special Topics in Forensic Science

General

Subject Code ~
FS

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Forensic Sci

Content

Description
Topics in forensic science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

FS391 - Special Topics in Forensic Science

General

Subject Code ~
FS

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Forensic Sci

Content

Description
Topics in forensic science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

FS393 - Special Topics in Forensic Science

General

Subject Code ~
FS

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Forensic Sci

Content

Description
Topics in forensic science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

FS426 - Criminalistics II

General

Subject Code ~
FS

Course Number ~
426

Course Name (appears on the transcript) ~
Criminalistics II

Content

Description
A continuation of the introductory forensic course CJ 325, is designed to provide student s with a strong theoretical and experimental background in forensic science applications and techniques, including proper documentation and communication of laboratory data. Through an integrated lab-lecture approach, the chemical, biological, and physical processes underlying the sampling, storage, and analysis of evidence will be studied.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete FS 425/FS 325, and CHEM 210; CHEM 312 or BIO 401

FS430 - Expert Witness Testimony

General

Subject Code ~
FS

Course Number ~
430

Course Name (appears on the transcript) ~
Expert Witness Testimony

Content

Description
Forensic Science is any science used in the legal system. This course will focus on investigations related to law enforcement matters and will enhance your understanding of courtroom proceedings as they relate to forensic science, while preparing you for expert witness testimony. This will entail consideration of crime scene investigation, ethics, analysis of scientific information and evidence, quality control as well as on how to prepare for and present your findings in a court of law. The course will conclude with a mock trial exercise.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete FS 425

FS440 - Undergraduate Research

General

Subject Code ~
FS

Course Number ~
440

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

Laboratory fees may be required

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
In order to enroll for undergraduate research, the student must make arrangements in writing prior to registration Applications are available from the deans of the Colleges of Arts and Sciences, Business, and Engineering Applications must have the signatures of the student, the faculty supervisor, and the department chair If the dean of the College approves the application, the student will be given a form authorizing registration for the work

FS441 - Undergraduate Research

General

Subject Code ~
FS

Course Number ~
441

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

This course is a continuation of FS 440. Laboratory fees may be required.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete FS-440

FS480 - Internship Forensic Chem/Forensic Bio

General

Subject Code ~
FS

Course Number ~
480

Course Name (appears on the transcript) ~
Internship Forensic Chem/Bio

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

FS481 - Internship Forensic Chem/Forensic Bio

General

Subject Code ~
FS

Course Number ~
481

Course Name (appears on the transcript) ~
Internship Forensic Chem/Bio

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

FS490 - Special Topics in Forensic Science

General

Subject Code ~
FS

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Forensic Sci

Content

Description
Members of the forensic science faculty offer selected topics in their areas of specialty. These courses are not offered on a regular basis and may be repeated for credit if the topic differ

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Prerequisites can vary depending on special topics

GEOG102 - Geog I: Highly Developed Countries

General

Subject Code ~
GEOG

Course Number ~
102

Course Name (appears on the transcript) ~
Highly Developed Countries

Content

Description
This survey of world geography is designed to help you develop a greater understanding of the advanced industrialized and highly developed societies of North America, Europe, Russia, East Asia and Oceania. Greater familiarity with these places will help you to appreciate the challenges confronting the more affluent parts of the world. All face issues like aging populations, increasingly costly social insurance systems, deindustrialization, and growing multiculturalism. The class puts special emphasis on the ways in which the changing global environment and an increasingly interdependent global economy are impacting political, environmental, social and cultural dimensions in all of these regions

Credit Hours

Min
3

GEOG103 - Geog Ii: Less Developed Countries

General

Subject Code ~
GEOG

Course Number ~
103

Course Name (appears on the transcript) ~
Less Developed Countries

Content

Description
This survey of world geography is designed to help you develop a greater understanding of the rapidly developing societies of Middle and South America, North Africa and Southwest Asia, Sub-Saharan Africa, South Asia and Southeast Asia. Developing a better understanding of these places will illustrate challenges associated with rapid population growth, urbanization, environmental stresses, industrialization, and dependence on raw material production in a highly competitive in a global market. This class will promote a better appreciation for the ways in which the changing global environment and an increasingly interdependent global economy are impacting political, environmental, social and cultural dimensions of all of these regions.

Credit Hours

Min
3

GEOG110 - Geography of United States & Canada

General

Subject Code ~
GEOG

Course Number ~
110

Course Name (appears on the transcript) ~
Geography of US & Canada

Content

Description
This course is an introduction to the discipline of geography that offers case studies and analysis from the United States and Canada, Themes covered in this course include surveys of physical features of the region, historic settlement and population patterns, agriculture and extractive industries, manufacturing organization, transportation systems, urbanization, environmental impact, and cultural geography.

Credit Hours

Min
3

GEOG190 - Special Topics in Geography

General

Subject Code ~
GEOG

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Geography

Content

Description
Topics in geography that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

GEOG333 - Indep Study in Geography

General

Subject Code ~
GEOG

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Geography

Content

Credit Hours

Min
1

GEOL101 - Physical Geology

General

Subject Code ~
GEOL

Course Number ~
101

Course Name (appears on the transcript) ~
Physical Geology

Content

Description
This is a systematic study of the planet Earth with emphasis on the forces, processes, and materials that are responsible for the more familiar land forms. Two class hours, three-hour lab or field trip

Credit Hours

Min
3

GURPLAB - General Univ Req't Lab Placeholder

General

Subject Code ~
GURP

Course Number ~
LAB

Course Name (appears on the transcript) ~
GUR - Lab Placeholder

Content

Description
General University Requirement Placeholder - Lab All undergraduate students must complete General University Requirements (GURs) which include Computer Literacy, Critical Thinking, Information Literacy, Mathematical Analysis, Oral Communication, Written Communication as well as Perspectives courses in Aesthetics, Ethics, Global Cultures, History, Natural Science, and Social/Behavioral Science.

Fulltime students may take up to 18 credits per semester at no additional charge and are encouraged to review their Self-Service "My Progress" section to see which specific GUR courses they need and wish to add to their current semester's load.

This placeholder is an encouragement to check your "My Progress" for what General University Requirements are remaining, and choose one to take in this placeholder's spot. Please see your advisor or academic dean's office for assistance if needed."

Credit Hours

Min
3

HIST105 - World History to 1500

General

Subject Code ~
HIST

Course Number ~
105

Course Name (appears on the transcript) ~
World History to 1500

Content

Description
This course is an introductory survey of world history to 1500. Focusing on the rise of the world's major civilizations and religions. The emphasis is on the social and political history of Europe, Asia, Africa, and the Americas.

Credit Hours

Min
3

HIST106 - World History, 1500 CE - Present

General

Subject Code ~
HIST

Course Number ~
106

Course Name (appears on the transcript) ~
World History, 1500 CE - Pres

Content

Description
This course explores continuity and change in world history from 1500CE to the present. It asks how interactions in the past between Africa, the Americas, Asia, and Europe shaped the patterns and processes of today's world. It examines specific encounters, empires, colonies and nations to understand the interrelated histories of today's world societies, governments, economies, and cultures.

Credit Hours

Min
3

HIST111 - United States History to 1877

General

Subject Code ~
HIST

Course Number ~
111

Course Name (appears on the transcript) ~
US History to 1877

Content

Description
This is an introduction to U.S. history with special emphasis on the colonial period, the American Revolution, the New Nation, Westward Expansion, the Civil War, and Reconstruction.

Credit Hours

Min
3

HIST112 - United States History 1878 to Present

General

Subject Code ~
HIST

Course Number ~
112

Course Name (appears on the transcript) ~
US History 1878 to Present

Content

Description
This is a survey of U.S. history with special emphasis on economic revolution, U.S. involvement in World War I, the Great Depression, the New Deal, World War II, the Cold War, and contemporary America.

Credit Hours

Min
3

HIST132 - Early Modern Europe 1500-1815

General

Subject Code ~
HIST

Course Number ~
132

Course Name (appears on the transcript) ~
Early Modern Europe 1500-1815

Content

Description
This course surveys the cultural, intellectual, social, political, and economic changes in Europe between 1500 and 1815. Central themes include the contemporary understanding of the human person, class status, gender roles, and the wider world known to early modern Europeans. The course considers topics such as the Protestant and Catholic Reformations, absolutism, colonialism, the scientific revolution, the enlightenment, the French Revolution, the Napoleonic period, and the advent of industrialization.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

HIST133 - Modern Europe, 1815-Present

General

Subject Code ~
HIST

Course Number ~
133

Course Name (appears on the transcript) ~
Modern Europe, 1815-Present

Content

Description
This course examines the history of modern Europe from the Congress of Vienna to the present from a political, social, cultural, and intellectual history perspective. Dominant themes include nationalism, wars and revolutions, science and industry, socialism, fascism, the welfare state, feminism, the European Union, and globalization.

Credit Hours

Min
3

HIST170 - Colonial Latin American History

General

Subject Code ~
HIST

Course Number ~
170

Course Name (appears on the transcript) ~
Colonial Latin Amer History

Content

Description
This course surveys the fascinating history of Spanish and Portuguese colonies in America (1500-1800). How did indigenous, Iberian and African peoples change with contact and coexistence? What political and economic institutions developed? How did socioracial and cultural identities transform? How did colonial Latin America influence global society and culture? It examines specific individuals, groups, and regions to recognize commonality and difference, as well as patterns of continuity and change over time in colonial Latin America.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

HIST171 - Modern Latin American History

General

Subject Code ~
HIST

Course Number ~
171

Course Name (appears on the transcript) ~
Modern Latin Amer History

Content

Description
This course explores the dramatic history of Latin America since independence from Spain and Portugal (1800-present). How did legacies of colonial rule shape the new nations of Latin America? How did different Latin Americans envision democracy, define citizenship, and debate equality? How did Latin Americans embrace, reject, and change capitalism? How have different peoples, cultures, and ideas created such diversity across Latin America? How have Latin Americans interacted with and influenced the United States and the world?

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

HIST190 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

HIST191 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

HIST201 - Technology & Society

General

Subject Code ~
HIST

Course Number ~
201

Course Name (appears on the transcript) ~
Technology & Society

Content

Credit Hours

Min
3

HIST208 - Medieval Europe, 300-1300 Bce

General

Subject Code ~
HIST

Course Number ~
208

Course Name (appears on the transcript) ~
Medieval Europe

Content

Description
This course covers European history from the division of the Roman Empire to the early Modern Period and explores a number of the various social, political, and cultural changes that took place on the continent. In particular, this course will use the Iberian Peninsula (modern Spain and Portugal) as a case study for exploring the staggering diversity of the European medieval experience across social, legal, religious, ethnic, and gender lines. No prior knowledge of the European Middle Ages is required. Satisfies one of the Writing Intensive Course (WIC) requirements for the College of Arts & Sciences.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
ENGL 133 or its equivalent, or permission of the Instructor

HIST250 - Colonial America

General

Subject Code ~
HIST

Course Number ~
250

Course Name (appears on the transcript) ~
Colonial America

Content

Description
This course examines the people and events that shaped America in the years before the creation of the United States. Because the traditional focus on the English experience overlooks the influential roles of other European nations and indigenous peoples in the process of colonization, we will begin with Columbus's discovery of the New World and study Spanish, French, and Dutch influences on America along with the English colonization effort. The role of various Native American societies in shaping colonial America, both as rivals and allies, will also receive extensive attention.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

HIST251 - Early American Women History -1865

General

Subject Code ~
HIST

Course Number ~
251

Course Name (appears on the transcript) ~
Early American Women Hist-1865

Content

Description
The purpose of this course is to introduce students to the diverse experiences of women in American history, which until recent decades had been largely ignored. Today, however, women's history and gender studies are two of the fastest growing and most promising fields of historical inquiry, offering students new perspectives on the nation's past and providing them with a framework to assess their own lives. This particular course will focus on the early years of American history, roughly from the 1500s to the 1860s, and cover such topics as colonial gender roles, the impact of the Revolution on women's status, gender and slavery in the Old South, and women's roles in opening the West.

Credit Hours

Min
3

HIST253 - War & American Society

General

Subject Code ~
HIST

Course Number ~
253

Course Name (appears on the transcript) ~
War & American Society

Content

Description
From the woodlands of New England to the muddy trenches of France, war waged in support of American civilization has often transformed the very society and values it was meant to protect. This course examines the changes warfare has wrought upon American society from its origins in the colonial era through the emergence of modern warfare in the early twentieth century. Topics addressed include the cultural implications of war in Native American societies, the controversy over standing armies during the Revolution, antiwar sentiment, women in war, and the impact of technology upon American military strategy.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

HIST254 - Sectional Crisis & Civil War

General

Subject Code ~
HIST

Course Number ~
254

Course Name (appears on the transcript) ~
Sectional Crisis & Civil War

Content

Description
This is an examination of the Peculiar Institution, the anti- slavery movement, the intensification of sectionalism, the secession crisis, why and how war came, the course and conduct of the war, and the reconstruction of the nation.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

No Requirements

HIST256 - History of American Pop Culture

General

Subject Code ~
HIST

Course Number ~
256

Course Name (appears on the transcript) ~
Hist of American Pop Culture

Content

Description
This course will examine the history and role of popular culture in shaping the experiences, identities, and even lives of Americans today. From film to video games to the Internet, from paperbacks and music and television, this course will consider how pop culture might be the last common ground left in a nation that is otherwise increasingly divided. This course fulfills the History general university requirement.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

HIST259 - The United States in Vietnam

General

Subject Code ~
HIST

Course Number ~
259

Course Name (appears on the transcript) ~
The United States in Vietnam

Content

Description
This course examines U.S. policy in Vietnam within the context of Vietnamese history and culture with special emphasis on Vietnamese nationalism, the French colonial period, both Indochina Wars, and the evolution of U.S. policy from the Truman presidency through the Nixon administration.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

HIST260 - History of Pre-Colonial Africa

General

Subject Code ~
HIST

Course Number ~
260

Course Name (appears on the transcript) ~
History of Pre-Colonial Africa

Content

Description
This is a thematic survey of the history of Africa up to the late 1890s with special emphasis on the Neolithic revolution, the rise of African states, the trans-Atlantic slave trade, and the prelude to colonialism.

Credit Hours

Min
3

HIST261 - Modern African History

General

Subject Code ~
HIST

Course Number ~
261

Course Name (appears on the transcript) ~
Modern African History

Content

Description
This course examines the origins of colonialism and the conquest of Africa. The development of colonial society and economy is explored on a regional basis. The course ends with the rise of new independent African states.

Credit Hours

Min
3

HIST276 - Spain: Nation and Culture

General

Subject Code ~
HIST

Course Number ~
276

Course Name (appears on the transcript) ~
Spain: Nation and Culture

Content

Description
What does it mean to be "Spanish"? This course aims to help students understand this complicated and much-debated question by exploring the diverse cultures and politics of culture that define modern Spain. From a hinterland of the Roman Empire, the region tranformed dramatically with 700 years of Islamic rule, 500 years of Catholic monarchy and global empire, a devastating civil war, Franco's 40-year dictatorship, and the return to democracy in the 1970s. We trace how events, interactions, and cultural issues from Spain's past shape the present: religions, gender and family roles, political values, ethnic identities, immigration, and controversies about iconic traditions like bullfighting and flamenco.

Credit Hours

Min
3

HIST277 - Colombia: Nation and Culture

General

Subject Code ~
HIST

Course Number ~
277

Course Name (appears on the transcript) ~
Colombia: Nation and Culture

Content

Description
Colombia is a complex country of cultural, ethnic, and ecological diversity. This course introduces students to the indigenous, Spanish, and African foundations of modern Colombia's multi-ethnic regional identities. Using scholarship, memoirs, art, and film, we examine Colombians' responses to uneven development, inequality, political conflict, and violence to learn how they have created meaningful ways of life despite these challenges. Topics include: customs, values, and religion; arts, music, and sports; land, labor, and exports (gold, coffee, bananas, flowers, cocaine); violence, displacement, and human rights.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

HIST289 - Methods Seminar in History

General

Subject Code ~
HIST

Course Number ~
289

Course Name (appears on the transcript) ~
Methods Seminar in History

Content

Description
This course provides a general introduction to historiography and historical research methods by focusing on a specific historical problem.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete 6 credits of 100-level HIST

HIST290 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

HIST291 - Special Topics in History-WIC

General

Subject Code ~
HIST

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in History-WIC

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST292 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST293 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST294 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST299 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
299

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

HIST310 - Medieval Architecture & Society

General

Subject Code ~
HIST

Course Number ~
310

Course Name (appears on the transcript) ~
Medieval Architect & Soc

Content

Description
This course examines the monuments of medieval Mediterranean architecture in their historical context. We will study military fortifications such as the castle and misr (garrison town), administrative projects such as the funduq (merchant hotel) and the earliest university campuses, and the development of new buildings for religious worship, such as mosques, churches and synagogues, monasteries, ribats and zawiyyas, to learn about the buildings themselves and the societies that created them. Note: this course is equivalent to ART 310 and could satisfy either the aesthetic perspective or historical perspective requirement.This course also satisfies a Writing Intensive Course (WIC) requirement for the College of Arts & Sciences.

Credit Hours

Min
3

HIST320 - The Twentieth Cent World

General

Subject Code ~
HIST

Course Number ~
320

Course Name (appears on the transcript) ~
The 20th Cent World

Content

Description
This course explores the forces and conditions that shaped events of the fastest changing century in human history. Themes will include the World Wars, the rise and fall of the Soviet Union, colonization and decolonization, globalization, and technology.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST333 - Indep Study in History

General

Subject Code ~
HIST

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in History

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HIST334 - Indep Study in History

General

Subject Code ~
HIST

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in History

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HIST336 - Early American Republic

General

Subject Code ~
HIST

Course Number ~
336

Course Name (appears on the transcript) ~
Early American Republic

Content

Description
This course examines the creation and evolution of the American nation from its inception in 1776 to its Jubilee in 2826, a dynamic fifty-year period that is rich and complex in its history. Forged out of the fires of war and revolution, the new United States faced the difficult task of securing unto itself a republican government at home while establishing a role in the international community abroad. How it did so, and with what success, will be studied through such topics as patriotism and party politics, national identity and American folklore, race, class, and gender in the republic, and the "empire of liberty" and westward expansion. New England's changing role in the early republic will be given special emphasis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing or permission of the instructor

HIST341 - German History Since 1871

General

Subject Code ~
HIST

Course Number ~
341

Course Name (appears on the transcript) ~
German History Since 1871

Content

Description
This is a systematic examination of constitutional, economic, social, cultural, and political issues at work as Germany moved from a collection of monarchies to empire, to republic, to dictatorship, and back to republic again. German contributions to music, literature, art, and philosophy are examined in their social and political contexts.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing

HIST343 - East German Society & Culture

General

Subject Code ~
HIST

Course Number ~
343

Course Name (appears on the transcript) ~
East German Society & Culture

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST345 - WW II & The Holocaust in Europe

General

Subject Code ~
HIST

Course Number ~
345

Course Name (appears on the transcript) ~
WW II & Holocaust in Europe

Content

Description
This is an approach to this world conflict from the perspective of total war and its impact on modern history. Topics include the politics and diplomacy leading to the war, the military conflict, and the human and material costs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST346 - History British Isles 1870-PRESENT

General

Subject Code ~
HIST

Course Number ~
346

Course Name (appears on the transcript) ~
Hist British Isles 1870-PRES

Content

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

HIST351 - The American Revolution

General

Subject Code ~
HIST

Course Number ~
351

Course Name (appears on the transcript) ~
The American Revolution

Content

Description
This course examines the transformation of Britain's American colonies into the United States between 1765 and 1789. Topics discussed include the changing character of imperial politics, the problems of waging revolutionary war, and the Revolution's impact on American society.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST355 - Watching War

General

Subject Code ~
HIST

Course Number ~
355

Course Name (appears on the transcript) ~
Watching War

Content

Description
A constant in the contemporary instruction and understanding of American history is the centrality of war. To the American public these wars have often manifested themselves in film as filmmakers and audiences alike strive to find the real experience or real meaning of a war in what is usually less than two hours. From the Revolutionary War to the Iraq War our understanding of history since the invention of the motion picture has been inextricably tied to what we watch. The film industry constantly revisits and even reinvents past conflicts in their movies, in the process shifting our collective understanding of the past and changing our attitiudes toward present and future conflicts. This course will examine how movies shape our understanding of American history and mythology, and will seek to place these films in a proper historical context.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

HIST356 - A City Upon a Hill: Boston 1630-1865

General

Subject Code ~
HIST

Course Number ~
356

Course Name (appears on the transcript) ~
City on Hill: Boston 1630-1865

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST357 - History of New York City

General

Subject Code ~
HIST

Course Number ~
357

Course Name (appears on the transcript) ~
History of New York City

Content

Description
New York City, as the world was reminded on September 11, 2001, is a global capital, a symbol of American dominance and vulnerability in the 21st century. The story of how the city came to occupy this position is central to the history of America and the modern world. This course is also a local history, for as countless observers have noted, New York is different. A historical analysis of the city offers a glimpse into the best and worst of all worlds, and it remains to be seen whether New York will be the model of the future or a monument to the past and what might have been.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior Standing

HIST358 - History of United States Since 1945

General

Subject Code ~
HIST

Course Number ~
358

Course Name (appears on the transcript) ~
History of US Since 1945

Content

Description
This course will begin with an examination of how America came to be so powerful in 1945, and will continue through the present, covering such themes and events as the Cold War, Vietnam, the Civil Rights Movement, the Reagan revolution, and the paradox of affluence and poverty. The course will end with a consideration of America's challenges, opportunities, and responsibilities in the post-Cold War world.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

HIST365 - Rise of Islam & Caliphate 500-1000

General

Subject Code ~
HIST

Course Number ~
365

Course Name (appears on the transcript) ~
Rise of Islam 500-1000 AD

Content

Description
This course examines the origins of the Islamic religion, its contribution to the development of a new political model, the Caliphate, and the impact the Caliphate as an institution had on the formation of the Islamic world from historical, theological, social, and political viewpoints. Topics will include pre-Islamic Arabia, the life of the Prophet Muhammad and his role as the first Muslim leader, the history and significance of the Rashidun, Umayyad, Abbasid, and Fatimid Caliphates, and the ways in which the institution continued to influence ideas of Islamic thought and governance during the later Middle Ages. The course will conclude by studying how modern political groups such as ISIS make use of the medieval idea of the Caliphate today. This course satisfies a Writing Intensive Course requirement (WIC) for the College of Arts & Sciences.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST372 - Latin American Revolutions

General

Subject Code ~
HIST

Course Number ~
372

Course Name (appears on the transcript) ~
Latin American Revolution

Content

Description
This course will examine several ways in which social movements in Latin America have been defined and analyzed by historians and social scientists. We will consider the circumstances under which people act collectively; how people respond to revolutionary transformations; and how economic, social, and cultural contexts limit or expand the scope of such activity. We will also give special attention to evaluating the kinds of sources that social scientists (historians, political scientists, anthropologists, and

economists) employ in their studies of society, action, and change. We will focus on cases from Peru, Colombia, Mexico, Bolivia, and Brazil in the twentieth and twenty-first centuries. However, this will entail investigation into the historical roots of violent and non-violent movements and broader comparisons across Latin American and world societies. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

HIST373 - Women in Latin America

General

Subject Code ~
HIST

Course Number ~
373

Course Name (appears on the transcript) ~
Women in Latin America

Content

Description
This course considers Latin American history through the lens of women's social and political mobilization in the region from the late colonial period to the present. Gender, power, and the creation of identities in Latin America will be explored. Particular attention will be paid to the relationship between the ideologies of gender, class, and race. These scholarly concerns will take us into the household, workplace, and civil society. Chronologically, the course begins in the late colonial period (1770-1810) and extends through contemporary urban popular movements (1970-2000) in order to examine different moments of social and political activism involving, motivated, or impeded by women. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

HIST374 - Latin America - Us Relations

General

Subject Code ~
HIST

Course Number ~
374

Course Name (appears on the transcript) ~
Latin America-US Relations

Content

Description
This course explores the intertwined histories of Latin America, the U.S. and the world (1800-present). Why have societies so connected by cultural, commercial, and migratory ties been at odds so often? How have Latin American nations forged their foreign policy and influenced others? How have Latin American perceptions of the U.S. changed over time? The course highlights social and cultural history of Latin American foreign relations, such as; perceptions of racial and cultural inferiority; military and intelligence agencies; trade and labor; radio, television, and film industry influence. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences

students.

Students may register for this course as HIST or INST.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Junior or Senior Standing

HIST375 - History of Modern East Asia

General

Subject Code ~
HIST

Course Number ~
375

Course Name (appears on the transcript) ~
History of Modern East Asia

Content

Description
This course examines the radical transformation of East Asia over the last 150 years, from humbled nations to world powers. For China, this course begins with the Opium War (1839-1842), after which China was forced to cede Hong Kong to the British; it concludes with the return of Hong Kong in 1997 and rising Western fears over the path China might take as the next superpower. For Japan, this course begins with its opening to Western trade in the 1850s, and ends with Japan seeking to find its way in the turbulent economic and cultural currents of the 1990s.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST380 - The Development of Modern Medicine

General

Subject Code ~
HIST

Course Number ~
380

Course Name (appears on the transcript) ~
Develop Modern Medicine

Content

Description
This course traces the late 18th century to the present in three interrelated themes: the intellectual history of our current system of medicine, the social history of the medical profession, and changing patterns of health and disease.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

HIST390 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined.

The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

HIST391 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST392 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST393 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST394 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST396 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST398 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
398

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HIST440 - Undergraduate Research in History

General

Subject Code ~
HIST

Course Number ~
440

Course Name (appears on the transcript) ~
Undergrad Research in History

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing or permission of instructor

HIST480 - Internship in History

General

Subject Code ~
HIST

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in History

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

HIST481 - Internship in History

General

Subject Code ~
HIST

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in History

Content

Description
See Internships, on p. 33 of the catalogue

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

HIST490 - Research Seminar in History

General

Subject Code ~
HIST

Course Number ~
490

Course Name (appears on the transcript) ~
Research Seminar in History

Content

Description
This seminar introduces the methodological, theoretical, and practical questions involved in the writing of history. Readings will explore several big questions of history as expressed in the work of some of the most creative practitioners (past and present) of the discipline. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
9 crs of HIST and Junior Standing, or permission of instructor

HIST491 - Special Topics in History

General

Subject Code ~
HIST

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in History

Content

Description
Topics in history that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

HIST492 - Senior Seminar in History

General

Subject Code ~
HIST

Course Number ~
492

Course Name (appears on the transcript) ~
Senior Seminar in History

Content

Description
A study of past and present methods of historiography and writing on an in-depth topic of a particular phase of history in which students undertake research on a related topic of their choice. This course may be repeated if the topic differs, but also serves as the capstone course for most history majors.

Credit Hours

Min
4

HIST495 - Senior Thesis in History

General

Subject Code ~
HIST

Course Number ~
495

Course Name (appears on the transcript) ~
Senior Thesis in History

Content

Description
This two-course sequence represents the capstone course of the history major. Senior students select a topic in the first semester and carry out supervised research. In the second semester, students write up their projects under a faculty member's direction and defend the final project before the history faculty.

Credit Hours

Min
2

Requisites

Free Form Requirements
15 credits of HIST, Junior Standing, and permission of instructor
Corequisite- HIST 490

HIST496 - Senior Thesis in History

General

Subject Code ~
HIST

Course Number ~
496

Course Name (appears on the transcript) ~
Senior Thesis in History

Content

Description
This two-course sequence represents the capstone course of the history major. Senior students select a topic in the first semester and carry out supervised research. In the second semester, students write up their projects under a faculty member's direction and defend the final project before the history faculty.

Credit Hours

Min
2

Requisites

Free Form Requirements
15 credits of HIST, Junior Standing, and permission of instructor
Corequisite- HIST 490

HON100 - Honors Composition I

General

Subject Code ~
HON

Course Number ~
100

Course Name (appears on the transcript) ~
Honors Composition I

Content

Description
This Honors course will focus on the techniques of critical reading and academic writing. Students will improve their skills in reading nonfiction prose, develop their writing accuracy, and write informative prose on a variety of subjects. They will also use a variety of techniques to develop sensitivity to language and writing, understand conventions of citation and documentation, and develop critical judgment. Students will also focus on developing a cohesive thesis, providing evidence, anticipating audience, and thoughtful revision. Students cannot receive credit for both HON 100 and ENGL 132.

Credit Hours

Min
3

Requisites

Free Form Requirements
Open to Honors Program students only

HON102 - Cities & Societies

General

Subject Code ~
HON

Course Number ~
102

Course Name (appears on the transcript) ~
Cities & Societies

Content

Description
Cities have had a disproportionate influence on the development of human society, and it is in cities that one can best see much of the creation and interaction of cultures. This course takes a broad view of culture, including such familiar areas as art, literature, and philosophy, but also the cultures of the workplace, the family, and politics. This course fulfills the general university-wide history requirement.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into Honors Program

HON133 - Honors Composition II

General

Subject Code ~
HON

Course Number ~
133

Course Name (appears on the transcript) ~
Honors Composition II

Content

Description
Building on the work of English 132, Honors English: Literature explores the many ways in which human experience is shaped by language and culture. Focused on a semester-long theme, HON 133 emphasizes both close reading and expository writing as students hone critical thinking skills that improve discursive practice and expand cultural literacy. This course stresses the analytic reading of literary texts in a cultural context and the writing of accurate, effective, and persuasive prose using evidence from primary and secondary sources. Honors 133 courses consider literature and other cultural texts from underrepresented populations and/or discuss a wide range of cultural issues, including those of racial and ethnic diversity and gender politics. As an introduction to academic discourse within the discipline of English, Composition II provides a foundation for subsequent college-level work. Course themes will vary from year to year.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Completion of ENG 132 with a minimum grade of C-.

Reserved for Honors Program students.

HON140 - HONORS Introduction to Psychology

General

Subject Code ~
HON

Course Number ~
140

Course Name (appears on the transcript) ~
HONORS Introduction to Psych

Content

Description
This is a survey of the primary topics of psychology including its historical evolution, aims and research methods. Topics include the scientific study of biopsychosocial bases of thought, feelings, and behavior, social determinants, and applications of psychology in various fields of human activity.

The course will include a special honors project. It also fulfills the social behavioral GUR requirement

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program -

HON150 - HONORS Introduction to Philosophy

General

Subject Code ~
HON

Course Number ~
150

Course Name (appears on the transcript) ~
Hon Intro to Philosophy

Content

Description
This course examines basic assumptions about reality, knowledge, and values. Students learn how to explain, analyze and evaluate arguments. Topics discussed and analyzed may include long-standing questions in philosophy and modern applications such as: Does God exist? Are we a combination of body and soul? Do we have free will? What do we know and how do we know it? Can moral beliefs be objectively true or false? What is the best form of government? Are non-human animals moral subjects? This honors section of the course offers a learning experience that is broader, deeper, or more complex than comparable learning experiences in the standard version of this course. Students cannot take both HON 150 and PH 103 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program -

HON190 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON191 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
4

Min
1

Requisites

Free Form Requirements
Acceptance into Arts and Sciences, Business, or Engineering Honors Program

HON192 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON193 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
193

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

HON194 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
194

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

HON195 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
195

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

HON196 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
196

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
4

Min
1

HON220 - Foundation/Ideas of Natural Science

General

Subject Code ~
HON

Course Number ~
220

Course Name (appears on the transcript) ~
Foundations/Ideas of Nat Sci

Content

Description
This course examines the nature of the universe from the standpoint of the natural sciences. It begins with an introduction to the approach used by the natural sciences to study the universe, the scientific method. Five major ideas in the natural sciences: the structure of the atom (physics), the periodic table (chemistry), the big bang theory of the origin of the universe (astronomy), plate tectonics (geology), the structure of DNA (biology), and evolution (biology) are then examined in the context of their historical development and the scientific method. Once these have been discussed, the natural sciences will be contrasted with other fields of human endeavor, comparing the methods used by each with the scientific method. Finally, complex questions from the real world of applied fields will be analyzed and the method of benefit/risk analysis will be introduced. This course satisfies the lab science requirement. Offered in Spring only.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors program

HON221 - HON Health Psychology

General

Subject Code ~
HON

Course Number ~
221

Course Name (appears on the transcript) ~
HON Health Psychology

Content

Description
This course will explore the relationship between psychological factors and physical and mental health illness. Included will be discussions of stress reactivity, psychoneuroimmunology, the role of cognitive behavior, stress hardiness, and prevention. Students will also learn and practice a variety of intervention protocols, including the relaxation response. This honors section of the course offers a learning experience that is broader, deeper, or more complex than comparable learning experiences in the standard version of this course. Students cannot take both HON 221 and PSY 220 for credit.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete PSY 101, or permission of the chair. Open to Honors Program students only.

HON231 - HON Biomedical Ethics

General

Subject Code ~
HON

Course Number ~
231

Course Name (appears on the transcript) ~
HON Biomedical Ethics

Content

Description
A critical examination of basic concepts, such as autonomy and privacy, and ethical issues in biomedical ethics, such as informed consent, euthanasia, assisted suicide, cloning, stem cell research, research and experimentation on animals, rights to healthcare, and the just allocation of medical care. Attention will also be paid to the application of major moral theories. This honors section of the course offers a learning experience that is broader, deeper, or more complex than comparable learning experiences in the standard version of this course. Students cannot take both HON 231 and PH 231 for credit.

Credit Hours

Min
3

HON290 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON291 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
4

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON292 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON293 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON294 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON299 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
299

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON301 - The Politics & Business of Food

General

Subject Code ~
HON

Course Number ~
301

Course Name (appears on the transcript) ~
Politics & Business of Food

Content

Description
This course will offer an overview of many policy controversies surrounding the production, distribution and consumption of food, primarily in the United States, including an examination of problems such as obesity, hunger, food deserts, and environmental damage. This course will study the involvement of government, the private sector, and the citizenry.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into Honors Program

HON303 - Love and Hate in Hollywood

General

Subject Code ~
HON

Course Number ~
303

Course Name (appears on the transcript) ~
Love and Hate in Hollywood

Content

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into Honors Program

HON333 - Indep Study in Honors Program

General

Subject Code ~
HON

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Honors Program

Content

Description
This faculty-directed research project is a supervised research project intended to allow honors students to explore an area of study in more depth than is possible in regularly offered courses. This course is intended mainly for junior honors students and cannot be taken concurrently with the senior honors project HON 495. Students can only count one faculty-directed research project toward their honors graduation requirements. See" Independent Study" in the Catalog.

Credit Hours

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program, arrangement with a member of honors faculty, and approval of the Honors Research Committee Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HON334 - Indep Study in Honors Program

General

Subject Code ~
HON

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Honors Program

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HON390 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON391 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON392 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON393 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON394 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON395 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON396 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON397 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
397

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON398 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
398

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON399 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
399

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into Honors Program

HON490 - Special Topics in Honors Seminar

General

Subject Code ~
HON

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Honors Program

HON495 - Senior Honors Project

General

Subject Code ~
HON

Course Number ~
495

Course Name (appears on the transcript) ~
Senior Honors Project

Content

Description
This course is intended for senior honors students who are preparing their senior honors project under the supervision of a member of the honors faculty in an appropriate field.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into Arts and Sciences Honors Program, arrangement with a member of honors faculty, and approval of the Honors Research Committee

HONB100 - Future of Work & Industry in Spfld, MA

General

Subject Code ~
HONB

Course Number ~
100

Course Name (appears on the transcript) ~
Future Work & Ind in Spfld,MA

Content

Description
This course is designed to provide students with an introduction the business community and industries in the Springfield, MA region. Students will explore the future of work by looking at the history, current state, and future of work in the region. Students will have an opportunity to: learn about the industries and business in the area; identify resources available in the community; opportunities for engaging the business community; hear speakers from the local community; and, visit local businesses. Offered: Fall only

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into the Honors Program or consent of the Business Honors Coordinator required

HONB110 - Honors Business Seminar

General

Subject Code ~
HONB

Course Number ~
110

Course Name (appears on the transcript) ~
Honors Business Seminar

Content

Description
This is a course designed specifically for honor students new to the study of business in a university setting. Students will have the opportunity to develop their business vocabulary and advance critical and analytical thinking skills for addressing business issues. Students will be introduced to concepts associated with and the contribution of the core business functions of marketing, management, finance, accounting, human resources, and information systems. A component of the course focuses on personal and professional development through the acquisition of skills in time management, oral presentations, working in teams, information literacy and career choice. There is a high level of interaction with faculty and peers both inside and outside the classroom. Offered: Fall Only Cannot take HONB 110 and BUS 110 for credit. Cross-listed as BUS 110.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into the Honors Program or consent of the Business Honors Coordinator required

HONB190 - Special Topics in Honors Business

General

Subject Code ~
HONB

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Honors Bus

Content

Description
Topics in honors business that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the CoB Honors program

HONB191 - Special Topics in Honors Business

General

Subject Code ~
HONB

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Honors Bus

Content

Description
Topics in honors business that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the CoB Honors program

HONB192 - Special Topics in Honors Business

General

Subject Code ~
HONB

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Honors Bus

Content

Description
Topics in honors business that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the CoB Honors program

HONB200 - Marketing Concepts

General

Subject Code ~
HONB

Course Number ~
200

Course Name (appears on the transcript) ~
Marketing Concepts

Content

Description
This course examines the marketing functions and analyzes the business environment that affects the development of promotion, pricing, distribution, and product/service/idea areas of the business organization. As the freshmen level honors equivalent of MK 200, the type of work required, pace of study, and opportunities for broader consideration of core course themes distinguish this course. In addition, this course emphasizes critical and independent thinking to produce creative applications of ideas. Key learning outcomes include an ability to analyze and comment on market strategy and tactical development. Such analysis and commentary should address environment influences, changing political, social, demographic, legal and regulatory, technological, and global marketplace environment, and the effects on the planning and execution of ethical and socially responsible marketing strategy and detailed development of the marketing mix.

Student cannot take both HONB 200 and MK 200 for credit.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into the Honors Program or consent of the Business Honors Coordinator

HONB201 - Business Law: Principles & Process

General

Subject Code ~
HONB

Course Number ~
201

Course Name (appears on the transcript) ~
Bus Law: Princ & Process

Content

Description
This course provides students with an introduction to the legal system and key principles of business law including the State and Federal Court System, torts, negligence, defamation, and contracts. Students will also engage in an in depth examination of legal processes including alternative dispute resolution options, legal research and writing, and preparing for and participating in a business related trial. Students will gain hands-on experience in business law processes through legal simulations, examination of business law case studies and legal research and writing. Key learning outcomes for this course include enhancing students? abilities to communicate the positions of the parties to a legal conflict; differentiate between the boundaries of law, ethics and sound business decision-making; and evaluate and determine the best course of legal action in business management, problem-solving and decision-making.

Students may not take HONB 201 and BL 201 or BL 360 for credit.

Credit Hours

	Min
	3

Requisites

Free Form Requirements
Acceptance into the Honors Program, or consent of the Business Honors Coordinator

HONB203 - Fin Accounting: the Language of Business

General

Subject Code ~
HONB

Course Number ~
203

Course Name (appears on the transcript) ~
Fin Acct: Lang of Business

Content

Description
This course is the introductory financial accounting course for students enrolled in the Business Honors Program in the College of Business. This course exposes students to the basic concepts and issues of financial reporting, including critical analysis of the four primary financial statements. The emphasis is on the interpretation and use of the financial accounting information to make informed decisions. Key outcomes include an understanding of underlying accounting concepts/principles, the accounting information process, the elements of the primary financial statements, and the role of financial accounting in the economy. Cases and financial statements of actual companies are used to stimulate critical and independent thinking, as well as creative application of concepts learned in class. Credit for both HONB 203 and AC 201 is not permissible.

Credit Hours

	Min
	3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into the College of Business Honors Program or consent of the Business Honors Coordinator

Complete MATH 111, 115, 123, 127, or MATH 133 and Sophomore Standing - Must be completed prior to taking this course.

HONB204 - Managing People & Processes in Org

General

Subject Code ~
HONB

Course Number ~
204

Course Name (appears on the transcript) ~
Managing People & Proc in Org

Content

Description
This course examines the managerial function in organizations and analyzes elements of organizational behavior that impact management practice and leadership. As the honors equivalent of MAN 204, this course is distinguished by the type of work required, pace of study, and opportunities for broader consideration of core course themes. In addition, this course emphasizes critical and independent thinking to produce creative applications of ideas. Key learning outcomes include an ability to analyze and critique: the role that individual differences and perception play in influencing behavior in organizations; theories and concepts of decision-making and problem solving; theories and concepts of motivation; theories and concepts of leadership; and theories and concepts used in effective teamwork and other organizational processes. Students cannot take both HONB 204 and MAN 204 for credit.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into the College of Business Honors Program or consent of the Business Honors Coordinator

HONB240 - Ethics & Social Responsibility

General

Subject Code ~
HONB

Course Number ~
240

Course Name (appears on the transcript) ~
Ethics & Social Responsib

Content

Description
This course explores the connections between businesses and the wider social environment of which they are a part. Key learning outcomes focus on: recognition of ethical issues with respect to business activities, the basis for government regulation of business and business involvement in the public policy process, identification and analysis of stakeholder issues, and the nature of corporate social responsibility.This course can be taken to fulfill the PH 211 requirement.Students cannot take both HONB 240 and MAN 240 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into the Honors Program or consent of the Business Honors Coordinator

HONB290 - Special Topics in Honors Business

General

Subject Code ~
HONB

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Honors Bus

Content

Description
Topics in honors business that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the Honors Program or consent of the Business Honors Coordinator required

HONB312 - Enterprise Proc Integration w/SAP

General

Subject Code ~
HONB

Course Number ~
312

Course Name (appears on the transcript) ~
Enterprise Pro Inte w/SAP

Content

Description
The course provides the intermediate integrative framework between BUS 101 and BUS 450. It does so by using SAP to capture the information generated in executing business processes. Students will dive deeper into the topics such as Master data, Business process design, ERP system integration and the value-added, industry specific best practices for processes. Each student will configure a fully functioning business by creating the essential business functions/elements, such as a Chart of accounts, a G/L, credit management, document management, organizational elements for procurement, fulfillment & production, to name a few. Students will create the necessary Master Data. Students will execute business transactions using previously created the org elements and Master data. The course demonstrates integration between functional areas through the configuration and execution of business processes. Using SAP, the student will build upon the introduction to each of the functional areas of business in an integrative manner.

Students cannot take both BUS 312 and HONB 312 for credit.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete MAN 101/HONB 101 or MAN 204/HONB 204; MK 200/HONB 200; BL 201/BL 360/BL 350/HONB 201; AC 202; BAIM 202; BAIM 221; and FIN 214

HONB390 - Special Topics in Honors Business

General

Subject Code ~
HONB

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Honors Bus

Content

Description
Topics in honors business that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into the College of Business Honors Program

HONB425 - Portfolio Mgmt and Investment Analysis

General

Subject Code ~
HONB

Course Number ~
425

Course Name (appears on the transcript) ~
Portfolio Mgt & Invt Analysis

Content

Description
The purpose of this course is to provide each student with real world and hands-on experience in security analysis and portfolio construction through the management of the WNE Student Managed Investment Fund. Student fund managers will be in charge of the investment decisions of a $100k, real-money, portfolio. Collectively, students will manage the overall portfolio composition, and will utilize various financial models and sources of financial data to assess sector, industry and individual security strength/weakness. Each student will be required to perform the necessary quantitative and qualitative analysis and present their research to all other fund managers, faculty and invited guests. Security selection will be based on a diversified equity portfolio approach seeking to enhance risk-adjusted returns versus commonly used market benchmarks. Offering: Fall, Odd years Cannot take HONB 425 and FIN 425 for credit. Cross-listed as FIN 425

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete FIN 214 and acceptance into the Honors Program or consent of the Business Honors Coordinator

HONB450 - Strategic Thinking & Action in Org

General

Subject Code ~
HONB

Course Number ~
450

Course Name (appears on the transcript) ~
Strat Think & Action Org

Content

Description
This honors strategy course expects students to go beyond a simple understanding of business strategy to more thoroughly examine strategic thought and practice. As such, the course involves a more demanding and rapid-pace than BUS 450 in the examination and application of strategic analysis, planning, implementation, and evaluation undertaken in the development of organizational strategy. Students will critically examine the relationships and influences between environment, organizational structure, and strategy. Key learning outcomes include the application, examination, and evaluation of key elements in the strategic management process - including internal and external strategic analyses, traditional and non-traditional measures of organizational performance - and the basis and relevance of strategic management theories.Students cannot take both HONB 450 and BUS 450 for credit.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete BUS 326 or BUS 312/HONB 312, and acceptance into the Honors Program or consent of the Business Honors Coordinator

HONB490 - Special Topics in Honors Business

General

Subject Code ~
HONB

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Honors Bus

Content

Description
Topics in honors business that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into the College of Business Honors Program

HONB495 - Senior Honors Project

General

Subject Code ~
HONB

Course Number ~
495

Course Name (appears on the transcript) ~
Senior Honors Project

Content

Description
This course is designed to provide an opportunity to work on an independent research or creative endeavor. Senior student works one-on one with a faculty mentor who is familiar with the field. The course plays a capstone role in completing the Business Honors Program.Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into the Honors Program and approval of College of Business Honors Committee

HONE102 - HON First Year Engineering Seminar

General

Subject Code ~
HONE

Course Number ~
102

Course Name (appears on the transcript) ~
HON First Year Engr Sem

Content

Description
This seminar course is designed to introduce first- year honors engineering students both to the engineering profession and to the practice of engineering as it relates to their university experience. It enables students to further develop academic and life management skills and to learn how to use University resources. As the honors equivalent of ENGR 102 the type of work required, and opportunities for broader consideration of core course themes distinguish this course. Students will also gain additional hands-on experience in the practice on engineering through their participation in the complementary ENGR 103 course. Students will be assessed through performance on homework, written reports, and by participation in course activities.May not take HONE 102 and ENGR 102 for credit.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance to College of Engineering Honors Program

HONE105 - Computer Programming for Engineers

General

Subject Code ~
HONE

Course Number ~
105

Course Name (appears on the transcript) ~
Computer Programming for Engrs

Content

Description
This is an introductory course in the design of software solutions to engineering problems using software capable of being programmed by the user. As the honors equivalent of ENGR 105, the type of work required, pace of study, and opportunities for more depth and breadth of course themes distinguish this course. Students learn procedural approaches to designing small to medium-scale programs. After successfully completing this course, students understand the issues involved in moving from a general problem statement to a software solution. Students learn a variety of software design solution techniques. They develop skills in logic, algorithm design, and data structure design and debugging. They apply these skills to a variety of engineering, mathematical, and numerical method problem areas. The methods of assessing student learning in the course are homework assignments; weekly quizzes; in-class, project-type programming assignments; and exams.

May not take HONE 105 and ENGR 105 for credit.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE110 - Data Acquisition & Processing

General

Subject Code ~
HONE

Course Number ~
110

Course Name (appears on the transcript) ~
Data Acquisition & Proces

Content

Description
This is a follow-on course to ENGR103, Introduction to Engineering , to further develop basic skills in engineering and start developing skills in entrepreneurship. As the honors equivalent of ENGR 110 the type of work required, pace of study, and opportunities for broader considerations of core course themes distinguish this course. In this course you learn about computer-aided data acquisition and processing, as well as, applying what you have learned to date in a product innovation competition. Through a series of laboratory experiences, students will learn the principles necessary to design, implement, and analyze computer-controlled experiments as well as continuing to develop their design skills (both necessary for product design). Industry standard LabVIEW and Arduino are the learning platforms. The methods of assessing student learning in the course are homework assignments, weekly quizzes, laboratory experiments and exams.

May not take HONE 110 and ENGR 110 for credit.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE190 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE191 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE192 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE193 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
193

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE194 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
194

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE202 - Mechanics I-Statics

General

Subject Code ~
HONE

Course Number ~
202

Course Name (appears on the transcript) ~
Mechanics I-Statics

Content

Description
This course is designed to teach problem-solving techniques and to provide students with the necessary background to take succeeding courses in solid mechanics. As the honors equivalent of ME 202 the type of work required, pace of study and opportunities for broader considerations of course themes distinguish this course.

May not take HONE 202 and ME 202 for credit.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance to College of Engineering Honors Program and MATH 134 with a minimum grade of C, and PHYS 133

HONE205 - Circuits I Electrical Engineering

General

Subject Code ~
HONE

Course Number ~
205

Course Name (appears on the transcript) ~
Circuits I Electrical Engr

Content

Description
Students will learn about the static and dynamic behavior of resistors, capacitors, and inductors, the type of electrical energy sources used, the rules used to analyze electrical circuits, to analyze DC and AC circuits for power flow and response characteristics, how to analyze and design op amp circuits used in instrumentation applications, and how to analyze and test Combinational Logic Circuits as applicable to simple industrial and domestic control settings. As the honors equivalent of EE 205 the type of work required, pace of study and opportunities for broader considerations of course themes distinguish this course.

May not take HONE 205 and EE 205 for credit.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance to College of Engineering Honors Program and pre- or co-requisite MATH 236 and PHYS 134
Complete MATH 134 with a minimum grade of a C

HONE240 - Undergrad Research Hon Engr

General

Subject Code ~
HONE

Course Number ~
240

Course Name (appears on the transcript) ~
Undergrad Research Hon Engr

Content

Description
A limited number of students may undertake supervised research if they show interest in and aptitude for independent and creative work. Approval of the College of Engineering Honors committee is required.

(See Undergraduate Research on page 34)

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE290 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into the College of Engineering Honors Program

HONE333 - Indep Study in Honors Engineering

General

Subject Code ~
HONE

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Honors Engr

Content

Description
A limited number of students are accorded the opportunity to pursue course work through supervised independent study. Approval of the College of Engineering Honors committee is required.

(See Independent Study on page 33)

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HONE390 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior Standing and acceptance into the College of Engineering Honors Program

HONE391 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

HONE480 - Internship in Hon Engr

General

Subject Code ~
HONE

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Honors Engr

Content

Description
Juniors or Senior students may undertake an internship for credit with an approved agency, organization or business. This opportunity furthers a student?s knowledge in a specialized area in a way not customarily available within the regular classroom setting. The amount of internship credit that may be counted toward the degree is limited to three (3) credit hours.

(See Internship on page 34)

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior Standing and acceptance into the College of Engineering Honors Program

HONE490 - Special Topics in Hon Engr

General

Subject Code ~
HONE

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Hon Engr

Content

Description
Topics in honors engineering that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Senior Standing and acceptance into the College of Engineering Honors Program

HONE495 - Senior Hon Engr Project

General

Subject Code ~
HONE

Course Number ~
495

Course Name (appears on the transcript) ~
Senior Hon Engr Project

Content

Description
This course is intended for senior honors students who are preparing their senior honors project under the supervision of a member of the faculty of the appropriate engineering major.

Credit Hours

Min
3

Requisites

Free Form Requirements
Senior Standing and acceptance into the College of Engineering Honors Program

HONU101 - Innovations: Making Our World

General

Subject Code ~
HONU

Course Number ~
101

Course Name (appears on the transcript) ~
Innovations: Making Our World

Content

Description
We will use the organizing principle of historical innovations (Google searches, video games, department stores, insurance, clocks, etc.) to see how the modern world has been shaped, often in surprising ways. This course also provides a platform that crosses divides of colleges and majors, and invites students to understand their membership in a community of honors students who share cultural, social, and scholarly experiences.

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU190 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand. -

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU191 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand. -

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU192 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand. -

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU290 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU291 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU292 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand.

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students

HONU390 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand. -

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students - Sophomore Standing

HONU391 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand. -

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students - Sophomore Standing

HONU392 - Special Topics in Honors

General

Subject Code ~
HONU

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Honors

Content

Description
The majority of Honors courses are not regular offerings, but special topics courses selected by the honors students themselves. These vary every semester and can be repeated if there is sufficient demand. -

Counts toward honors requirements in COAS, COB, and COE.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Acceptance restricted to Honors Students - Sophomore Standing

HRM322 - Managing a Diverse Workforce

General

Subject Code ~
HRM

Course Number ~
322

Course Name (appears on the transcript) ~
Managing Diverse Workforc

Content

Description
As the labor force becomes increasingly diverse, a strong emphasis is being placed on diversity-related issues of all kinds in the workplace. Diversity in the workplace may result from differences in individual characteristics such as gender, race, ethnicity, national origin, age, religion, and physical ability/disability. Organizations need to address diversity issues in some manner if they are to compete effectively in a global economy. But what should an organization actually do about increased diversity in the workplace other than watch it happen? To address this question, this course examines issues related to managing and being a member of an increasingly diverse workforce. Learning how to deal with these issues in a manner that preserves the integrity and takes advantage of the contributions of all members of the workforce, regardless of their personal characteristics and group memberships, is encouraged.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
MAN 101/HONB 101 or MAN 204/HONB 204 or PSY 101 or SO 101

HRM323 - Human Resource Management

General

Subject Code ~
HRM

Course Number ~
323

Course Name (appears on the transcript) ~
Human Resource Management

Content

Description
The course provides an overview of human resource management practices in organizations. Focus on key learning outcomes includes the understanding, application, and problem-solving associated with: the strategic role of human resource management; legal issues of HRM including selection and compensation; principles of effective employee selection; various approaches to employee training; setting and administration of compensation; pay for performance systems; approaches to performance appraisal; workplace health and safety; value of job description and building motivation into the job design. Course includes career readiness element.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAN 101/HONB 101 or MAN 204/HONB 204 or PSY 101

HRM328 - Human Resources Analytics

General

Subject Code ~
HRM

Course Number ~
328

Course Name (appears on the transcript) ~
Human Resources Analytics

Content

Description
The course offers students opportunities to apply analytical methods to enhance people-related decision making in organizations. Students will use Human Resource (HR) data to evaluate critical HR Management questions and issues such as workforce planning, legal compliance, recruiting, hiring and promotion, performance management, training, job design, compensation, and career planning. Students will learn to solve organization HR challenges using analytics, identify advantages and disadvantages of analytic options, evaluate scholarly reports and studies, use key analytic tools, understand how to gather, track, store, retrieve, organize, analyze, interpret, and present HR data that leads to actionable business decisions.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MAN 204/HONB 204 and BAIM 221

HRM333 - Indep Study in Human Resource Management

General

Subject Code ~
HRM

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in HR Management

Content

Description
See Independent Study on p. 32 of catalogue

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HRM334 - Indep Study in Human Resource Management

General

Subject Code ~
HRM

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in HR Management

Content

Description
See Independent Study on p. 32 of catalogue

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HRM390 - Special Topics in HR Management

General

Subject Code ~
HRM

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics HR Management

Content

Description
This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

HRM436 - Compensation & Benefits

General

Subject Code ~
HRM

Course Number ~
436

Course Name (appears on the transcript) ~
Compensation & Benefits

Content

Description
The course takes an in-depth look at the role of compensation and benefits in an organizations strategic plan to recruit, motivate and retain qualified employees in union and non-union environments. Key learning outcomes include the understanding, application, and problem-solving associated with: the design and methodology of wage and salary administration; job evaluation; salary structure; use of wage incentive systems; international compensation; health insurance administration; health and wellness programs; retirement and savings plans; other compensation and benefits options; and evaluating effectiveness of compensation and benefits programs.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete HRM 323

HRM466 - Senior Seminar in HR Management

General

Subject Code ~
HRM

Course Number ~
466

Course Name (appears on the transcript) ~
Senior Seminar HR Management

Content

Description
The course provides students with an opportunity to integrate their HRM knowledge and skills. Key learning outcomes focus on using data to identify and address organizational problems and opportunities. application of employment law. labor law and compliance to an organizational situation, application of HRM theories to an organizational problem or opportunities, and refine skills as a strategic business partner. Course includes career readiness element.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete HRM 328; BL 424; HRM 436 and Senior HR Management majors only

HRM481 - Internship in HR Management

General

Subject Code ~
HRM

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in HR Management

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

HS210 - Nutrition

General

Subject Code ~
HS

Course Number ~
210

Course Name (appears on the transcript) ~
Nutrition

Content

Description
This course will introduce students to the science of nutrition as it relates to individual food choices, health behaviors, and overall health. Application topics include wellness, obesity, eating disorders, sports nutrition, and diet-related disease. Nutrients and nutrient needs will be addressed using a functional approach. This course is intended for students entering health related fields and those with a general interest in nutrition. (NSP).

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO-107 and BIO-117

HS215 - Introduction to GIS

General

Subject Code ~
HS

Course Number ~
215

Course Name (appears on the transcript) ~
Introduction to GIS

Content

Description
Geographic Information Science (GIS) is a relatively new discipline that allows individuals to manage, analyze, and visualize information related to geographical locations in a simple format. GIS has many applications in the health care sector, particularly regarding medical and epidemiological research. For example, this tool is used to track sources of diseases and movements of contagions, to conduct health care policy research, and to track child immunizations. In this class, students will analyze health-care related data sets and learn about the versatile applications of GIS in the health care sector.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

HS290 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
4

Min
3

HS291 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
4

Min
3

Requisites

Free Form Requirements
Prerequisites can vary depending on special topic

HS310 - Environment Influences on Human Health

General

Subject Code ~
HS

Course Number ~
310

Course Name (appears on the transcript) ~
Env Influences on Human Health

Content

Description
This course offers an introductory investigation of the human health impacts of various chemical, biological, physical, and social factors in the environment. Topics include, among others, the health effects of air and water pollutants, toxic wastes, pesticides, disease organisms present in food and water, noise, radiation, climate, and socioeconomic status. The scientific methods for determining these effects are examined.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 108, CHEM 106, and BIO 216, or permission of instructor

HS315 - Protein Folding, Misfolding & Dis

General

Subject Code ~
HS

Course Number ~
315

Course Name (appears on the transcript) ~
Protein Fold, Misfold & Dis

Content

Description
This course covers the effects of the alteration of the folded protein structure as a consequence of environmental stress, genetic mutation, and/or infection. Misfolded proteins can stick together and fall out of solution in a process known as aggregation. In many protein aggregation diseases, misfolded proteins self-associate, forming fiber-like aggregates that cause brain cell death and dementia. The molecular and biochemical basis of the prion diseases, which include bovine spongiform encephalopathy (mad cow disease), Creutzfeldt-Jakob disease and kuru will be examined. Other classes of misfolding diseases such as Alzheimer's disease, Parkinson's disease, Cystic Fibrosis, and cancer will be discussed including possible detection methods and therapies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 216 or permission of instructor

HS320 - Regeneration

General

Subject Code ~
HS

Course Number ~
320

Course Name (appears on the transcript) ~
Regeneration

Content

Description
The ability of organisms to repair and replace tissues and body parts has long been an intriguing puzzle. This course will focus on regeneration in mammals and will discuss progress in regenerative medicine for selected organ systems. An oral presentation and a review paper on a topic of interest is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 107 with a C- or better and BIO 216 or BIO 310

HS321 - Evolutionary Medicine

General

Subject Code ~
HS

Course Number ~
321

Course Name (appears on the transcript) ~
Evolutionary Medicine

Content

Description
This course is designed to be a comprehensive introduction to evolutionary, or Darwinian, medicine. In brief, evolutionary medicine is the application of evolutionary thinking, including evolutionary processes and human evolutionary history, to understanding health and disease among contemporary human populations. This course uses a scientific approach, drawing on the methods, theories, and bodies of knowledge from various scientific disciplines, including evolutionary biology, genetics, neuroscience, physiology, nutritional sciences, and medicine.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 216 or permission of instructor

HS322 - Immunology

General

Subject Code ~
HS

Course Number ~
322

Course Name (appears on the transcript) ~
Immunology

Content

Description
Immunology is the study of the physiological mechanisms that humans and other animals use to defend their bodies from invasion by other organisms. In this course, students will be introduced to the three lines of defense utilized by humans to ward off infections. They will also learn about how improper functioning of the immune system can result in diseases like autoimmunity, allergies, and cancer.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO 107 and CHEM 209

HS325 - Epidemiology

General

Subject Code ~
HS

Course Number ~
325

Course Name (appears on the transcript) ~
Epidemiology

Content

Description
This course offers an introduction to the principles and methods of epidemiology. Epidemiology is the study of the distribution and determinants of disease and other health-related events at the population level. Topics include epidemiologic methods (e.g., study design, measures of disease distribution and association, interpretation), and the application of research findings to disease prevention and control strategies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO-108; MATH 120 or MATH 121, and Junior Standing
BIO 215 and BIO 216 are recommended

HS333 - Indep Study in Health Sciences

General

Subject Code ~
HS

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Health Sciences

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HS334 - Indep Study in Health Sciences

General

Subject Code ~
HS

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Health Sciences

Content

Description
See "Independent Study" information in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

HS390 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
4

Min
3

HS391 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
4

Min
3

Requisites

Free Form Requirements
Complete BIO 216 or permission of instructor

HS395 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Prerequisites can vary depending on special topic

HS396 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

HS412 - Cancer Biology

General

Subject Code ~
HS

Course Number ~
412

Course Name (appears on the transcript) ~
Cancer Biology

Content

Description
This course provides an overview of the fundamentals of cancer biology and cancer treatment. Intended for junior and senior students majoring in health sciences or biology. Topics include cancer as a genetic disease, oncogenes, familial cancer, signal transduction, cell cycle control, apoptosis, cancer metabolism, metastasis, and conventional and molecularly-targeted therapies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO-306, or permission of instructor

HS440 - Undergraduate Research Health Sci

General

Subject Code ~
HS

Course Number ~
440

Course Name (appears on the transcript) ~
Undergrad Research Health Sc

Content

Description
See Undergraduate Research.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Senior Standing

HS441 - Undergraduate Research Health Sci

General

Subject Code ~
HS

Course Number ~
441

Course Name (appears on the transcript) ~
Undergrad Research Health Sc

Content

Description
See "Undergraduate Research" in the Catalog.

This is a continuation of HS 440. Lab fees may be required.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete HS-440

HS470 - Seminar in Health Sciences

General

Subject Code ~
HS

Course Number ~
470

Course Name (appears on the transcript) ~
Seminar in Health Sciences

Content

Description
This seminar is intended as a capstone experience for health sciences majors. Students will read, discuss, and present articles from the primary literature related to a particular theme in health science.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete BIO 306

HS480 - Internship in Health Sciences

General

Subject Code ~
HS

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Health Sciences

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

HS481 - Internship in Health Sciences

General

Subject Code ~
HS

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Health Sciences

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

HS490 - Special Topics in Health Sciences

General

Subject Code ~
HS

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Health Sci

Content

Description
Topics in health sciences that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
HSCI & BIOG majors; at least Senior Standing

IE212 - Probability & Statistics

General

Subject Code ~
IE

Course Number ~
212

Course Name (appears on the transcript) ~
Probability & Statistics

Content

Description
This is a basic study of probability and statistical theory with emphasis on engineering applications. Students become knowledgeable of the collection, processing, analysis, and interpretation of numerical data. They learn the basic concepts of probability theory and statistical inference, and become aware of techniques of statistical design.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 134, or concurrently

IE290 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

IE302 - Human Factors in Design Engineering

General

Subject Code ~
IE

Course Number ~
302

Course Name (appears on the transcript) ~
Human Factors Design Engr

Content

Description
This course offers an introduction to the design of systems to fit the human user for the purpose of improving user efficiency, safety, decision-making, safety, and job satisfaction. Topics include both physical and cognitive aspects of human factors engineering. Course will include opportunities for hands on data-collection and an experiment- focused student project.

Credit Hours

Min
3

IE308 - Work Analysis & Design

General

Subject Code ~
IE

Course Number ~
308

Course Name (appears on the transcript) ~
Work Analysis & Design

Content

Description
Introduction to work methods and measurement. Coverage of methods to improve production process efficiency and operator performance. Techniques include project evaluation and review, line balancing, work sampling, time study, physical and cognitive ergonomics. A major design and problem-solving project is required.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212

IE312 - Engineering Economic Analysis

General

Subject Code ~
IE

Course Number ~
312

Course Name (appears on the transcript) ~
Engineer Economic Analys

Content

Description
This is a study of the economic evaluation and comparison of engineering designs and project alternatives. Topics include the effects of cash-flow patterns, earning and inflationary powers of money, interest-rate characteristics, financing, and taxes on capital investments. Emphasis is on corrective actions.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete IE 212

IE314 - Manufacturing Processes

General

Subject Code ~
IE

Course Number ~
314

Course Name (appears on the transcript) ~
Manufacturing Processes

Content

Description
This is a study of various methods of manufacturing. Areas studied include stages of product processing, equipment determination and justification, tooling metrology, as well as estimating design-to-product cost.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

IE315 - Quality Control & Engr Statistics

General

Subject Code ~
IE

Course Number ~
315

Course Name (appears on the transcript) ~
Qualt Ctrl & Engr Stats

Content

Description
This course studies statistical techniques used in analyzing experimental results and quality control. Topics include data analysis, regression, design of experiments, statistical process control, control charts, and process capability analysis.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete IE 212

IE318 - Mathematical Programming for Engineers

General

Subject Code ~
IE

Course Number ~
318

Course Name (appears on the transcript) ~
Math Programming for Engrs

Content

Description
This course will be an introduction to mathematical programming, with an emphasis on techniques for the solution and analysis of deterministic linear models. The primary type of model to be addressed is linear programming. The main emphasis will be on mathematical modeling of problems common to industrial engineers. This course will also emphasize effective modeling techniques, solutions methods such as the simplex and revised simplex methods.

Additionally, the course will introduce effective modeling techniques and commercial solvers such as MS Excel/Solver, LINGO, and CPLEX.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212

IE326 - Production Planning & Control

General

Subject Code ~
IE

Course Number ~
326

Course Name (appears on the transcript) ~
Production Plan & Control

Content

Description
This is an introduction to quantitative production management. Topics include inventory control, production planning, master production scheduling, capacity planning, and techniques for shop floor control. The relationships between a company's manufacturing, marketing, and financial functions are included.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212

IE328 - Lean Six-Sigma for Engineers

General

Subject Code ~
IE

Course Number ~
328

Course Name (appears on the transcript) ~
Lean Six-Sigma for Engrs

Content

Description
This course will introduce the students to both the theory and application of contemporary quality improvement techniques. The course will cover Six Sigma methodology, and problem-solving tools to improve cost, quality, time and variability. The main emphasis will be on process improvement tools and methodologies and the integral elements of a total quality management for both manufacturing and service organizations. Additionally, the course will discuss approaches for designing quality into products and processes.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete IE 212

IE330 - Manufacturing & Production Lab

General

Subject Code ~
IE

Course Number ~
330

Course Name (appears on the transcript) ~
Manufacturing & Production Lab

Content

Description
This course will introduce engineering students to core fundamental concepts in the design, implementation and assessment of automation systems utilized in industrial and manufacturing work environments. Students will finish the course with a foundational understanding and a hand-on knowledge of the key automation technologies used in controlling operations in manufacturing. Topics will include machining processes, injection molding processes, additive manufacturing processes, programmable logic controls, and robotics.

Credit Hours

Min
2

Requisites

Free Form Requirements
Complete IE 314 or ME 322; or concurrently

IE333 - Independent Study

General

Subject Code ~
IE

Course Number ~
333

Course Name (appears on the transcript) ~
Independent Study

Content

Description
See Independent Study

Credit Hours

Max
3

Min
1

IE334 - Computer Simulation & Design

General

Subject Code ~
IE

Course Number ~
334

Course Name (appears on the transcript) ~
Comp Simulation & Design

Content

Description
This is a study of discrete-event simulation and its use in the analysis and design of systems. The focus is on the analysis of manufacturing systems such as assembly lines, material handling systems, and production processes. Students write programs using traditional programming languages and simulation software.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ENGR 105/HONE 105, and IE 212

IE335 - Indep Study in Industrial Engineering

General

Subject Code ~
IE

Course Number ~
335

Course Name (appears on the transcript) ~
Indep Study in Indust Engr

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

IE390 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
1

IE410 - Engineering Project Management

General

Subject Code ~
IE

Course Number ~
410

Course Name (appears on the transcript) ~
Engr Project Management

Content

Description
This course studies the use of conceptual, analytical, and systems approaches in managing engineering projects and activities. Major topics are development and writing project plans including project proposals, project scopes, work breakdown structures, network diagrams, project schedules, and presentations. Other topics include the people side of engineering and project management, communication, and documentation. An industrial project is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing
Corequisite- IE 439

IE419 - Python and Machine Learning for Industry

General

Subject Code ~
IE

Course Number ~
419

Course Name (appears on the transcript) ~
Python & ML for Industry Apps

Content

Description
This is the study of contemporary computer tools toward industrial engineering. Students design, develop, and deploy client and web based applications including user interface and database backend. These applications are developed for inventory and production control systems, statistical applications, and database/data mining applications. Software tools and packages utilized include: VBA, HTML, CSS, PHP, MySQL and MS Access.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ENGR 110/HONE 110
Corequisite- IE 212

IE420 - Industrial Engr Operations Research

General

Subject Code ~
IE

Course Number ~
420

Course Name (appears on the transcript) ~
Industrial Engr Oper Research

Content

Description
This operations research course covers more advanced topics in operations research. The course focuses on the fundamentals of model formations for mathematical programming. Topics include but not limited to parametric linear programming, transportation and assignment problems, network optimization, dynamic programming, integer programming, heuristic methods, and the introduction to non-linear programming. Applications of the introduced topics will be discussed using real case studies.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212 and MATH 235

IE422 - Industrial Safety & Hygiene

General

Subject Code ~
IE

Course Number ~
422

Course Name (appears on the transcript) ~
Industrial Safety & Hyg

Content

Description
This is a study of issues related to human interaction(s) within a workplace. The focus is on industrial safety and hygiene in workplace design. Other topics include: the principles of industrial hazard avoidance and the roles of NIOSH and its relationship with OSHA.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

IE424 - Computer Integrated Manufacturing

General

Subject Code ~
IE

Course Number ~
424

Course Name (appears on the transcript) ~
Computer Integrated Manuf

Content

Description
This is a study in the issues related to computer-integrated manufacturing and the integration of automated processes within a modern manufacturing environment. The focus is on engineering design, modeling and applications in automation, flow lines, robotics, numerical control, and computer usage in manufacturing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete IE 314 or ME 322

IE428 - Facility Design & Material Handling

General

Subject Code ~
IE

Course Number ~
428

Course Name (appears on the transcript) ~
Fac Design & Mater Hand

Content

Description
This course will provide students with the fundamental concepts, theory and procedures for the study of facilities design and location; physical layout; material flow principles; and material handling. The course will discuss product design, process planning and schedule design in the development of analytical procedures for facility design and material handling. Additionally, students will use software to supplement the decision-making process in the design, rationalization and improvement of factory and office layouts.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212 and IE 318

IE429 - Design & Analysis of Experiments

General

Subject Code ~
IE

Course Number ~
429

Course Name (appears on the transcript) ~
Des & Analy Experiments

Content

Description
This course deals with the design of experiments, the application of analysis of variance, regression analysis, and related statistical methods. The goals are to learn how to plan, design, and conduct experiments efficiently and effectively and learn how to analyze the resulting data to obtain objective conclusions. Experimental design and analysis are investigated.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212 or equivalent

IE437 - Design Projects

General

Subject Code ~
IE

Course Number ~
437

Course Name (appears on the transcript) ~
Design Projects

Content

Credit Hours

Min
3

IE439 - Senior Design Project I

General

Subject Code ~
IE

Course Number ~
439

Course Name (appears on the transcript) ~
Senior Design Project I

Content

Description
Project management material covered in IE 410 is applied to business and industry problems. Each student develops a complete senior project plan in an industrial setting, obtains approval by a faculty and industrial project advisor, and makes an oral presentation of the proposal to the faculty. Guest lecturers relating to patents, technical writing, ethics, engineering registration, and other professional concerns are included.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Graduating senior status

IE440 - Senior Design Projects II

General

Subject Code ~
IE

Course Number ~
440

Course Name (appears on the transcript) ~
Senior Design Projects II

Content

Description
The student works on an independent engineering project under the supervision of a project advisor. The design process is emphasized. Progress reports and a final written report are submitted to the student's project advisor. Oral presentations of reports are made before the faculty and students. A student who selects a project suggested by industry has the opportunity of working with an industrial sponsor in an actual engineering experience.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete IE 439

IE460 - Supply Chain Engineering

General

Subject Code ~
IE

Course Number ~
460

Course Name (appears on the transcript) ~
Supply Chain Engineering

Content

Description
This course introduces the student to the strategic role of supply chain engineering. The success and prosperity of businesses greatly depend on the effective supply chain and resilience in solving supply chain issues. By the end of the course the student will have the skills to formulate an effective supply chain model, evaluate supply chain performance, and apply the relevant analytical tools.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IE 212, Junior or Senior Standing

IE480 - Internship in Industrial Engineering

General

Subject Code ~
IE

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Industrial Engr

Content

Description
See "Internships".

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

IE490 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

IE491 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

IE590 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

IE591 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

IE601 - Adv Engineering Statistics

General

Subject Code ~
IE

Course Number ~
601

Course Name (appears on the transcript) ~
Adv Engineer Statistics

Content

Description
This course examines model building, design of experiments, multiple regression, nonparametric techniques, contingency tables and introduction to response surfaces, decision theory and time series data.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE604 - Human Factors

General

Subject Code ~
IE

Course Number ~
604

Course Name (appears on the transcript) ~
Human Factors

Content

Description
This is a study of research related to the interface of human beings and machines. Topics include human factors, product and equipment design, capabilities and limitations of the human sensory-motor system, design of displays, and interaction between individual groups and machine systems.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE605 - Reliability

General

Subject Code ~
IE

Course Number ~
605

Course Name (appears on the transcript) ~
Reliability

Content

Description
This course covers the fundamental concepts in reliability engineering. Topics include lifetime distributions, methodologies for parameter estimation, system reliability modeling, degradation modeling, accelerated life testing (ALT) modeling and planning. Most topics are data-driven and advanced analytical methods such as Bayesian statistics using Markov Chain and Monte Carlo (MCMC) for reliability analysis will also be introduced. Basic probability and statistics background is required for this course.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE609 - Strategic Engineering Economics

General

Subject Code ~
IE

Course Number ~
609

Course Name (appears on the transcript) ~
Strateg Engineering Economics

Content

Description
This is a study of the economic aspects of engineering decisions. Topics include comparison of alternatives in engineering programs and economic factors in selecting and replacing machinery, equipment, and structure.

May not take IE 609 and EMGT 609 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE619 - Engineering Supply Chain

General

Subject Code ~
IE

Course Number ~
619

Course Name (appears on the transcript) ~
Engineering Supply Chain

Content

Description
This course will cover the theory, principles, and implications of supply chain management and is intended to provide students with an understanding of the strategic and tactical elements of supply chains. Topics include supply chain networks and design, planning supply and demand, inventory management, managing uncertainty, transportation issues, financial factors, and coordination. The focus of the class is both theoretical and practical and will include case studies.

May not take IE 619 and EMGT 619 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE620 - Multi-Criteria Decision Analysis

General

Subject Code ~
IE

Course Number ~
620

Course Name (appears on the transcript) ~
Multi-Criteria Dec Analys

Content

Description
This is a study of techniques of mathematical formulation, analysis, and solution of technical management problems and the interpretation of results. Computer applications are included.

May not take IE 620 and EMGT 620 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE622 - Lean Production Systems

General

Subject Code ~
IE

Course Number ~
622

Course Name (appears on the transcript) ~
Lean Production Systems

Content

Description
This is a study of the problems, analytical techniques, and recent developments that relate to the traditional production systems and lean production systems. Topics include forecasting, inventory control, production planning, scheduling, and the relationships between manufacturing and other functions of the firm. Emphasis is on pull/demand based production systems.

May not take IE 622 and EMGT 622 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE626 - Discrete Event Simulation

General

Subject Code ~
IE

Course Number ~
626

Course Name (appears on the transcript) ~
Discrete Event Simulation

Content

Description
This is a study of the computer simulation applied to queuing networks, inventory and production control, and material handling systems.

May not take IE 626 and EMGT 626 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE629 - Adv Manufacturing Engineering Systems

General

Subject Code ~
IE

Course Number ~
629

Course Name (appears on the transcript) ~
Adv Manufacturing Engr Systems

Content

Description
This is a study of manufacturing systems techniques with special emphasis on cost estimating, automation, group technology, expert systems, flexible assembly, cellular manufacturing, and other related special topics.

May not take IE 629 and EMGT 629 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE631 - Production & Inventory Modeling

General

Subject Code ~
IE

Course Number ~
631

Course Name (appears on the transcript) ~
Production & Inventory Model

Content

Description
This course provides the theory and application of forecasting and modeling aggregate demand, fragmented demand and consumer behavior using statistical methods for analysis for services and products. Resulting models are correlated to engineering and management decisions made with respect to product, process and systems design. The theory and practice of production and inventory modeling will be covered.

May not take IE 631 and EMGT 631 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE635 - Operations Research

General

Subject Code ~
IE

Course Number ~
635

Course Name (appears on the transcript) ~
Operations Research

Content

Description
This course provides the theory and application of deterministic optimization models. Topics include problem formulation, the simplex method, duality and primal dual relationships, complementary slackness, revised simplex and interior point algorithms. Solution approaches will be done traditionally and using contemporary software.

May not take IE 635 and EMGT 635 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE643 - Design of Experiments

General

Subject Code ~
IE

Course Number ~
643

Course Name (appears on the transcript) ~
Design of Experiments

Content

Description
This is an overview of statistical methods for design of products and processes. Topics include experimental design and analysis, regression analysis, robust design, and Taguschi's methods. Currently popular methods are surveyed.

May not take IE 643 and EMGT 643 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE644 - Quality Systems/Process Improvement

General

Subject Code ~
IE

Course Number ~
644

Course Name (appears on the transcript) ~
Quality Syst & Proc Impro

Content

Description
This is a quantitative course covering an analysis of quality system structures in industry today and the process improvement tools used in quality systems. Process and quality tools such as SPC, Gage R R, ISO 9000, 6 Sigma, benchmarking, and the Malcolm Baldrige National Quality Award are studied. The course is based on applications of these quality principles.

May not take IE 644 and EMGT 644 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE650 - Systems Integration

General

Subject Code ~
IE

Course Number ~
650

Course Name (appears on the transcript) ~
Systems Integration

Content

Description
This course is an introduction to the relevant issues and required techniques for successful systems design development, integration, management, and implementation. The principles and methods for system lifecycle analysis, system planning and management, systems integration, and strategic decision-making will be covered in this course. The interfaces between the system, subsystems, the environment, and people will be part of the course materials. Students will learn the factors to control the total system development process designed to ensure a high quality and effective system.

May not take IE 650 and EMGT 650 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE670 - AI: Applied Neural Networks and Machine

General

Subject Code ~
IE

Course Number ~
670

Course Name (appears on the transcript) ~
AI: Applied Neural Networks

Content

Description
This course concentrates on application of neural networks in the field of engineering. In this course students will learn vision-based applications of Perceptron algorithm as well as back propagation. Linearly and nonlinearly separable clustering and classification problems will be covered. This course is project based and concentrates on the latest applied Neural Networks and Machine Learning algorithms. All concepts are heavily reinforced using MATLAB, the main computational platform.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE671 - AI: Machine Learning - Concepts

General

Subject Code ~
IE

Course Number ~
671

Course Name (appears on the transcript) ~
AI: Machine Learning - Concep

Content

Description
This course focuses on AI concepts such as Data Exploration, Single and Multivariate Parametric and Non-Parametric methods of regression and classification tasks. Students will learn the theory that underlies these algorithms and implement them using popular machine learning packages such as Python with scikit-learn and MATLAB. During the final project, students will implement multiple algorithms and learn how to select the best algorithm with the optimized hyperparameters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE672 - Ai: Machine Learning - Applications

General

Subject Code ~
IE

Course Number ~
672

Course Name (appears on the transcript) ~
AI: Machine Learning - Applic

Content

Description
This course focuses on Artificial Intelligence application packages such as Data exploration, Natural Language Processing, Support Vector Machine, Reinforcement Learning, Artificial Neural Networks (ANNs) and Computer Vision and Deep Learning. Students will learn the theory and applications of a variety of algorithms. These algorithms will be implemented using Python and MATLAB software. As the final project, students will apply a combination of algorithms to a specific application and develop an end to end solution.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE676 - AI: Applied Fuzzy Logic AI: Applied Fuzzy Logic

General

Subject Code ~
IE

Course Number ~
676

Course Name (appears on the transcript) ~
AI: Applied Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. In this course students will learn to analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and will learn to apply fuzzy logic theory to a variety of practical applications. Students will also learn to use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. Machine Controls will be the application.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

IE680 - Engineering Project

General

Subject Code ~
IE

Course Number ~
680

Course Name (appears on the transcript) ~
Engineering Project

Content

Description
Students must select a project faculty advisor and obtain topic approval prior to registration for this course. This is an independent engineering project under the supervision of a project faculty advisor. The design process is emphasized. Progress reports and a final written report are required. An oral presentation and defense of the project is made before a faculty committee.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE690 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

IE691 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE692 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE693 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE694 - Special Topics Industrial Engineering

General

Subject Code ~
IE

Course Number ~
694

Course Name (appears on the transcript) ~
Special Topics in Indust Engr

Content

Description
This is a study of an advanced topic in engineering of special interest to indstrial engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE698 - Thesis Research

General

Subject Code ~
IE

Course Number ~
698

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to industrial engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE699 - Thesis Research

General

Subject Code ~
IE

Course Number ~
699

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to industrial engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

IE701 - PhD Seminar/Research Methods

General

Subject Code ~
IE

Course Number ~
701

Course Name (appears on the transcript) ~
PhD Seminar/Research Methods

Content

Description
This course provides tools and techniques employed to be used in Industrial Engineering research. Topics covered include: program/faculty overview, literature review methods and tools, hierarchy of research questions, research ethics, and visual display of quantitative information.

Credit Hours

Min
3

Requisites

Free Form Requirements
Enrollment in IEPHD Program

IE770 - Dissertation Research

General

Subject Code ~
IE

Course Number ~
770

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701 or IE 701

IE771 - Dissertation Research

General

Subject Code ~
IE

Course Number ~
771

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701 or IE 701

IE772 - Dissertation Research

General

Subject Code ~
IE

Course Number ~
772

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701 or IE 701

IE773 - Dissertation Research

General

Subject Code ~
IE

Course Number ~
773

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701 or IE 701

IE774 - Dissertation Research

General

Subject Code ~
IE

Course Number ~
774

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation. Discussion, presentation and guidance of the dissertation research will take place during these research meetings.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete EMGT 701 or IE 701

ILP190 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
Topics of this course vary from year to year depending on faculty and student interest. This course may be repeated for credit, if topic differs

Credit Hours

Min
3

ILP212 - American Art & American Culture

General

Subject Code ~
ILP

Course Number ~
212

Course Name (appears on the transcript) ~
Amer Art & Amer Culture

Content

Description
American art both reflects and influences the culture in which it is created. This course will provide students with the opportunity to explore the evolution of major American art movements, styles, and artistic elements from the 18th century to the present and their connections to the cultural ideas of the time. Iconic works of American painting, sculpture, photography and architecture will be visually ?read? and discussed. Selected readings, and a museum visit will supplement the visual analysis to highlight the connection between the art and the cultural context of the period. The class will include visual analysis techniques to look at and discuss a work of art using standard art terminology. Students will have the opportunity to investigate in-depth either a work of art or an artist as representative of an American art movement of their choice.

Credit Hours

Min
3

ILP215 - The Music-Making Mind

General

Subject Code ~
ILP

Course Number ~
215

Course Name (appears on the transcript) ~
The Music-Making Mind

Content

Description
This course will cover the theories and practices of how we learn and teach presentational and participatory music. Topics will include a comparison of different methods for teaching and learning music as well as the history and perception of emotion in music. Students will review the recent research on cognition of performing and listening to music and discuss how the music-making mind can and should be studied.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP220 - Work and Career

General

Subject Code ~
ILP

Course Number ~
220

Course Name (appears on the transcript) ~
Work and Career

Content

Description
This course examines liberal and professional perspectives on work and career, with opportunities for students to explore the meaning and practical implications that these terms have for them individually. Students will engage in activities designed for career exploration, build a public portfolio that represents elements of this process, and develop a plan for their remaining academic journey. Key learning outcomes include: historical differences in the meaning of work and career, social problems related to work and careers, career development strategies, and contemporary organizational approaches to employee career development.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP221 - Symbols and Sounds

General

Subject Code ~
ILP

Course Number ~
221

Course Name (appears on the transcript) ~
Symbols and Sounds

Content

Description
This course will examine the relationship between language and music across time as basic forms of human communication. as well as how that has impacted music history. It also will look at professions for which the relationship between music and language is particularly central, such as music composition and music criticism.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP224 - Experience Italy

General

Subject Code ~
ILP

Course Number ~
224

Course Name (appears on the transcript) ~
Experience Italy

Content

Description
This Integrated Liberal and Professional Perspectives course, ILP 224 "Covering Italy," is designed for students to participate in international travel. This course focuses on the process and techniques of becoming better writers, speakers, and photographers through the perspective of a journalist to report on the Italian culture, media outlets, and its people.

This particular class will spend three-weeks during the summer at WNE's partner institution, Sant'Anna Institute, in Sorrento, Italy, and students will document their experiences through writing assignments and presentations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP225 - Gender & Work

General

Subject Code ~
ILP

Course Number ~
225

Course Name (appears on the transcript) ~
Gender & Work

Content

Description
Students are introduced to sociological and managerial perspectives on gender and work, including a consideration of standards for social research and its usefulness in a managerial setting. The focus of the course is on an analysis of the quality of social research and on its relevance and application in managerial settings.

Credit Hours

Min
3

ILP230 - Business & the Global Environment

General

Subject Code ~
ILP

Course Number ~
230

Course Name (appears on the transcript) ~
Business & Global Environ

Content

Description
This course focuses on political, cultural, economic, and social elements related to globalization of the business environment and covers a broad spectrum of issues. Learning outcomes are focused on the recognition and understanding of concepts and practices with respect to: the economics of international monetary and banking systems; the nature of regional economic integration; theories of international trade; the organization of global firms; cross-cultural marketing issues; international legal frameworks and trade organizations; and ethics and social responsibility.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP234 - Our Nuclear World

General

Subject Code ~
ILP

Course Number ~
234

Course Name (appears on the transcript) ~
Our Nuclear World

Content

Description
In this course, we examine how the development and employment of nuclear technologies may have both positive and negative consequences. This course discusses in detail the social, geopolitical, and scientific implications associated with the use of nuclear technologies. Such uses include: electric power production, weapons, medical applications, non-destructive testing, food preservation, and radioactive dating. The first part of the course uses the principles of natural science to explain the fundamental science behind the various nuclear technologies in use all around us today. Also, it will address some of the practical benefits and problems created by this usage. The working premise for the liberal perspective of Our Nuclear World is the Thomas Theorem: ?If men define situations as real, they are real in their consequences.? From this position, we examine the history and social, economic, and geo-political impact of nuclear power, nuclear weapons, and nuclear medicine, etc. Using sociological thought regarding culture (values, beliefs, and norms), social structure (social class, social status, social power), and social institutions (economy, politics, media, national security), we seek to explain the social forces behind the development, promotion, and resistance to the nuclear age. Finally, we try to make all of this relevant to your life.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP235 - Global Sustainability Management

General

Subject Code ~
ILP

Course Number ~
235

Course Name (appears on the transcript) ~
Global Sustainability Mgmt

Content

Description
This travel/study course explores the impact of organizational activities on sustainability through trips of one-to-three week's duration during school breaks that are chaperoned and supervised by a faculty member. These trips take students outside the geographic borders of the U.S. and provide learning experiences beyond the classroom environment. The course involves research and discussion of environmental issues relevant to the country being visited, and programs and activities that enhance the ability of students to comprehend, analyze, and grasp different aspects of sustainability that are the responsibility of organizations in the global environment. The major goal of the course is to allow undergraduate students opportunities to understand the relationship between the science of environmental sustainability and the efforts of organizations to support environmental responsibility. The course may be repeated for credit if the location/topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing and permission of instructor May be repeated for credit if the location/topic varies

ILP236 - Global Warming

General

Subject Code ~
ILP

Course Number ~
236

Course Name (appears on the transcript) ~
Global Warming

Content

Description
This ILP course will first address the physical laws and underpinnings of the observed global warming trend, especially the changes in the atmospheric abundance of greenhouse gases and aerosols and in land surface properties, that alter the energy balance of the climatic system and the preexisting greenhouse effect, will be investigated. Model projections for future climates will be discussed. The investigation of the physical science basis will be followed by an assessment of the observed and projected global and local impacts of the climatic changes and the adaptations and vulnerabilities of natural, social, and economic systems impacted by these changes. Finally the proposed political solutions addressing these threads, (local and global) especially as expressed and outlined in the Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) a panel under the joint auspices of the United Nations and the World Meteorological Organization will be discussed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP237 - Forensic Physics

General

Subject Code ~
ILP

Course Number ~
237

Course Name (appears on the transcript) ~
Forensic Physics

Content

Description
This ILP course will focus on the application of basic physics concepts to Forensic Science with an emphasis on the quantitative analysis of real and contrived cases. It will expose the students to actual methods and techniques used by investigators in the field of Forensic Physics. The science of physics is especially important when dealing with ballistic evidence where the trajectory of a bullet is in question (kinematics). Physics is needed to aid in accident reconstruction, resolving the many different forces at work in order to explain how an event may have happened (Newton's laws, collisions, energy). Other topics are, e.g., the physics of explosions and arson (thermodynamics), analysis of bloodstain patterns (kinematics), and the use of physical and geometric optics principles to develop latent fingerprints.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PHYS 103, or PHYS 123 or PHYS 133

ILP238 - Global Health & Technology

General

Subject Code ~
ILP

Course Number ~
238

Course Name (appears on the transcript) ~
Global Health & Technology

Content

Description
This course provides a multidisciplinary study of the intersection between global health issues and the technologies being developed to resolve them. Major questions that will be addressed during the course include: (1) What are the major health problems facing the world today? (2) Who pays for healthcare and how does this vary regionally? (3) How can technology be used to solve global health issues? The course content and assignments reflect the integrated liberal and professional approach to learning through graphical analysis of biomedical data, examination of cultural and economic issues, and both written and oral communications regarding the social implications of technology development.

At the conclusion of the course, students embark on a faculty-led trip to Guatemala, where they investigate healthcare in the region.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophmore Standing

ILP240 - Football w/o Helmets/Soccer & Rugby

General

Subject Code ~
ILP

Course Number ~
240

Course Name (appears on the transcript) ~
Football w/oHelmet: Soc & Rug

Content

Description
The team sports industry in the UK is alive and well even with the four major US professional team sports having little or no presence. This course examines two of the most popular professional team sports in the UK, football and rugby. The course focuses on the structural, cultural, and economic aspects of these two sports focusing on the similarities to their counterparts in the US.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP243 - Introduction to GIS

General

Subject Code ~
ILP

Course Number ~
243

Course Name (appears on the transcript) ~
Introduction to GIS

Content

Description
Geographic Information Science (GIS) is a relatively new discipline that allows individuals to manage, analyze, and visualize information related to geographical locations in a simple format. It is a powerful tool in a wide range of disciplines, including politics, environmental science, engineering, public health, economics, sociology, and business. In this course, students will analyze data sets from several of these disciplines and learn about the versatile applications of this technology. Students will also learn how to convert geospatial data collected with GPS (Global Positioning System) technology to visual maps generated with GIS software.

Two class hours, three-hour lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP250 - Aids: a Global Pandemic

General

Subject Code ~
ILP

Course Number ~
250

Course Name (appears on the transcript) ~
Aids: a Global Pandemic

Content

Description
This course explores the origins and history of the HIV/AIDS pandemic, the socio-economic factors related to the epidemiology of the disease and the impact of the disease. Much of the course's content will focus on sub-Saharan Africa, which is the epicenter of the pandemic. The globalization of the disease and the increasing interdependence of countries and regions requires discussion and readings that take a national and international approach.

Formerly ILP 350.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP251 - The Economics of Social Policy

General

Subject Code ~
ILP

Course Number ~
251

Course Name (appears on the transcript) ~
The Economics of Social Policy

Content

Description
This course examines how economic theory assists in examining and explaining the social policy choices we all make as citizens. This integrated liberal arts and professional course will cover policy issues such as welfare reform, healthcare, Social Security, and immigration.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP252 - True Story: Films That Inspire

General

Subject Code ~
ILP

Course Number ~
252

Course Name (appears on the transcript) ~
True Story: Films That Inspire

Content

Description
This course combines social work professional knowledge, values, and skills that relate to community organization and the promotion of social justice with psychological and sociological explanations of why some people choose to act in the face of oppression, while others become bystanders, victims, or collaborate with the aggressor. The course will be taught using films based on true stories of people who took action to combat oppression.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP290 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP291 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP292 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP293 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP294 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP295 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
295

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP296 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
296

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP297 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
297

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP310 - Political Polling

General

Subject Code ~
ILP

Course Number ~
310

Course Name (appears on the transcript) ~
Political Polling

Content

Description
Polling is a central part of political campaigns. Candidates use public opinion data to shape their message, their campaign ads and sometimes issue positions. This course draws from political science, survey research, and psychology to examine how pollsters measure voters' perceptions of candidates and issues, and how candidates use polling data to adjust their message and strategy in the heat of a campaign. The course also examines the psychology behind the formation of political attitudes and how best to measure those attitudes in a dynamic campaign environment.

Students receive hands-on experience in polling through the Western New England University Polling Institute.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

ILP314 - Textiles Through Time

General

Subject Code ~
ILP

Course Number ~
314

Course Name (appears on the transcript) ~
Textiles Through Time

Content

Description
This course will examine the history, sociology, aesthetics, economics, and inventions related to textiles. We will move through time looking at the change in choice of textile production from natural fibers to manufactured fibers exploring what drove these changes and the applications of various textiles as they became available.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

ILP317 - Management Issues for Professionals

General

Subject Code ~
ILP

Course Number ~
317

Course Name (appears on the transcript) ~
Man Issues for Professionals

Content

Description
Managerial economics is part of the education of managers, engineers, and other professionals who are involved in decision-making. It provides a framework for assembling information and analyzing alternative decisions. The principle problems studied are those of optimization, forecasting, risk avoidance, and business decision making. Its principle tools are drawn from economic theory and statistics. Calculus and numerical calculations are used to develop and analyze the data that theory has demonstrated to be relevant.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 111 or MATH 123 or MATH 133

ILP324 - Sports-Related Concussions

General

Subject Code ~
ILP

Course Number ~
324

Course Name (appears on the transcript) ~
Sports-Related Concussions

Content

Description
This course is designed to provide a comprehensive examination of sport-induced concussions, combining the basic medical science of closed head injury (liberal) with the policy and practice of assessment and managing concussions on and off the playing field (professional). The course content includes an introduction to brain anatomy and the neurological effects that occur in response to physical trauma to the brain; a description of the immediate and long term symptoms associated with concussions and a review of the cognitive and neurological diagnostic tools used for evaluation; an examination of the effects of repeated concussions, Post-concussion Syndrome, and rehabilitation options for concussed patients; an investigation of the management of concussions and return-to-play protocols.

Since the study of concussions in sports has attracted national attention in recent years, this course will focus on the current theories and research findings that are shaping policy changes within the sport, at the level of coaching, and in the classroom.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP353 - Leadership & Team Skills

General

Subject Code ~
ILP

Course Number ~
353

Course Name (appears on the transcript) ~
Leadership & Team Skills

Content

Description
This course provides the opportunity to examine leadership issues from historical, sociological, and psychological perspectives, and to practice leadership and group skills within the classroom. Readings from historical biographies, sociology, and psychology will be used to gain insights into a range of leadership qualities and abilities. Students will also take a number of assessment instruments that will help them determine their own leadership profiles and will guide them in refining their skills during the semester. Students will be assigned to a specific small group that will perform an array of activities and serve as the context for personal skill building. Students will learn how to analyze a variety of leadership functions and develop a reflective practice that will enable them to continue to perfect their leadership skills in the future.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

ILP369 - Problem Solving Through Design

General

Subject Code ~
ILP

Course Number ~
369

Course Name (appears on the transcript) ~
Problem Solving Through Design

Content

Description
This course is intended for all majors. The course will focus on systematic approaches to problem solving through design. Design is the process to achieve desired transformation from the current state to an improved state. Everyone does this, whether it is a simple activity or finding the solution to a complex problem. Students will gain understanding of defining criteria and restrictions that influence designs and how designs influence culture and society.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

ILP370 - Human Genome Project

General

Subject Code ~
ILP

Course Number ~
370

Course Name (appears on the transcript) ~
Human Genome Project

Content

Description
This 300-level course is targeted at both non-science and science majors intrigued by the potential this new research has for affecting their lives, and the lives of their friends and family, particularly regarding health issues. The current learning objectives for this course include, but are not limited to: (1) a basic understanding of how genetics works; (2) a basic understanding of the history of the HGP; (3) an understanding of some of the potential benefits of new genetic and reproductive technologies; (4) an understanding of the inherent conflicts associated with new genetic technologies and the ethical issues associated with these conflicts, for example, concerns about access-who is denied benefits, who gains the benefits; and (5) an understanding of the civil responsibility in guiding both the research and its ultimately applications. Students will be introduced to the history and motivation for the project, the fundamentals of genomics, and applications of the HGP. The second part focuses on the ethical, legal, and social implications (ELSI) of the research.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

ILP375 - Exploring Public Opinion

General

Subject Code ~
ILP

Course Number ~
375

Course Name (appears on the transcript) ~
Exploring Public Opinion

Content

Description
In this course, students will learn the basics of public opinion polling within the broader context of rhetoric and the public spher. Readings in rhetoric and culture criticism will frame the work that students do in constructing surveys, selecting samples, and conducting public opinion polls for clients on and/or off-campus. Practical and theoretical perspectives will be employed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing

ILP380 - Investigative Reporting

General

Subject Code ~
ILP

Course Number ~
380

Course Name (appears on the transcript) ~
Investigative Reporting

Content

Description
This course allows all students to gain knowledge of criminal investigation, criminal procedure, and criminal law while conducting research and writing of investigative reports. An investigative reporter needs to have an open mind while spending considerable time researching and preparing a report in order to arrive at the truth. Reporters need a clear and concise knowledge of the criminal justice system before beginning their research. Students will be responsible for weekly readings in criminal investigation, trials, and appellant hearings on death row inmates. Each student will write weekly investigative reports in a specific area of the criminal justice system. Students will pair up to write and present in class a final investigative report on death row inmates to determine whether or not such inmates are guilty or raise concern of a wrongful conviction. This course serves a dual purpose in preparing students in the criminal and investigative way of reporting as well as the opportunity to view and report the facts of a case in an open-minded procedure by establishing the truth of the matter. This course emphases the integration of behavior science (criminal justice and political science) and communicating (communications) to the public in written form of the issue at hand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or senior Standing

ILP388 - Sexuality/Sexual Assault in Society

General

Subject Code ~
ILP

Course Number ~
388

Course Name (appears on the transcript) ~
Sex/Sexual Assault in Soc

Content

Description
The first part of the course explores cultural, political and socio-economic factors with regard to communication and sexual rela-tionships, sexual behaviors, gender roles, sexual orientation, sexual disorders, and sexually transmitted diseases. The remainder of the course discusses sexual assault in our society from cultural, legal, psychological and political perspectives with an emphasis on awareness, prevention and treatment. The course engages guest lecturers in the field to enhance the professional perspectives. The course will use a combination of primary research literature, text-book material, and popular literature to illustrate the variety of perspectives.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

ILP390 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP391 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP392 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP393 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

ILP394 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP395 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP396 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP398 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
398

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILP399 - Special Topics in ILP

General

Subject Code ~
ILP

Course Number ~
399

Course Name (appears on the transcript) ~
Special Topics in ILP

Content

Description
This is a study of an advanced topic in ILP (Integrated Liberal Professional), but not offered on a regular basis.

Credit Hours

Min
3

ILSP333 - Indep Study Integrated Liberal Studies

General

Subject Code ~
ILSP

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study Integrat Lib Stud

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ILSP334 - Indep Study Integrated Liberal Studies

General

Subject Code ~
ILSP

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Integrat Lib Stud

Content

Credit Hours

Max
3

Min
1

ILSP480 - Internship in Integrated Lib Studies

General

Subject Code ~
ILSP

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Int Lib Studies

Content

Description
Internship experiences typically occur within the context of major or minor academic disciplines. From time to time, however, there are opportunities that hall outside the confines of the major, but yet provides career experience

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

ILSP481 - Internship in Integrated Lib Studies

General

Subject Code ~
ILSP

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Int Lib Studies

Content

Description
Internship experiences typically occur within the context of major or minor academic disciplines. From time to time, however, there are opportunities that hall outside the confines of the major, but yet provides career experience

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

INST100 - Global Intercultural Orientation

General

Subject Code ~
INST

Course Number ~
100

Course Name (appears on the transcript) ~
Global Intercultural Orient

Content

Description

This course is designed for students who are preparing to study and/or work abroad. Studying abroad is a unique opportunity that more and more students are taking advantage of in an effort to become more worldly, improve their employment prospects after graduation, and to gain a better understanding of different political and economic systems, dissimilar cultures, histories, and norms, divergent religious beliefs and practices, as well as the diversity of languages that are spoken in our increasingly globalized world. The ultimate goal of this course is for students to be better prepared for what they will experience when they travel abroad in order that they can make the most of their overseas travels and experiences.

Credit Hours

Min
2

INST101 - Intro to Contemporary Global Issues

General

Subject Code ~
INST

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Contemp Global Issues

Content

Description

The course examines numerous social, cultural, economic, and political issue areas from the vantage points of global community and global citizenship. Areas such as the regulation of business, the spread of technology, environmental pollution, health, poverty, crime, human rights, immigration, education, and democracy as well as war and peace, are analyzed within the context of globalization.

Credit Hours

Min
3

INST190 - Special Topics in International Study

General

Subject Code ~
INST

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Int'l Study

Content

Description

Topics in international studies that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

INST290 - Special Topics in International Study

General

Subject Code ~
INST

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Int'l Study

Content

Description
Topics in international studies that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

INST391 - Special Topics in International Study

General

Subject Code ~
INST

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Int'l Study

Content

Description
Topics in international studies that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

INST480 - Internship in International Studies

General

Subject Code ~
INST

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Int'l Study

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

INST481 - Internship in International Studies

General

Subject Code ~
INST

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Int'l Study

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

INST490 - Seminar in International Studies

General

Subject Code ~
INST

Course Number ~
490

Course Name (appears on the transcript) ~
Seminar in International Study

Content

Description
This is an exploration of selected topics in international studies with an emphasis on developing research analytical skills. These skills are incorporated into a research project on a topic selected by the student. This course may be repeated if the topic differs. All senior international studies majors are required to enroll in this course.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing and 15 credits of INST, or permission of the instructor

INTB251 - Intro to International Business

General

Subject Code ~
INTB

Course Number ~
251

Course Name (appears on the transcript) ~
Intro to Int'l Business

Content

Description
This course serves as an introduction to the vocabulary and concepts of international business and to the challenges that face business firms conducting activities across national borders. Key learning outcomes include: international business terms and concepts, cultural variables that affect business practices, different types of economic, political and legal systems and their impact on business, and the financial and regulatory frameworks of international commerce.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Sophomore Standing

INTB333 - Indep Study in International Business

General

Subject Code ~
INTB

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study Int'l Business

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

INTB334 - Indep Study in International Business

General

Subject Code ~
INTB

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Int'l Business

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

INTB480 - Internship in International Business

General

Subject Code ~
INTB

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Int'l Business

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

INTB481 - Internship in International Business

General

Subject Code ~
INTB

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Int'l Business

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

IT101 - Intro to Computing

General

Subject Code ~
IT

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Computing

Content

Description
This course is designed to introduce the student to various fields of computing in order to help them make an informed choice about which career path they would like to pursue. Topics include data representation, hardware, system and application software, communications and the systems development life cycle. Comparison of the computer science and information technology fields will be ongoing throughout the course.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

IT102 - Intro to Programming

General

Subject Code ~
IT

Course Number ~
102

Course Name (appears on the transcript) ~
Intro to Programming

Content

Description
Covers problem solving with programming in greater detail. Students learn to apply fundamental imperative, procedural constructs to solve common programming problems, as well as the beginnings of object oriented programming (e.g., defining classes, instantiating objects, using objects, and using application programmer's interfaces). Students learn to design and develop small programs using a procedural, imperative programming language and appropriate analysis, design, and testing techniques.

Students cannot receive credit for IT 102/CS 102 and CS 171.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

IT111 - Accelerated Python

General

Subject Code ~
IT

Course Number ~
111

Course Name (appears on the transcript) ~
Accelerated Python

Content

Description
This course is for students who have learned to program in a programming language other than Python and want/need to learn Python. This course covers procedural and object-oriented programming in Python, including variables, types, expressions, selection, iteration, functions, classes, and objects.

Credit Hours

Min
3

IT200 - Data Structures

General

Subject Code ~
IT

Course Number ~
200

Course Name (appears on the transcript) ~
Data Structures

Content

Description
This course continues the introduction to computer programming begun in CS 102 or IT 102. This course covers the development and use of data structures in computer science and object-oriented software development. Using a modern programming language, students learn about the implementation and use of abstract data types. Students are expected to apply and augment the programming knowledge acquired in previous courses to the task of developing more complex works. Topics include linked lists, stacks, queues, hash tables, common trees and tree algorithms, graphs and traversal algorithms, and common algorithms related to these structures. Students will also learn to evaluate the efficiency of the algorithms that they implement over the course of the semester.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 102/IT 102, CS 111/IT 111, or CS-171

IT230 - Intro to Operating Sys & Script Dev

General

Subject Code ~
IT

Course Number ~
230

Course Name (appears on the transcript) ~
Intro to Oper Sys & Script Dev

Content

Description
This course provides students with the foundations for working with current operating systems. Students learn to make effective use of operating systems' powerful command-line interface. They also learn how to create scripts to automate redundant tasks and scripts to act as glue between otherwise independent applications.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IT 101 or CS 101, and IT 102 or CS 102 or CS 171

IT240 - Foundations of Web Systems

General

Subject Code ~
IT

Course Number ~
240

Course Name (appears on the transcript) ~
Foundations of Web System

Content

Description
This course provides student with the foundation for Web site development and maintenance. Students learn about Web browsers, how URLs are resolved, and Web pages are returned. They learn hypertext, self-descriptive text, web page design, web navigational systems, and digital media. Students become proficient with common tools for authoring and publishing Web pages. This course is equivalent to BIS 210.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomare Standing and at least 1 CS or IT course

IT250 - Data Communications & Networks

General

Subject Code ~
IT

Course Number ~
250

Course Name (appears on the transcript) ~
Data Commun & Networks

Content

Description
This is a study of the concepts and terminology of data communications, network design, and distributed information systems. Major topics include communication concepts, network architectures, data communications software and hardware, and the impact of communications technology on information systems. This course is equivalent to CS 360.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete IT 101 or CS 101 or IT 102 or CS 102

IT300 - Database Management Systems

General

Subject Code ~
IT

Course Number ~
300

Course Name (appears on the transcript) ~
Database Management Syst

Content

Description
This course is a study of the concepts, theory, design techniques, and information retrieval methods, emphasizing the relational database model and structured query language (SQL). It incorporates database design and application development CASE (computer aided software engineering) tools, with emphasis on the entity-relational (E-R) model and unified modeling language (UML). Topics include data modeling and organization, database architecture, SQL, and database connectivity technologies. Design and implementation projects are required. This course is equivalent to CS 364.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing and IT-101 or CS-101 or BIS-300

IT310 - System Operation & Administration

General

Subject Code ~
IT

Course Number ~
310

Course Name (appears on the transcript) ~
System Operation & Admin

Content

Description
This course focuses on the organization and architecture of computer operations systems and its major components such as process management, I/O management, and resource management. The course also enables the students to learn how to perform standard system administrative tasks, such as installing system and applications software, installing new hardware, managing user accounts, backing up and restoring file systems, boot-up and shutdown, and monitoring system performance.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
At least junior Standing and IT 230

IT320 - Foundations of Human Comp Interact

General

Subject Code ~
IT

Course Number ~
320

Course Name (appears on the transcript) ~
Foundations Human Comp Inter

Content

Description
Students learn the basic concepts of human computer interaction to evaluate, design, and improve the usability of a system. These basic concepts include human factors, performance analysis, cognitive processing, usability studies, environment, and user training. Students will gain practical experience by applying these concepts to web systems.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CS 101 or IT 101, and CS 102 or IT 102 or CS 171

IT330 - Fundamentals of Cybersecurity

General

Subject Code ~
IT

Course Number ~
330

Course Name (appears on the transcript) ~
Fundamentals of Cybersecurity

Content

Description
This course introduces the fundamentals of cybersecurity, including information security, compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; and cryptography. The course covers new topics in cybersecurity security as well, including psychological approaches to social engineering attacks, Web application attacks, vulnerability assessment, data loss prevention, cloud computing security, and application programming development security.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IT 230 and IT 250, or permission of instructor

IT333 - Indep Study in Information Technology

General

Subject Code ~
IT

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Info Tech

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

IT334 - Internship in Information Technology

General

Subject Code ~
IT

Course Number ~
334

Course Name (appears on the transcript) ~
Internship in Info Tech

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

IT350 - Web Systems Development

General

Subject Code ~
IT

Course Number ~
350

Course Name (appears on the transcript) ~
Web Systems Development

Content

Description
Web applications are the heart and soul of ecommerce. Students will learn to create interactive web applications that are backed by databases using current server-side technologies. Students also learn basic web server administration, and how to secure websites and web communications.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
IT 102 or CS 102 or CS 171; and IT 240
Corequisite- IT 300; BIS 321; CS 364

IT360 - Network Management & Operations

General

Subject Code ~
IT

Course Number ~
360

Course Name (appears on the transcript) ~
Network Mngt & Operations

Content

Description
In this course, students learn about various tasks that are involved in day-to-day network management and operations. Students will learn how to perform tasks such as network configuration, remote administration access, IP configuration (static and dynamic), setting up name servers, namespace configuration and management, and how to troubleshoot network problems and fix them.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete IT 230 and IT 250

IT390 - Special Topics in Information Technology

General

Subject Code ~
IT

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Info Tech

Content

Description
Topics in computer science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

IT410 - Adv Topics in System Admin

General

Subject Code ~
IT

Course Number ~
410

Course Name (appears on the transcript) ~
Adv Topics System Admin

Content

Description
This course is a study of current advanced topics in system administration. Topics may include the latest security issues, advances in storage technologies, advances in network file systems, and latest technology used in setting up shared file systems, high performance computer system maintenance, and latest strategies used for backup and restoration.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete IT 310

IT430 - Ethical Hacking

General

Subject Code ~
IT

Course Number ~
430

Course Name (appears on the transcript) ~
Ethical Hacking

Content

Description
This course is a study of current advanced topics in network security. The course will focus on advance topics in access control, Web security, remote access and Virtual Private Networks, wireless LAN/WAN security, and mail and DNS security.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete IT 330

IT435 - Cybersecurity Operations

General

Subject Code ~
IT

Course Number ~
435

Course Name (appears on the transcript) ~
Cybersecurity Operations

Content

Description
This course focuses on knowledge and skills related to security concepts, security monitoring, host-based analysis, network intrusion analysis, and security policies and procedures. Students will learn how to monitor and fight threats to an organization's IT infrastructure, assess the scope of the attack and affected systems, collect data for further analysis, and understand and follow established procedures for response to alerts converted to incidents. Students will learn how to assess security systems and measure for weaknesses and possible improvements.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
IT 430, or permission of instructor

IT450 - Adv Top Web Design & Dev

General

Subject Code ~
IT

Course Number ~
450

Course Name (appears on the transcript) ~
Adv Top Web Design & Dev

Content

Description
This course is a study of current advanced topics in Web design and development. Topics such as load balancing, quality of service, caching, information architecture, Web site administration tools, usability, and security in ecommerce will be studied.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete IT-350

IT460 - Adv Top Network Adminstration

General

Subject Code ~
IT

Course Number ~
460

Course Name (appears on the transcript) ~
Adv Top Network Admin

Content

Description
This course is a study of current advanced topics in network administration. Topics such as latest software/hardware network management tools, switches and routers, firewall configurations, and latest tools to manage and troubleshoot enterprise and service provider networks will be studied.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete IT 360

IT480 - Internship in Information Technology

General

Subject Code ~
IT

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Info Tech

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

IT481 - Internship in Information Technology

General

Subject Code ~
IT

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Info Tech

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

IT490 - Special Topics in Information Tech

General

Subject Code ~
IT

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Info Tech

Content

Description
Topics in information technology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

JRNL100 - Journalism: Practices and Principles

General

Subject Code ~
JRNL

Course Number ~
100

Course Name (appears on the transcript) ~
Journalism: Practices & Princ

Content

Description
This course offers an introduction to the nature, problems, and ethics of newspaper work as well as the organization and techniques of the modern newsroom. The course places special emphasis on writing the news story in its various forms. Extensive written assignments are required.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ENGL 132 or equivalent with grade of "C-" or better No prerequisite for Summer'20 Session

JRNL120 - Producing the Westerner-Fall

General

Subject Code ~
JRNL

Course Number ~
120

Course Name (appears on the transcript) ~
Producing the Westerner-FL

Content

Description
This course gives students hands-on experience with producing a college newspaper. Students may be responsible for writing, editing, photographing, graphic design, layout, advertising, and aspects of business management.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Work on The Westerner and permission of the instructor

JRNL121 - Producing the Westerner-Spring

General

Subject Code ~
JRNL

Course Number ~
121

Course Name (appears on the transcript) ~
Producing the Westerner-SP

Content

Description
This course gives hands-on experience with producing a college newspaper. Students may be responsible for writing, editing, photography and graphics, layout and design, advertising, and aspects of business management.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Work on The Westerner and permission of the instructor

JRNL190 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

JRNL220 - Producing a College Newspaper

General

Subject Code ~
JRNL

Course Number ~
220

Course Name (appears on the transcript) ~
Producing a College Newspaper

Content

Description
In this course, students learn all aspects of newspaper production, including writing, editing, layout, research, checking sources, and meeting deadlines for a college newspaper, The Westerner.

Credit Hours

Min
3

Requisites

Free Form Requirements
Permission of the instructor

JRNL290 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

JRNL291 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

JRNL303 - Contemporary Journalism

General

Subject Code ~
JRNL

Course Number ~
303

Course Name (appears on the transcript) ~
Contemporary Journalism

Content

Description
This course develops students' nonfiction storytelling, research, and writing skills, focusing in particular on the various media platforms for which journalists produce material in contemporary society. Students consider similarities and differences among different styles of journalism, examine the expectations of news consumers in different media and the impact those expectations have on journalism as a profession, and develop stories that include multimedia components. Students will be expected to produce stories worthy of publication and/or broadcasting as a result of this course.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete COMM 100 or COMM 233, and JRNL 100 or JRNL 101

JRNL333 - Indep Study in Journalism

General

Subject Code ~
JRNL

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Journalism

Content

Credit Hours

Max
3

Min
1

JRNL360 - Sportswriting

General

Subject Code ~
JRNL

Course Number ~
360

Course Name (appears on the transcript) ~
Sportswriting

Content

Description
This course will introduce you to the craft of sportswriting. Beginning with a discussion of how to approach writing in general, the course focuses principally on analyzing models of successful sportswriting and developing your skills in producing your own sportswriting. You will be expected to read copiously and critically and to write (and revise) several short assignments as well as one research-based project. This course satisfies a Writing Intensive requirement for Arts and Sciences students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete JRNL-100 or JRNL 101, and 2 ENGL writing courses with a minimum grade "C"

JRNL370 - Adv Radio Reporting

General

Subject Code ~
JRNL

Course Number ~
370

Course Name (appears on the transcript) ~
Adv Radio Reporting

Content

Description
This course provides students with professional radio reporting opportunities. It focuses on radio news reporting with instruction and real-life applications in developing, researching, writing, and producing broadcast news stories to be aired on National Public Radio Station WAMC. Students receive on-the-air talent techniques and one-on-one coaching for professional voice-over productions. Story ideas are assigned by the instructor, the WAMC news director, and news producers; students must also generate his/her own story proposals.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete COMM 241 and COMM 251, or JRNL 100/JRNL 101 and COMM 245

JRNL390 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

JRNL391 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
junior Standing

JRNL392 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

JRNL393 - Special Topics in Journalism

General

Subject Code ~
JRNL

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Journalism

Content

Description
Topics in journalism that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

LA100 - First Year Seminar

General

Subject Code ~
LA

Course Number ~
100

Course Name (appears on the transcript) ~
First Year Seminar

Content

Description
This course represents a segment of the general education requirements, specifically pertaining to personal development and relevant academic skills. First Year Seminar is a course designed to ease the transition to the first year of college and to explore the value of college and develop a sense of personal identity. While course content can vary from section to section, there is a commonly shared core of objectives that characterizes the seminar. Organized around academic interests, there is structured opportunity to become acquainted with the intricacies of particular academic disciplines, or, if undecided, to engage career exploration activities. As regards general education components, the seminar serves as an introduction to critical thinking, a platform for exploring information literacy, and practical application of oral presentation strategies. One of the unique components of the course is linking the role of instructor to that of academic advisor for the students enrolled in any particular section. The course is also distinguished by the use of student assistants known as First Year Seminar Assistants whose role is to support students in the academic transition challenges of the first year.

Credit Hours

Min
2

Requisites

Free Form Requirements
For New Freshmen Only

LA101 - First Year Field Experience

General

Subject Code ~
LA

Course Number ~
101

Course Name (appears on the transcript) ~
First Year Field Experience

Content

Description
Linked with First Year Seminar, this experience exposes first year social work students to the realities and complexities of the actual workplace. Working with such populations as the elderly, developmentally challenged, children in foster care, and school age children, students explore the development of professional relationships and the challenges often faced by social workers. Enrollment in First Year Seminar is a corequisite.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Co-requisite LA 100 New Freshmen only

LA102 - First Year Seminar for Pharmacy

General

Subject Code ~
LA

Course Number ~
102

Course Name (appears on the transcript) ~
1st Year Seminar for Pharmacy

Content

Description
Intended for pre-pharmacy students, this course is designed to ease students' transition to their first year of college and to allow them to explore the value of college and personal identity. This seminar provides a structured opportunity for pre-pharmacy students to become acquainted with the intricacies of their chosen academic discipline and to engage in career exploration activities. This first year seminar course emphasizes both the learning (academics, resources, information literacy, and critical thinking) and living (social and extracurricular) aspects that are relevant to the students' college experiences and responsibilities.

Credit Hours

Min
1

LA103 - Colleges Success Coaching Experienc

General

Subject Code ~
LA

Course Number ~
103

Course Name (appears on the transcript) ~
College Success Coach Exp

Content

Description
Designed for those students who have been admitted to the college with full participation in this program as a condition of acceptance. Prerequisites are less than 24 credits, first term of enrollment.

Course will meet one time per week for 50 minutes.

Credit Hours

Min
1

Requisites

Free Form Requirements
Designed for those students who have been admitted to the college with full participation in this program as a condition of acceptance Prerequisites are less than 24 credits, first term of enrollment

LA105 - International Student Seminar

General

Subject Code ~
LA

Course Number ~
105

Course Name (appears on the transcript) ~
International Student Seminar

Content

Description
This course is designed specifically for international students who are new to Western New England University, providing a general orientation to the University and the surrounding area while addressing transitional issues an international student may face in the first semester of study. In this 15 week course, students will learn about the resources available to them and develop skills for college success in an American classroom.

Credit Hours

Min
1

Requisites

Free Form Requirements
New international student with fewer than 24 credits To be taken in the first semester/term or enrollment

LA110 - First Year Seminar Arts & Sciences

General

Subject Code ~
LA

Course Number ~
110

Course Name (appears on the transcript) ~
First Year Seminar Arts & Sci

Content

Description
The course represents a segment of the general education requirements, specifically pertaining to personal development and relevant academic skills. First Year Seminar is a course designed to ease the transition to the first year of college and to explore the value of college and develop a sense of personal identity. While course content can vary from section to section, there is a commonly shared core of objectives that characterizes the seminar. Organized around academic interests, there is structured opportunity to become acquainted with the intricacies of particular academic disciplines, or, if undecided, to engage major and/or career exploration activities. As regards general education components, the seminar serves as an introduction to critical thinking, a platform for exploring information literacy, and practical application of oral presentation strategies. One of the unique components of the course is linking the role of instructor to that of academic advisor for the students enrolled in any particular section. The course is also distinguished by the use of student assistants known as First Seminar Assistants whose role is to support students in the academic transition challenges of the first year. In addition, the LA 110 course offers the opportunity for the faculty to use a medium of their choice to emphasize critical thinking and writing skills as they relate to contemporary issues, making students more aware of local, national, and global issues that will influence the world they live in.

Credit Hours

Min
3

Requisites

Free Form Requirements
First-Year Students only

LA150 - Writing & Reading Lab

General

Subject Code ~
LA

Course Number ~
150

Course Name (appears on the transcript) ~
Writing & Reading Lab

Content

Description
This is a one-credit laboratory course designed to supplement the work in certain sections of ENGL 132 English Composition I: College Reading and Writing with a review of English fundamentals. Topics include sentence structure, mechanics, and usage.

Credit Hours

Min
1

Requisites

Free Form Requirements
Take concurrently with ENGL 130 or ENGL 132 or ENGL 133

LA151 - Writing & Reading Lab

General

Subject Code ~
LA

Course Number ~
151

Course Name (appears on the transcript) ~
Writing & Reading Lab

Content

Description
This is a one-credit laboratory course that introduces basic rhetorical principles and applies the principles taught in LA 150 to assignments in certain sections of ENGL 133 English Composition II: Introduction to Literature.

Credit Hours

Min
1

Requisites

Free Form Requirements
Take concurrently with ENGL 130 or ENGL 132 or ENGL 133

LA175 - Academic Reading Strategies I

General

Subject Code ~
LA

Course Number ~
175

Course Name (appears on the transcript) ~
Acad Read Strategies I

Content

Description
This is a one-credit laboratory course that provides students with an understanding of the skills needed for proficiency in college reading. Some theory is presented, but the emphasis is on the application of the skills to college reading.

Credit Hours

Min
1

Requisites

Free Form Requirements
Take concurrently with ENGL 130 or ENGL 132 or ENGL 133

LA176 - Academic Reading Strategies II

General

Subject Code ~
LA

Course Number ~
176

Course Name (appears on the transcript) ~
Acad Read Strategies II

Content

Description
This is a one-credit laboratory course that applies the strategies taught in LA 175 to textbooks from courses across the curriculum.

Credit Hours

Min
1

Requisites

Free Form Requirements
Take concurrently with ENGL-130 or ENGL-132 or ENGL-133

LA190 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

LA191 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

Requisites

Free Form Requirements
Freshmen Only Pre-Pharmacy Majors

LA192 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

LA193 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
193

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
0

LA194 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
194

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

LA195 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
195

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
0

LA250 - Language Support Lab I

General

Subject Code ~
LA

Course Number ~
250

Course Name (appears on the transcript) ~
Language Support Lab I

Content

Description
This is a one-credit laboratory course which gears instruction to the individual needs of students who speak English as a foreign or second language or who come from a bilingual background. The course is usually taken concurrently with a designated section of ENGL 132. May be taken for two credit hours by arrangement.

Credit Hours

Max
2

Min
1

LA251 - Language Support Lab II

General

Subject Code ~
LA

Course Number ~
251

Course Name (appears on the transcript) ~
Language Support Lab II

Content

Description
This is a one-credit laboratory course that continues the work of LA 250. This course is usually taken concurrently with a designated section of ENGL 133. May be taken for two credit hours by arrangement.

Credit Hours

Max
2

Min
1

LA275 - Guided Research Thesis & Project Writers

General

Subject Code ~
LA

Course Number ~
275

Course Name (appears on the transcript) ~
Guided Resrch Thesis/Project

Content

Description
This course guides students through the research process for thesis or in-depth written projects. Building on the first-year introductions to information literacy, this class extends students' information research skills to more advanced, discipline-specific techniques and tools. Beginning with their own topics, students learn to form research questions or problems, develop strategies for discovering authoritative information, and the effective and ethical use of sources.

Students have ample time for hands-on research pertinent to their project, with immediate guidance and feedback from the instructor.

The course meets in a computer lab. Students are encouraged to have a research topic before beginning this course.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Recommended for sophomores and above

LA276 - Guided Research Thesis & Project Writers

General

Subject Code ~
LA

Course Number ~
276

Course Name (appears on the transcript) ~
Guided Resrch Thesis & Project

Content

Description
This course guides students through the research process for thesis or in-depth written projects. Building on the first-year introductions to information literacy, this class extends students' information research skills to more advanced, discipline-specific techniques and tools. Beginning with their own topics, students learn to form research questions or problems, develop strategies for discovering authoritative information, and the effective and ethical use of sources.

Students have ample time for hands-on research pertinent to their project, with immediate guidance and feedback from the instructor.

The course meets in a computer lab. Students are encouraged to have a research topic before beginning this course.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Recommended for sophomores and above

LA277 - Guided Research Thesis & Project Writers

General

Subject Code ~
LA

Course Number ~
277

Course Name (appears on the transcript) ~
Guided Resrch Thesis & Project

Content

Description
This course guides students through the research process for thesis or in-depth written projects. Building on the first-year introductions to information literacy, this class extends students' information research skills to more advanced, discipline-specific techniques and tools. Beginning with their own topics, students learn to form research questions or problems, develop strategies for discovering authoritative information, and the effective and ethical use of sources.

Students have ample time for hands-on research pertinent to their project, with immediate guidance and feedback from the instructor.

The course meets in a computer lab. Students are encouraged to have a research topic before beginning this course.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Recommended for sophomores and above

LA278 - Guided Research Thesis & Project Writers

General

Subject Code ~
LA

Course Number ~
278

Course Name (appears on the transcript) ~
Guided Resrch Thesis & Project

Content

Description
This course guides students through the research process for thesis or in-depth written projects. Building on the first-year introductions to information literacy, this class extends students' information research skills to more advanced, discipline-specific techniques and tools. Beginning with their own topics, students learn to form research questions or problems, develop strategies for discovering authoritative information, and the effective and ethical use of sources.

Students have ample time for hands-on research pertinent to their project, with immediate guidance and feedback from the instructor.

The course meets in a computer lab. Students are encouraged to have a research topic before beginning this course.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Recommended for sophomores and above

LA290 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

LA333 - Indep Study in Liberal Arts

General

Subject Code ~
LA

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Liberal Arts

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

LA390 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

LA391 - Student Literacy Volunteers

General

Subject Code ~
LA

Course Number ~
391

Course Name (appears on the transcript) ~
Student Literacy Volunteers

Content

Description
This is an introduction to the problems of illiteracy and to the techniques of teaching literacy. Students receive elementary training in techniques and practice those techniques under supervision in the Greater Springfield community.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Sophomore Standing or higher

LA490 - Special Topics in Liberal Arts

General

Subject Code ~
LA

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Liberal Arts

Content

Description
Liberal Arts topics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

LA491 - Student Literacy Volunteers II

General

Subject Code ~
LA

Course Number ~
491

Course Name (appears on the transcript) ~
Student Literacy Volunteers II

Content

Description
This is a continuation of the work in LA 391.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Sophomore Standing or higher, and LA-391

LAW500 - Intro to the Law

General

Subject Code ~
LAW

Course Number ~
500

Course Name (appears on the transcript) ~
Intro to the Law

Content

Description
Introduction to the Law is a one-credit course required in the first year for all entering students, offered prior to the beginning of the first term. This class introduces students to the study of law. It is designed to give students the knowledge and skills that will enable them to get the most out of their other first-year courses. The goals of the course include introducing students to the purposes and pedagogy of law school, providing techniques and strategies for learning the law, and providing information on background concepts. Students will gain an understanding of the American legal system, explore the function of case law and how it relates to other sources of the law, and learn to actively engage in case analysis. The class is graded pass/fail. (Required course)

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

LAW501 - Constitutional Law

General

Subject Code ~
LAW

Course Number ~
501

Course Name (appears on the transcript) ~
Constitutional Law

Content

Description
This course is a study of the allocation of governmental authority and the limitations on that authority as defined by the Constitution of the United States. The course will deal with the problems of defining the scope of federal power, the relationship between the federal government and the states, the scope of state authority, and the rights of individuals with an emphasis on those rights guaranteed by the Due Process and Equal Protection Clauses of the Constitution. (Required Course)

Credit Hours

Min
4

LAW502 - Intro to the Legal Profession

General

Subject Code ~
LAW

Course Number ~
502

Course Name (appears on the transcript) ~
Intro to the Legal Profession

Content

Description
Introduction to the Legal Profession is a one-credit required course for all first year students, offered prior to the beginning of the second term. This skills course is designed to introduce students to aspects of legal practice through a simulated client representation. The goals of the course include helping students develop an understanding of the importance of professionalism, legal ethics, and competency and to provide opportunities for students to engage in hands-on lawyering skills. The class is graded pass/fail. (Required course)

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Take LAW-500;

LAW503 - Contracts

General

Subject Code ~
LAW

Course Number ~
503

Course Name (appears on the transcript) ~
Contracts

Content

Description
This course introduces students to the law governing legally enforceable agreements with a focus on the rights and duties of contracting parties. In focusing on how promissory relationships are created by the parties, the course emphasizes how these relationships are interpreted, limited, discharged, breached, and enforced. The course also addresses the ethical and equitable considerations affecting the contracting parties. (Required course.)

Credit Hours

Min
4

LAW505 - Criminal Law

General

Subject Code ~
LAW

Course Number ~
505

Course Name (appears on the transcript) ~
Criminal Law

Content

Description

This course is designed to give students an introduction to the principles governing the criminalization of conduct. To this end, this course will discuss and examine the history and development of common law and statutory crimes and criminal responsibility in the United States. Class discussions will focus on the competing interests and policies, which come into play when society has determined that certain conduct is criminal. We will also discuss the underlying and competing philosophical approaches to answer questions such as what constitutes a crime? Who should be punished and why? And under what circumstances will we excuse or justify conduct, which violates criminal law? Lastly in this course we will explore the intersections of law and morality regarding criminal responsibility. By the end of this course, students should be able to give a workable definition of what constitutes a crime, gain a familiarity with the elements of a crime, identify, and scrutinize principles of criminal responsibility and analyze and discuss implications of legal concepts within specific fact patterns.

Credit Hours

Min
4

LAW507 - Lawyering Skills I

General

Subject Code ~
LAW

Course Number ~
507

Course Name (appears on the transcript) ~
Lawyering Skills I

Content

Description

Lawyering Skills I is a required first-year course designed to introduce students to the essential problem-solving and communication skills of the legal profession. The legal research and writing faculty work closely with students in smaller classroom settings to introduce techniques of legal analysis, the basic sources and processes of legal research, and the principles of legal writing and oral advocacy. Through a series of assignments of increasing complexity, students learn how to analyze legal problems, research legal issues, frame legal arguments, and gain experience in drafting the major forms of predictive and persuasive legal writing. During the first semester, in Lawyering Skills I, students will be placed in the role of lawyer as advisor and counselor by focusing on predictive, advisory writing while learning other lawyering skills such as fact gathering and analysis, interviewing, and client counseling. Students will write legal memoranda, conduct interviews, draft professional emails and letters, and conduct office meetings, all in the context of completing practice based assignments. Students will receive individualized feedback throughout the semester. (Required Course)

Credit Hours

Min
2

LAW508 - Lawyering Skills II

General

Subject Code ~
LAW

Course Number ~
508

Course Name (appears on the transcript) ~
Lawyering Skills II

Content

Description

Lawyering Skills II is a required first-year course designed to introduce students to the essential problem-solving and communication skills of the legal profession. The legal research and writing faculty work closely with students in smaller classroom settings to introduce techniques of legal analysis, the basic sources and processes of legal research, and the principles of legal writing and oral advocacy. Through a series of assignments of increasing complexity, students learn how to analyze legal problems, research legal issues, frame legal arguments, and gain experience in drafting the major forms of predictive and persuasive legal writing. During the second semester, in Lawyering Skills II, students will focus on the role of lawyer as an advocate by focusing on persuasive writing and drafting. In this context, students will assume the role and professional obligations of a lawyer by drafting legal arguments and documents on behalf of clients. Students will write a trial brief and argue a dispositive motion in a trial court simulation. Students will continue to receive individualized feedback throughout the semester. (required course; graded; two-credits) (prerequisite: successful completion of Lawyering Skills I)

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete LAW-507

LAW509 - Civil Procedure

General

Subject Code ~
LAW

Course Number ~
509

Course Name (appears on the transcript) ~
Civil Procedure

Content

Description
The object of this course is to introduce students to the civil litigation process, including the attendant jurisdictional questions, court organization, and pleadings and rules of practice in state and federal courts. In addition, an analysis of the litigation process is undertaken, with emphasis on discovery, pretrial procedures, trial, judgment, and appellate review of the decision. (Required Course)

Credit Hours

Min
4

LAW511 - Property

General

Subject Code ~
LAW

Course Number ~
511

Course Name (appears on the transcript) ~
Property

Content

Description
Starting with the historical evolution of the concepts involved in real and personal property, this course will study the rights and duties of owners and possessors of property, priority of possession or property, and present and future interests in property. This course will also consider issues in landlord and tenant law, evidence of ownership or right to possession, methods of title assurance, commercial and noncommercial transfers of interests in property, the rescission, modification, interpretation and performance of transfer agreements and documents, and private controls on the use of property. This course may also explore conflicts between private ownership of property and community needs, the nature and purposes of types of shared ownership of property, and public controls on the use of property. (Required Course)

Credit Hours

Min
4

LAW513 - Torts

General

Subject Code ~
LAW

Course Number ~
513

Course Name (appears on the transcript) ~
Torts

Content

Description
This is a course concerning civil liability for harm inflicted on another. Topics studied may include negligent, reckless and intentional acts that inflict harm; defenses to claims of liability; the liability of owners or occupiers of land; and strict liability. (Required Course)

Credit Hours

Min
4

LAW551 - Business Organizations

General

Subject Code ~
LAW

Course Number ~
551

Course Name (appears on the transcript) ~
Business Organizations

Content

Description
This course focuses on the fundamental conceptual framework of business organizations law including the formation and conduct of business in the agency, partnership, corporate, and limited liability company forms. It provides an introduction to the terminology of business organizations and finance, and transmits some sense of what business lawyers do. It also raises questions of ethics, professional responsibility and critical analysis of numerous aspects of business law.

Credit Hours

Min
3

LAW553 - Evidence

General

Subject Code ~
LAW

Course Number ~
553

Course Name (appears on the transcript) ~
Evidence

Content

Description
This course is an introduction to the basic rules of evidence governing the proof of facts in criminal and civil trials, with a focus on the Federal Rules of Evidence. Topics covered may include the role of the judge and jury; relevance; hearsay and its exceptions; character evidence; and the competency, examination and impeachment of witnesses. Classroom method focuses on discussion of selected problems and cases and aims at providing all students with a common grounding in the basic rules of evidence. (Required Course)

Credit Hours

Min
3

LAW555 - Income Tax

General

Subject Code ~
LAW

Course Number ~
555

Course Name (appears on the transcript) ~
Income Tax

Content

Description
A study of the codified law as it relates to the federal taxation of the income of individuals. This course emphasizes the concepts of gross income, taxable income, and deductions. Special emphasis is given to the federal tax policy considerations inherent in resolving tax issues. A survey of selected topics such as the tax consequences of divorce and administrative practice before the Internal Revenue Service and the Tax Court may be included in the course. (Required Course)

Credit Hours

Min
3

LAW556 - Legislative and Administrative Process

General

Subject Code ~
LAW

Course Number ~
556

Course Name (appears on the transcript) ~
Legislative and Admin. Process

Content

Description
This course will introduce students to statutes and administrative regulations, the foundations of public law and policy. Using the federal system as our model, we will study the allocation of power to all three branches of government: the process by which Congress creates legislation and authorizes administrative agencies to enforce those laws; the process by which those agencies make and enforce regulations pursuant to their statutory mandates; and the role of courts to ensure that agencies have properly interpreted their statutory mandates and followed procedural requirements for promulgating and enforcing regulations. We will also examine the role that lawyers play in terms of advocacy for, implementation of, challenges to, and defense of public policy.

Credit Hours

Min
3

LAW575 - Professional Responsibility

General

Subject Code ~
LAW

Course Number ~
575

Course Name (appears on the transcript) ~
Professional Responsibility

Content

Description
This course examines the ethics of lawyering and the various roles of the lawyer. We will discuss the nature and scope of the attorney's responsibilities and obligations to clients, society, the administration of justice, the profession, and the self. It covers legal and ethical standards and aspirations relevant to regulating the conduct of lawyers and the development of professional ethics. (Required Course)

Credit Hours

Min
2

LAW580 - Pro Bono Requirement

General

Subject Code ~
LAW

Course Number ~
580

Course Name (appears on the transcript) ~
Pro Bono Requirement

Content

Description
In order to graduate, students must complete 20 hours of pro bono service

Credit Hours

Min
0

LAW588 - Advanced Legal Analysis II

General

Subject Code ~
LAW

Course Number ~
588

Course Name (appears on the transcript) ~
Advanced Legal Analysis II

Content

Description
This required course will introduce you to the mechanics of the bar exam, the substantive material tested on the bar exam, and teach you important skills in reading, analyzing, and answering bar exam questions. The course uses a learn-by-doing approach. Weekly written homework assignments include multiple choice questions, essay questions, and multi-state performance tests. These will be submitted, graded, and returned online before most class meetings, and will then form the basis for class discussion and review. Students will also be regularly assigned online substantive videos to review and utilize in their homework and classroom discussion. The course will reinforce selected topics within three (3) of MBE subjects, Tort Law, Contract Law, and Evidence. Students will learn how the bar examiners test these topics and will learn how to study and to apply their knowledge to bar exam questions. Students must successfully complete both ALA I and ALA II to graduate. ALA I and ALA II can only be taken your last two semesters before graduation.

Billing Hours

Min
2

Credit Hours

Min
2

LAW599 - Adv Legal Analysis I

General

Subject Code ~
LAW

Course Number ~
599

Course Name (appears on the transcript) ~
Adv Legal Analysis I

Content

Description
This required course will introduce you to the bar exam, review material tested on the bar exam, and teach you important skills in reading, analyzing, and answering bar exam questions. The course uses a learn-by-doing approach. Written homework assignments include multiple choice questions and essay questions. These will be submitted, graded, and returned online before most classes and will then form the basis for class discussion and review. Students will also be assigned online video review.

The course will refresh your recollection of selected topics within three of MBE subjects, Contracts, Evidence and Torts. Students will learn how the bar examiners test these topics and will learn how to study and to apply their knowledge to bar exam questions. Students must successfully complete both ALA I and ALA II to graduate. ALA I and ALA II can only be taken your last two semesters before graduation.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

LAW601 - Electronic Discovery

General

Subject Code ~
LAW

Course Number ~
601

Course Name (appears on the transcript) ~
Electronic Discovery

Content

Description
This course is an introduction to the legal and practical issues related to electronic discovery and the use of electronic evidence in legal proceedings. Attorneys engaged in litigation must ensure compliance with the rules and regulations governing the preservation and production of electronically stored information. Lawyers and clients nationwide are struggling with the practical challenges of electronic discovery and the law is continuously evolving. Students will gain an in-depth understanding of the legal rules governing ediscovery and develop practical knowledge and key analytical skills that can be used in practice.

Credit Hours

Min
2

LAW603 - International Criminal Law

General

Subject Code ~
LAW

Course Number ~
603

Course Name (appears on the transcript) ~
International Criminal Law

Content

Description
In this course we will discuss the application of domestic and international law to questions of jurisdiction over international criminal activities, international cooperation in criminal matters, substantive international law contained in multilateral treaties concerning war crimes and terrorism, and the permanent International Criminal Court. The course consists of a series of topics, organized around the principles and offenses of international criminal law, including: nature and sources of international criminal law; nature and elements of responsibility and defenses against responsibility; basis of jurisdictional competence of states under international law; methods for obtaining persons abroad; attempts over time, including through international tribunals, to secure punishment for international crimes; offenses against peace; war crimes; crimes against humanity; genocide; terrorism; and the intersection between international crimes and human rights. (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Max
3

Min
1

LAW611 - White Collar Crime

General

Subject Code ~
LAW

Course Number ~
611

Course Name (appears on the transcript) ~
White Collar Crime

Content

Description
This course offers an overview of the law of business (white collar) crime. Topics include: individual and corporate responsibility for malfeasance; complicity; conspiracy; mail fraud; public corruption; RICO; securities fraud; perjury and false statements; obstruction of justice; the 5th amendment protections for business speech and documents. (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
3

LAW616 - Employee Benefits Law

General

Subject Code ~
LAW

Course Number ~
616

Course Name (appears on the transcript) ~
Employee Benefits Law

Content

Description
Employee benefits issues are a part of the everyday practice of law. This course provides a historical background of Employee Benefits Law and the regulation of Employee Benefit Plans, including ERISA, as well as a brief review of Federalism and Preemption of State Law. This survey course will explore current employee benefits law and public policy issues, federal tax policy, and employee benefit plans, as well as the scope and cost of Retirement and Health Care Plan Coverage in the United States.

Credit Hours

Min
2

LAW619 - Labor Law Arbitration

General

Subject Code ~
LAW

Course Number ~
619

Course Name (appears on the transcript) ~
Labor Law Arbitration

Content

Credit Hours

Min
3

LAW622 - Federal Criminal Law

General

Subject Code ~
LAW

Course Number ~
622

Course Name (appears on the transcript) ~
Federal Criminal Law

Content

Description

This course will examine the ways in which federal criminal law has sometimes allowed for greater change and experimentation within the realm of criminal law, including innovations in criminal law stemming from the federal system (e.g., sentencing guidelines, RICO statues, extension of certain civil rights). The course will both study the scope of federal criminal jurisdiction, and discuss the merits of federalizing white-collar crime and organized crime, including crimes relating to terrorist organizations. The purpose of the course is to give students both a more technical undestanding of federal criminal law and to review larger issues of federal criminal law in greater depth. (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
3

LAW625 - Municipal and Land Use Law

General

Subject Code ~
LAW

Course Number ~
625

Course Name (appears on the transcript) ~
Municipal and Land Use Law

Content

Description

This course will cover foundational concepts in municipal governance and land use and planning law. The course begins with municipal governance and zoning fundamentals, including zoning enabling acts, ordinances, variances, incentive zoning, transferable development rights and accessory uses. The course will also cover takings; sustainable development, including New Urbanism and smart growth; historic preservation; and aesthetic regulation. (Credits may be applied toward Public Interest Practice and Transactional Law Practice concentrations.)

Credit Hours

Min
3

LAW628 - Adv Criminal Law

General

Subject Code ~
LAW

Course Number ~
628

Course Name (appears on the transcript) ~
Adv Criminal Law

Content

Description

This course's goal is both to broaden and to deepen the students' understanding of criminal law. We will study in depth matter not addressed-or covered only briefly-in the first year. Topics may include crimes (such as theft offenses, rape, attempt, complicity, and conspiracy), defenses (such as self defense, necessity, duress, diminished capacity and mental illness) and both constitutional and prudential limitations on criminalization and punishment. (Credits may be applied towards the Gender and Sexuality Law Concentration.)

Credit Hours

Min
3

LAW629 - Gender & the Law

General

Subject Code ~
LAW

Course Number ~
629

Course Name (appears on the transcript) ~
Gender & the Law

Content

Description
This course examines issues of gender in the law from the standpoint of feminist legal jurisprudence, particularly the way it is affected by and constructs gender in our society. Topics may include the law of sexual harassment, sexual autonomy and reproductive choice, workplace discrimination, legal regulation of welfare and low-income women, and the way in which a legal definition of sex (or the lack of it) influences law and social policy. (Credits may be applied toward Gender & Sexuality Law and Public Interest Practice concentrations.)

Credit Hours

Min
3

LAW630 - Race & the Law

General

Subject Code ~
LAW

Course Number ~
630

Course Name (appears on the transcript) ~
Race & the Law

Content

Description
This course examines the use of the law both to perpetuate and eradicate racial injustice in the United States. The goals of the course are to achieve an understanding of the role of law in its social context and the use of legal institutions and law as tools for social change, including the responses of American courts and legislatures. This course will examine racial classification in the United States, the historical and legal framework of slavery, race-based citizenship, and immigration issues, segregation, and other issues from the Civil Rights Era to the present. We will examine cases, statutory law, and relevant sources that explore the effect that race and racial inequality have on American law and society. Students will be encouraged to actively participate in class and to share current examples of the effect that issues of race have on the law in the United States. (Credits may be applied toward Public Interest concentration.)

Credit Hours

Min
3

LAW632 - Law Office Management

General

Subject Code ~
LAW

Course Number ~
632

Course Name (appears on the transcript) ~
Law Office Management

Content

Description
This course will introduce students to the operation and management of solo practice, law firms, and corporate legal departments. Practices and techniques that assist in the ethical, professional, and profitable representation of clients while reducing stress and crisis situations will be presented through presentations, readings, and guest lecturers. Topics to be covered include: business planning; time management, accounting and billing; client recruitment and relations; technology and office systems; stress management and personal support; ethical responsibilities and professionalism.

Credit Hours

Min
2

LAW633 - Internet Law

General

Subject Code ~
LAW

Course Number ~
633

Course Name (appears on the transcript) ~
Internet Law

Content

Description
This course will examine how the law is responding to the various challenges posed by the internet. It will look at the application of various sources of law to the internet, including the United Stated Constitution, state and federal statutes, and common law principles, as well as a variety of proposals for new or revised laws to regulate this means of both communication and commerce. The course will examine the differing legal treatment of various participants in the online world including internet service providers vs. creators of online content. Topics to be discussed include sovereignty and jurisdiction over cyberspace, censorship of internet content, online defamation and other forms of tortuous conduct, the regulation of intermediaries such as internet service providers, and the legal status of domain names. The course does not require any technical expertise, but instead will focus on the way in which the legal system responds to the creation of new technology either by reasoning by analogy and applying existing legal principles or by creating new legal categories and regulatory techniques.

Credit Hours

Min
3

LAW643 - Family Law

General

Subject Code ~
LAW

Course Number ~
643

Course Name (appears on the transcript) ~
Family Law

Content

Description
This course examines the relationship between family and law. Topics addressed include legal definitions of family taking into consideration both the marital and non-marital family; rights and obligatons among family members; the federal and state government's role in family life as well as the constitutional limits on government involvement; dissolution of family including issues of property distribution, alimony/support, and the implications of children; jurisdiction; and the role of the attorney in family formation and disputes. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. (Credits may be applied toward Gender & Sexuality Law concentration.)

Credit Hours

Min
3

LAW645 - Entertainment Law

General

Subject Code ~
LAW

Course Number ~
645

Course Name (appears on the transcript) ~
Entertainment Law

Content

Description

This course is designed as an introduction to the legal, business, creative, and ethical aspects of the practice of law in the film, television, music, publishing, art, and video game industries, providing an overview of key areas such as contractual practices, personal and intellectual property rights, compensation, and creative control issues. While not a course on copyright or contracts, our focus will include an examination of the interaction between these disciplines and the arts, as well as an exploration of current topics such as grants of rights, duration of copyright, licensing, fair use, exclusivity, merchandising, rights of privacy and publicity, and regulation of entertainment industries. (Credits may be applied towards Transactional Law Practice concentrations.)

Credit Hours

Min
3

LAW651 - Immigration Law

General

Subject Code ~
LAW

Course Number ~
651

Course Name (appears on the transcript) ~
Immigration Law

Content

Description

This course will explore the American immigration system from constitutional, statutory, and policy perspectives. Topics considered include the source and scope of congressional power to regulate immigration, standards and procedures for entry, exclusion, and deportation, illegal migration, and the acquisition and loss of American citizenship. Admission of aliens into the United States will focus on family-sponsored entry, employment-based entry, refugee-based entry, and unlawful entry. (Credits may be applied toward International and Comparative Law Practice and Public Interest Practice concentrations.)

Credit Hours

Min
3

LAW660 - Closely Held Businesses

General

Subject Code ~
LAW

Course Number ~
660

Course Name (appears on the transcript) ~
Closely Held Businesses

Content

Description

As part of the advanced curriculum in the law of business organizations, this course provides an in-depth analysis of the myriad legal problems involved in the formation and operation of closely held businesses, i.e., those businesses whose ownership interests are not publicly traded. We will consider unincorporated business entities - including the general partnership, the limited partnership (LP), the limited liability partnership(LLP), and the limited company(LLC) - as well as the incorporated closely held business in form of the close corporation. The main issues discussed for each form of business organization are the mechanics of entity formation; management and control of the closely held business; financial rights and liabilities of the entities owners; fiduciary duties among the entities owners; the transferability of entity ownership; and exit rights during dissociation and dissolution. Prerequisite: Law 551 Business Organizations. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW-551

LAW665 - Mergers & Acquisitions

General

Subject Code ~
LAW

Course Number ~
665

Course Name (appears on the transcript) ~
Mergers & Acquisitions

Content

Description
This course will focus on both the business and legal elements of merger and acquisition activities. It will offer a comprehensive overview of the strategic and financial issues as well as the legal necessities involved in the process. Specifically, we will review the current M&A issues around venture capital backed companies, private equity backed companies and publicly traded companies. We will explore the valuation methodologies, term-sheet structures, deal structure considerations (asset vs. stock), negotiation tactics, compliance with federal and state laws and tax implications of M&A transaction structures. Some specific content will include dealing with the implications of debt, the treatment of stock preferences/classes as well as other issues such as stock options, management carve outs, drag-along rights and the need for shareholder or SEC approval. Class activities will include lectures, cases studies, simulations and guest speakers. The rubric will be based on several field research assignments, a small team project and a final exam. (Credits may be applied towards the Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW669 - Medical Malpractice

General

Subject Code ~
LAW

Course Number ~
669

Course Name (appears on the transcript) ~
Medical Malpractice

Content

Description
This course focuses on litigating medical malpractice claims. We will analyze different theories of recovery and corresponding defenses. Students will receive instruction and become proficient in pre-litigation investigation; drafting pleadings; conducting pre-trial discovery (including questioning and defending at depositions); expert discovery; and, motion practice. No prior medical knowledge or experience is necessary. Students who have or wish to take LAW 704 Medical Liability and Quality should not register for this course.

Credit Hours

Min
2

LAW670 - UCC Survey

General

Subject Code ~
LAW

Course Number ~
670

Course Name (appears on the transcript) ~
UCC Survey

Content

Description
This course will focus primarily on the Uniform Commercial Code, Articles 2 and 9 (sales of goods and secured transactions). It will also provide a very limited overview of the law of negotiable instruments. As a survey course, this course is highly recommended as preparation for the bar exam. Students who have taken Sales (LAW 744) or Secured Transactions (LAW 746) may not enroll in this course. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

Requisites

Free Form Requirements
LAW 503 Contracts

LAW674 - Employment Discrimination

General

Subject Code ~
LAW

Course Number ~
674

Course Name (appears on the transcript) ~
Employment Discrimination

Content

Description
This course concerns discrimination in the workplace, with emphasis on different theories of discrimination and the application of those theories in a variety of settings. The primary focus is on the text and interpretation of Title VII of the Civil Rights Act of 1964, as amended in 1991. Other areas studied may include the Age Discrimination Act of 1967, the Equal Pay Act of 1963, and the Americans with Disabilities Act of 1990. (Credits may be applied toward Public Interest Practice Concentration and Gender and Sexuality Law Concentration.)

Credit Hours

Max
3

Min
2

LAW675 - Law & Entrepreneurship

General

Subject Code ~
LAW

Course Number ~
675

Course Name (appears on the transcript) ~
Law & Entrepreneurship

Content

Description
This course provides law students with an overview of the legal issues facing entrepreneurs as they launch new ventures and develop their businesses from start-ups to operating entities. We will examine business and legal issues arising during the early life cycle of a new business and link key learning objectives to real-life scenarios. The course covers an introduction to business entities, legal aspects of marketing, ownership of ideas, technology and intellectual property, trade secrets, licensing agreements, and other key matters involved in entrepreneurship.

Billing Hours

Min
2

Credit Hours

Min
2

LAW679 - Gaming Law

General

Subject Code ~
LAW

Course Number ~
679

Course Name (appears on the transcript) ~
Gaming Law

Content

Description
This course is intended to provide a broad overview of federal and state laws regarding gambling in the United States which includes lotteries, pari-mutuel wagering and casino gaming. The course will feature a focus on major issues that attorneys will face when working for, or dealing with, gaming facilities including licensing and regulatory issues, hospitality laws, gaming-focused contract matters, casino credit and debt collection as well as a discussion on Native American gaming issues, sports wagering and internet gaming. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW685 - Bankruptcy

General

Subject Code ~
LAW

Course Number ~
685

Course Name (appears on the transcript) ~
Bankruptcy

Content

Description
Recommended for those who intend to practice commercial law of any type, or intend to have a general practice, including business litigation. This course constitutes an overview of primarily the consumer chapters of the United States Bankruptcy Code. Students are exposed to the perspectives of both debtors and creditors in the bankruptcy liquidation and reorganization process. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW686 - Health Care Finance & Delivery

General

Subject Code ~
LAW

Course Number ~
686

Course Name (appears on the transcript) ~
Health Care Finance & Delivery

Content

Description
This is a survey course that will cover a variety of issues relating to health care access, delivery and reimbursement for services. Topics may include the institutional duty to provide care, discrimination in access to health care, insurance contract interpretation, federal regulation of insurance including ERISA, professional relationships in health care enterprises, and fraud and abuse.

Credit Hours

Min
3

LAW688 - Bioethics & the Law

General

Subject Code ~
LAW

Course Number ~
688

Course Name (appears on the transcript) ~
Bioethics & the Law

Content

Description
This is a survey course that will cover a variety of bioethics topics through the lenses of law, ethics, medicine, and public policy. Topics may include reproductive technologies and rights, medical decision-making, end of life care, distributive justice topics, and research on human subjects.

Credit Hours

Min
3

LAW691 - Food & Drug Law

General

Subject Code ~
LAW

Course Number ~
691

Course Name (appears on the transcript) ~
Food & Drug Law

Content

Description
This course focuses on the regulation of food and drugs by the Food and Drug Administration (FDA). The course will examine the basic statutory framework and laws governing the regulation of drugs, medical devices, biologics, cosmetics, dietary supplements, and food, including the FDA's practices, procedures, and enforcement authority. This course will discuss the underlying policies guiding the substantive laws as well as their interaction with other areas of law, such as product liability, intellectual property, environmental regulations, and the medical profession. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

LAW694 - Conveyancing

General

Subject Code ~
LAW

Course Number ~
694

Course Name (appears on the transcript) ~
Conveyancing

Content

Description
This course concerns the legal aspects of the purchase and sale of real estate, beginning with the real estate broker and concluding with the closing process. The course covers in detail the purchase and sale agreement and remedies for the breach of the agreement; title examination and title insurance; property description and deed drafting; RESPA forms and regulation and closing adjustments; the closing process; and ethical considerations in representation of parties in real estate transactions. (Credits may be applied toward the Transactional Law Practice concentrations.)

Credit Hours

Min
2

LAW695 - Academic Success

General

Subject Code ~
LAW

Course Number ~
695

Course Name (appears on the transcript) ~
Academic Success

Content

Description
This required Academic Success course assists you succeed in law school and the legal profession. This includes three(3) components: Module One - learning how to maximize your learning potential, how to enhance your study techniques and class preparation, outlining, time management; Module Two covers essential law school skills, such as exam preparation and exam writing techniques note-taking, briefing cases, and outlining; Module Three introduces students to the form and substance of the bar exam and course selection, as well as health and wellness in law school and the profession.

Credit Hours

Min
1

LAW696 - Landlord & Tenant

General

Subject Code ~
LAW

Course Number ~
696

Course Name (appears on the transcript) ~
Landlord & Tenant

Content

Description
This course focuses on the landlord-tenant relationship in the residental rental market with emphasis on recent court decisions and various selected state laws that have attempted to lessen the problems of substandard or inadequate rental housing, housing discrimination, problems of lead paint poisoning, and related issues. Eviction proceedings, discrimination litigation and consumer remedies are covered in detail. Prerequisite: LAW 511 Property. (Credits may be applied toward Public Interest Practice and Transactional Law Practice concentrations.)

Credit Hours

Min
2

Requisites

Free Form Requirements
Complete LAW-511

LAW702 - Products Liability

General

Subject Code ~
LAW

Course Number ~
702

Course Name (appears on the transcript) ~
Products Liability

Content

Description
This course presents an analysis and discussion of the American law of products liability. The focus of the course is on the major theories of liability with respect to injuries caused by the use of defective consumer products. We will cover the requirements of each of the major causes of action in product litigation, together with appropriate defenses and damages related to those causes of action.

Credit Hours

Min
2

LAW704 - Medical Liability & Quality

General

Subject Code ~
LAW

Course Number ~
704

Course Name (appears on the transcript) ~
Medical Liability & Quality

Content

Description
This course focuses on improving health care quality and on the relationship between physician and patient. It begins with the materials on health care quality and medical error. It then turns to governmental regulation of health care professionals through licensure and discipline. The course also examines the clinician-patient relationship, including duties to treat, confidentiality, and informed consent and. Finally, the course will explore the framework for malpractice suits against health care professionals and the doctrinal and evidentiary dimensions of malpractice litigation. Course previously titled Health Care Liability & Quality.

Credit Hours

Min
3

LAW705 - Administrative Law

General

Subject Code ~
LAW

Course Number ~
705

Course Name (appears on the transcript) ~
Administrative Law

Content

Description
This course examines the system through which a vast array of governmental power is exercised in the United States: the administrative process. Its focus will be the ways in which private interests are arranged, rearranged, and/or protected in that system against the background of the public interest. The course will address agency powers to gather and utilize information, promulgate regulations, and adjudicate rights and remedies under applicable statutes and regulations. Judicial review of adverse agency action will also be explored. (Credits may be applied toward Public Interest Concentration.)

Credit Hours

Min
3

LAW706 - Criminal Procedure: Investigation

General

Subject Code ~
LAW

Course Number ~
706

Course Name (appears on the transcript) ~
Criminal Proc: Investigation

Content

Description

This course examines the constitutional limits on police investigation of suspected crimes. Fair procedure guarantees that individuals will be free from unreasonable invasions of privacy and freedom by enforcement agents of the state. Students will read and critique provisions of the United States Constitution as the United States Supreme Court interprets it. Students will develop an understanding of the search and seizure clause of the Fourth Amendment. Students will analyze the requirements of custodial interrogations and constitutional identifications. Students will also identify legally significant facts applicable to each issue and articulate discussion of cases, including facts and judicial reasoning. Students will successfully convey in writing, in the context of two take home written assignments, their understanding and application of the law covered over the course of the semester.

Credit Hours

Min
3

LAW708 - Labor Law in Capitalist America

General

Subject Code ~
LAW

Course Number ~
708

Course Name (appears on the transcript) ~
Labor Law Capitalist America

Content

Description

This course traces the development of American Labor Law, from its early beginnings at the dawn of the industrial revolution, through the great depression of the 1930s, the post-war years, and the modern era. It considers how workers have joined together to improve their material well-being, and how society regulates the inevitable conflict between workers and management. The course studies the National Labor Relations Act and its interpretation by the courts and the National Labor Relations Board. Areas covered include the right to join unions, to engage in collective bargaining, and the procedures to resolve labor disputes, jurisdictional disputes, board procedures, representation, elections, unfair labor practices, strikes and job actions, picketing, lockouts, secondary boycotts, arbitration of disputes, and union organizing. (Credits may be applied toward Transactional Law Practice concentration.) Formerly Labor Law

Credit Hours

Min
3

LAW711 - Licensing of Intellectual Property

General

Subject Code ~
LAW

Course Number ~
711

Course Name (appears on the transcript) ~
Licensing of Intellectual Prop

Content

Description

This course provides an overview of the licensing characteristics of intellectual property including considerations for licensing of patents, trademarks, trade secrets and copyrights. This course includes an interactive negotiation and drafting of a mock licensing agreement over the course of the semester. Attributes of E-commerce, software, shrink-wrap, click-wrap and database licenses, distributorship licenses, research and development licenses, university technology licenses and joint venture agreement licenses are presented. The essential elements of licensing agreements including grant clauses, royalty, fee and payment clauses, indemnification clauses, termination clauses, confidentiality clauses, best effort clauses, quality control clauses and remedies clauses are presented for use in the drafting of the mock licensing agreement. Antitrust concerns in intellectual property licensing including patent misuse are presented for use and consideration in drafting the mock licensing agreement. Licensing resources are introduced including case law, sample licensing clauses, licensing treatises and actual licensing agreements for use by the students in drafting the mock licensing agreement.

Credit Hours

Min
2

LAW712 - Insurance Law

General

Subject Code ~
LAW

Course Number ~
712

Course Name (appears on the transcript) ~
Insurance Law

Content

Description
This course provides students with a working knowledge of fundamental legal priniciples concerning insurance policy and coverage issues. Legal issues regarding the regulation, and underwriting of insurance will be reviewed as well as claims handling, good and bad faith, and punitive damages. The course will also examine life, disability, property and casualty, automobile, health, and various professional liability insurance coverage issues. At the conclusion of this course the student should have a basic understanding of how insurance coverage in general is created, regulated, interpreted, applied, and enforced, as well as the application of basic principles to several different types of insurance coverage. (Credits earned in this course can be applied towards the Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW715 - Conflict of Laws

General

Subject Code ~
LAW

Course Number ~
715

Course Name (appears on the transcript) ~
Conflict of Laws

Content

Description
This course deals with the legal ramifications of disputes involving connections with two or more states. When such disputes reach the courts, what law should be applied and how should the determination be made? The course explores choice of law questions and the various methods and theories courts and scholars have proposed and adopted to answer them. The contrasting points of view regarding choice of law are analyzed in terms of which policies best promote the goals of individual states, as well as harmony and efficiency in the federal system. This course may also deal, briefly, with constitutional questions concerning choice of law, judicial jurisdiction, and recognition of judgments. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam.

Credit Hours

Min
2

LAW716 - First Amendment Rights

General

Subject Code ~
LAW

Course Number ~
716

Course Name (appears on the transcript) ~
First Amendment Rights

Content

Description
This course is a basic introduction to the First Amendment of the United States Constitution, focusing on freedom of expression. Topics to be studied include the special problems of particular kinds of speech, such as advocacy of violence as a political tool for change, libel, obscenity, hate speech, commercial speech, and symbolic speech, for example flag burning. The course will also address specific techniques employed by the government to regulate speech including prior restraints, time, place, and manner regulations, limits on access to public property to exercise free speech rights, and compelled expression. If time allows, the course may also address the two religion clauses of the First Amendment. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
2

Requisites

Free Form Requirements
LAW 501 Constitutional Law

LAW719 - Voting Rights

General

Subject Code ~
LAW

Course Number ~
719

Course Name (appears on the transcript) ~
Voting Rights

Content

Description
This course considers ways in which the law governing the right to vote affects and reflects political and racial power relationships and hierarchies. Topics include Constitutional and other sources of the right to vote, voting and representation, apportionment and redistricting, partisan and racial gerrymandering, the Voting Rights Act of 1965, voter registration, and the interplay of federal and state authority over voting and elections. The course will examine specific tools governments have used to regulate elections and voting, the scope and limits of judicial review of voting regulations, and the legal frameworks under which laws and rules affecting voting rights are assessed. (Credits can be applied towards Public Interest Practice Concentration.

Credit Hours

Min
2

LAW721 - Environmental Law

General

Subject Code ~
LAW

Course Number ~
721

Course Name (appears on the transcript) ~
Environmental Law

Content

Description
This course is an intensive study of the major pollution control programs in the United States, including the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act and Superfund. In addition to the general characteristics shared by each, the course will consider several recurring issues of the administrative state, namely the interpretation of complex and programmatic statues, the nature of administrative authority, and litigation strategies within statutory regimes generally. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

LAW724 - Federal Courts & Jurisdiction

General

Subject Code ~
LAW

Course Number ~
724

Course Name (appears on the transcript) ~
Federal Courts & Jurisdiction

Content

Description

This course focuses on the role of the federal courts under the American system of dual (national and state) sovereignty and divided national governmental power among the branches. More specifically, we will study: (a) the constitutional allocation of power and responsibility to enforce federal rights between federal and state courts; (b) the power of Congress to control jurisdiction over federal claims; (c) the sovereign immunity of state governments; (d) Article III limitations of federal judicial power; and (e) the conditions under which federal courts abstain from deciding cases within their jurisdiction. A recurring question throughout the course will be whether (and to what extent) our federal system does or should assure that persons harmed by violations of federal law have access to adequate judicial remedies against such harm. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
2

LAW727 - Juvenile Justice

General

Subject Code ~
LAW

Course Number ~
727

Course Name (appears on the transcript) ~
Juvenile Justice

Content

Description

This course concentrates on juvenile delinquency proceedings from pretrial procedure through trial and the occasional transfers of juvenile offenders to the adult criminal system. Developments in the area of due process for young people (United States Supreme Court cases) and effective client advocacy are stressed. Prerequisite: Law 505 Criminal Law. (Credits may be applied toward Criminal Law Practice and Public Interest Practice concentrations.)

Credit Hours

Min
2

Requisites

Free Form Requirements

Completed or concurrently enrolled in LAW 505 Criminal Law

LAW735 - Civil Rights Police Misconduct

General

Subject Code ~
LAW

Course Number ~
735

Course Name (appears on the transcript) ~
Civil Rts Police Misconduct

Content

Description

This course offers an introduction to federal civil rights litigation, principally under 42 U.S.C. sec. 1983, in the context of claims of misconduct such as wrongful arrest, imprisonment, and other wrongful denials of liberty; wrongful prosecution; excessive force; illegal search and seizure; wrongful interference with first amendment rights; and failure to protect. It will also examine immunity, defenses, and supervisory and government liability. (Credits may be applied toward Criminal Law Practice and Public Interest Practice concentrations.)

Credit Hours

Min
3

LAW739 - Copyright Law

General

Subject Code ~
LAW

Course Number ~
739

Course Name (appears on the transcript) ~
Copyright Law

Content

Description
This course will focus on the legal protection given the creators of literary, artistic, musical, and related works. The course emphasis will be on copyright law's attempt to balance the rights of creators with the public's interest in access to creative works. (Credits may be applied toward Transactional Law Practice concentration.) (NOTE: this is a three credit class but will be scheduled for two credits in person and one credit asynchronously online)

Credit Hours

Min
3

LAW741 - Law & Education

General

Subject Code ~
LAW

Course Number ~
741

Course Name (appears on the transcript) ~
Law & Education

Content

Description
This course focuses on the legal issues in K-12 public education.

Credit Hours

Min
3

LAW747 - Income Tax II

General

Subject Code ~
LAW

Course Number ~
747

Course Name (appears on the transcript) ~
Income Tax II

Content

Description
A continuation of the study of the law as it relates to the federal taxation of the income of individuals. This course explores the tax concepts of realization and recognition of income, the character of gains and losses from the disposition of property, and tax accounting methods. The course also explores the role of debt in property transactions and may include a discussion of assignment of income principles. Prerequisite: Law 555 Income Tax I. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

LAW748 - Trusts & Estates

General

Subject Code ~
LAW

Course Number ~
748

Course Name (appears on the transcript) ~
Trusts & Estates

Content

Description
This course is a study of the inter-vivos and testamentary gratuitous transfer of property, including intestate succession, wills, and trusts. Also discussed are the duties and liability of the fiduciary, the use of charitable donations, and the raising of constructive and resulting trusts. Prerequisite: Law 511 Property. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW-511

LAW749 - Workers' Compensation

General

Subject Code ~
LAW

Course Number ~
749

Course Name (appears on the transcript) ~
Workers' Compensation

Content

Description
Since as far back as Ancient Rome and Greece, society has compensated injured workers for work-related accidents. This course analyzes the history and the principles of the system for compensating employees for work-related injuries. This course will provide an understanding of the core concepts of Workers' Compensation law and the mechanics of litigating and defending claims for workers' compensation benefits.

Credit Hours

Min
2

LAW750 - Corporate Finance

General

Subject Code ~
LAW

Course Number ~
750

Course Name (appears on the transcript) ~
Corporate Finance

Content

Description
This course will examine the fundamentals of finance and capital structures. The course will start with a focus on financial statement analysis and various measurements of company performance. The course will then explore the factors that influence the capital structuring decisions made by businesses, investors, and lenders. The course will help students understand mergers, leveraged buyouts, long-term debt, and asset securitization with a focus on the tools necessary for a lawyer to render legal

opinions. Through participation in simulated transactions, students will draft memoranda evaluating the opportunities for a business to raise capital. The work will be based on both legal principles and business considerations. The course will prove useful for students who are interested in transactional work. (Credits may be applied towards the Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW751 - Securities Regulation

General

Subject Code ~
LAW

Course Number ~
751

Course Name (appears on the transcript) ~
Securities Regulation

Content

Description
This course is a study of the law relating to the basic structure of the system by which dealings in securities are regulated. The course will focus on the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to fundamental regulatory issues, such as what constitutes a security, the nature of controls over the distribution and trading of securities and exemptions from those controls, as well as liability for misconduct. Prerequisite: LAW 551, Business Organizations, completed or currently enrolled.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW-551

LAW760 - Trademark Law

General

Subject Code ~
LAW

Course Number ~
760

Course Name (appears on the transcript) ~
Trademark Law

Content

Description
This course surveys the legal rules and policies governing how producers of goods and services use trademarks, logos, product designs, and other devices to identify the source of their goods and services in order to protect their good will and prevent confusion in the marketplace. The course focuses primarily on the federal trademark statute and its recent amendments, as applied in both the traditional and electronic marketplaces. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW762 - International Law

General

Subject Code ~
LAW

Course Number ~
762

Course Name (appears on the transcript) ~
International Law

Content

Description
This course provides an overview of public international law with a focus on the framework and development of international law. We will examine how the doctrines, institutions and methodologies of international law have developed in recent years, with attention to the application of those doctrines and methodologies to legal aspects of current international controversies. We will also discuss the structure, goals, processes, and institutions of international law, with detailed consideration of issues such as the sources of international law, the recognition and responsibility of states, and the role of organizations, corporations, and individuals in the application of international law.

Credit Hours

Min
3

LAW772 - Non-Profit Law

General

Subject Code ~
LAW

Course Number ~
772

Course Name (appears on the transcript) ~
Non-Profit Law

Content

Description
Over the past several decades, the nonprofit sector has grown dramatically in wealth and prominence. This seminar examines the rationales, structures, and controversies related to nonprofit organizations and philanthropy in the United States. We will examine: (a) the state and federal requirements for obtaining exemption from otherwise applicable taxes; (b) the roles of nonprofits organizations posited by economic, political, and historical vantage points; (c) the legal purposes and framework of these organizations-including the advantages of the nonprofit form (e.g. whether tax-exemption is justified) and the restrictions on the type of commercial and political activity in which they can engage; and (d) the controversies surrounding the nonprofit sector, with particular emphasis on the ethics of giving, the oversight roles played by boards of directors, state authorities, and federal regulators, and questions of accountability and performance.

Credit Hours

Min
2

LAW773 - Business Accounting for Lawyers

General

Subject Code ~
LAW

Course Number ~
773

Course Name (appears on the transcript) ~
Business Accounting Lawyers

Content

Description
This course will introduce law students to accounting, giving them a basic understanding of financial statements, accounting mechanics, and underlying accounting concepts and principles. The course is designed for students with little-to-no background in accounting. In addition to basic accounting, we will discuss such issues as professional governance and standard setting, topics currently being reviewed by the accounting regulators and/or Congress, recent accounting scandals, Sarbanes-Oxley, and difference between the practice of law and of accounting (including ethical foundations). (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
2

LAW774 - Sports Law

General

Subject Code ~
LAW

Course Number ~
774

Course Name (appears on the transcript) ~
Sports Law

Content

Description
This is a survey course in sports law with an emphasis on professional sports. The course covers various legal issues affecting the professional sports industries and may include focuses on antitrust law, labor law, contracts, regulation of private associations, regulation of athlete agents and their ethical duties, and intellectual property and sports broadcasting issues.

Credit Hours

Min
2

LAW776 - Cybercrime

General

Subject Code ~
LAW

Course Number ~
776

Course Name (appears on the transcript) ~
Cybercrime

Content

Description
In this course, the students will explore how our current age of information and technology offers new challenges to the existing framework of not only criminal law but also criminal procedure, particularly within the investigative arm of the Fourth Amendment. We will discuss the use of digital evidence in criminal cases and offer a broader framework of digital evidence within the context of the Fourth Amendment. Key questions include: How has the age of information and technology spawned new types of crimes? What new techniques and practices are required to identify cybercriminal activity? How are law enforcement agencies responding to the dangers that cybercrimes create? This course will explore a range of central issues from deciphering the existence of a person's reasonable expectation of privacy in cyberspace to how law enforcement techniques are shifting from traditional mechanisms of crime control to new regulatory rules, including the use of technology. (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
2

LAW777 - Academic Enrichment Workshop

General

Subject Code ~
LAW

Course Number ~
777

Course Name (appears on the transcript) ~
Academic Enrichment Workshop

Content

Description
The Academic Success course assists students with study techniques, class preparation, outlining, and exam preparation and exam writing techniques. It also covers essential law school skills, such as note-taking, briefing cases, and outlining. This course is required for those students on Academic Warning as defined in Section 601 of the Academic Standards.

Credit Hours

Min
0

Session Cycle ~
SPO - Spring Only

LAW778 - International Business Transactions

General

Subject Code ~
LAW

Course Number ~
778

Course Name (appears on the transcript) ~
Int'l Business Transactions

Content

Description
This survey course will consider some of the major private and public law issues involved in international trade and investment. The emphasis of the course will be on the private, transactional aspects of International Business Transactions. In particular, we will examine typical legal arrangements for (i) the international financing and sale of goods (including extensive coverage of the United Nations Convention on Contracts for the International sales of Goods - CISG), (ii) the non-establishment forms of foreign investment employed by market participants in order to generate business internationally (including licensing of intellectual property rights, international distributorship contracts, transfer of technology agreement, etc.), and (iii) the foreign direct investment of capital through the establishment of business operations abroad (both within the European Union and China). We will also discuss selected issues crucial to the avoidance and resolution of international business disputes. The pedagogical approach will involve the discussion of problems and the study of judicial and quasi-judicial decisions, regulations, statutes, and international agreements. Although Public International Trade Law is not the emphasis of this course, an overview of the structure and operation of both international and regional trade organizations, including the World Trade Organization (WTO) and The North America Free Trade Agreement (NAFTA), will also be provided. (Credits may be applied toward International and Comparative Law Practice and Transactional Law Practice concentrations.)

Credit Hours

Min
3

LAW784 - Criminal Procedure Survey

General

Subject Code ~
LAW

Course Number ~
784

Course Name (appears on the transcript) ~
Criminal Procedure Survey

Content

Description
In this course, we will explore the constitutional rules that control the behavior of police officers when they investigate crime and prosecute criminal defendants. Specifically, this course will survey the impact of the Fourth, Fifth, Sixth and Eighth Amendments on police investigations and also analyze the ways in which constitutional guarantees of due process, equal protection, and trial by jury impact criminal prosecutions. To this end, this course will provide an overview of criminal procedure issues arising during police investigation, arrest, prosecution, trial and post-conviction NOTE: Students who take this course may NOT also take either Criminal Adjudication or Criminal Investigation. Although this course will touch on some of the topics in Criminal Procedure: Investigation and Criminal Procedure: Adjudication, not all of these subject areas will be reviewed. For this reason, this course is intended for students who do not intend to practice Criminal Law, but want an introduction to criminal procedure. Students planning to practice criminal law or who have a significant interest in the field should consider taking both the Criminal Procedure: Investigation and Criminal Procedure: Adjudication courses, which together provide a more in-depth study of criminal procedure law. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. Requisites: Students registered for LAW 784 should not register for LAWW 706, LAW 928, or LAW 796. LAW 505 Must be completed prior to taking this course. Criminal Law

Credit Hours

Min
3

Requisites

Free Form Requirements
Students registered for LAW 784 should not register for LAWW 706 or LAW 796

LAW792 - International Human Rights

General

Subject Code ~
LAW

Course Number ~
792

Course Name (appears on the transcript) ~
International Human Rights

Content

Description
The international human rights project attempts to apply inalienable, indivisible, interdependent, and universal protections/rights ahead of the dictates of a "sovereign" leader or community. This course asks students to consider the development of those rights (political, economic, and cultural); the context for the application of rights; and the impact on a legal system that historically required the agreement of a sovereign that speaks for a state in an international system. Rights will be considered on a local, national, regional, and international level, including through the United Nations system. (Credits may be applied toward International and Comparative Law Practice and Public Interest Practice concentrations.)

Credit Hours

Min
3

LAW794 - Employment Law in Capitalist America

General

Subject Code ~
LAW

Course Number ~
794

Course Name (appears on the transcript) ~
Employ. Law Capitalist America

Content

Description
This course provides a foundational survey of key state and federal laws that protect employee rights and employer interests in the workplace.After beginning with a discussion of the various legal paradigms implicit in workplace regulation, the course is organized around five themes: (1)The Rise and Questionable Fall of At-Will Employment; (2) Job Security, Employee Mobility & Workplace Freedom; (3) Wage and HourLegislation; (4) The Laws Governing Workplace Accidents and Safety, and (5) Private Dispute Resolution and Arbitration in the Workplace. Thecourse will address these themes in the context of a globalized labor market, the safety net protecting the low-wage workforce, non-standardwork arrangements, and the impact of web-based communications in the workplace. For questionable pedagogical reasons, "employment law" isusually separated from the study of "labor law." and from "employment discrimination law." Consequently, by design the course does not cover ingreat depth the National Labor Relations Act public sector labor law, or the laws protecting workers from status-based discrimination (e.g. TitleVII of the Civil Rights Act the Americans with Disabilities Act). However, the course does introduce these laws and the legal rules governing theright to form unions and collectively bargain as well as the protections afforded to employees because of discrimination based on race, gender,disability, sexual orientation, etc. The readings are inevitably somewhat eclectic and the structure of this course attempts to grapple with whatare truly academic distinctions separating one area of workplace law from another because employers and employees routinely grapple withworkplace disputes that arise under a complex web of interrelated and sometimes conflicting legal rules. There is a final exam in this course.(Credits may be applied toward Public Interest Practice concentration and Transactional Law Practice concentration.) Formerly Employment Law

Credit Hours

Min
3

LAW796 - Criminal Procedure: Adjudication

General

Subject Code ~
LAW

Course Number ~
796

Course Name (appears on the transcript) ~
Criminal Proc: Adjudication

Content

Description
This course examines the constitutional basis of criminally accused persons' post-arrest rights, in the context of, e.g.: bail and pretrial release, discovery, the right to counsel, guilty pleas, burdens and standards of proof, selection and composition of the jury, confrontation, effective assistance of counsel, jury instructions, double jeopardy, and other rights incident to criminal trials, appeals, and collateral review. Students taking this course may not enroll in LAW 784 Criminal Procedure: Survey. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. (Credits may be applied toward Criminal Law Practice concentration.) Prerequisite: LAW 505 Criminal Law

Credit Hours

Min
3

LAW807 - Elder Law

General

Subject Code ~
LAW

Course Number ~
807

Course Name (appears on the transcript) ~
Elder Law

Content

Description
This course concentrates on the legal problems associated with the elderly and issues of aging. Topics of discussion will include social, psychological, legal, and financial aspects of planning for the elderly. Issues will include Medicare benefits, Medicaid benefits, nursing home institutionalization, social security, and estate planning.

Credit Hours

Min
2

LAW809 - Entertainment Law

General

Subject Code ~
LAW

Course Number ~
809

Course Name (appears on the transcript) ~
Entertainment Law

Content

Description
This course is designed as an introduction to the legal, business, creative, and ethical aspects of the practice of law in the film, television, music, publishing, art, and video game industries, providing an overview of key areas such as contractual practices, personal and intellectual property rights, compensation, and creative control issues. While not a course on copyright or contracts, our focus will include an examination of the interaction between these disciplines and the arts, as well as an exploration of current topics such as grants of rights, duration of copyright, licensing, fair use, exclusivity, merchandising, rights of privacy and publicity, and regulation of entertainment industries. (Credits may be applied towards Transactional Law Practice concentrations.)

Credit Hours

Min
3

LAW817 - Workplace Investigations

General

Subject Code ~
LAW

Course Number ~
817

Course Name (appears on the transcript) ~
Workplace Investigations

Content

Description
A workplace investigation occurs when an employer, through an informal or formal complaint, learns of a potential policy or legal violation or crime being committed in the workplace. Employers are legally obligated to investigate complaints of harassment, discrimination, retaliation, and other safety and ethical violations in a timely manner. A workplace investigation informs employment decisions and may uncover important evidence that could be used during a trial or other legal processes involving workplace violations. This course will review a broad range of situations in which investigations occur in the workplace, with a focus on workplace harassment claims. The objective of this course is to introduce students to workplace investigations through a legal analysis that is supported by case law and legal citations, as well as to discuss best practices in areas of investigation where the law remains unsettled. The course will conclude with each student preparing their own investigation report based on a fictional workplace harassment claim.

Credit Hours

Min
2

LAW818 - Amateur Sports Law

General

Subject Code ~
LAW

Course Number ~
818

Course Name (appears on the transcript) ~
Amateur Sports Law

Content

Description
This course covers various amateur sports law issues and focuses on legal regulation of interscholastic, intercollegiate, and Olympic sports. Topics may include constitutional law, tort law, contract law, Title IX issues and enforcement, federal disability discrimination laws, NCAA Enforcement and Infractions issues, the legal relationship between a university and its student athletes, regulatory authority of the NCAA, United States Olympic Committee, and high school athletic associations, antitrust law, resolution of disputes affecting Olympic sports (including the jurisdiction and operation of the Court of Arbitration for Sport), and regulation of private educational institutions and sport associations.

Credit Hours

Min
2

LAW822 - Personal Injury Law

General

Subject Code ~
LAW

Course Number ~
822

Course Name (appears on the transcript) ~
Personal Injury Law

Content

Description
In this course we will explore the topic of personal injury litigation. Students will be presented with the legal, practical and ethical considerations that arise in this area of civil litigation. In addition to legal theory, students will gain insight in the day-to-day practice of personal injury law, with the goal of equipping students to join existing firms or create their own personal injury practice. Topics will generally include client advertising, client intake, fee arrangements and maintaining client relationships,

investigation of claims, liability insurance coverage(s), pleadings, discovery, electronic discovery, depositions, experts, damages, motion practice, trial strategy, and negotiating settlements. This course will meet once a week, virtually. The grading will be comprised of one or more in-class multiple choice quizzes, and a final open book/ open notes 2 hour exam.

Credit Hours

Min
2

LAW837 - Rec. & Risk: Lessions From Action Park

General

Subject Code ~
LAW

Course Number ~
837

Course Name (appears on the transcript) ~
Recreation & Risk: Lessons

Content

Description
New Jersey's Action Park generated thousands of stories (many of them true), countless injuries, and a number of deaths-and at least 100 lawsuits. At its peak in the 1980s and 1990s, it was wildly popular with kids on the east coast for many of the reasons it was also far more dangerous than more conventional parks-the guests had a great deal of control over their experiences, and, thus, their risks.The park featured homegrown attractions, an experimental approach to safety, vast quantities of alcohol, and, as it turns out, an almost entirely notional insurance company-all overseen by its founder, who had, as we will discuss, a unique, but not entirely baseless, view of what his responsibility should be. In addition to stories, injuries, and deaths, Action Park has led to a movie and a book-and now a law school course. The primary text for the course is the book Action Park: Fast Times, Wild Rides, and The Untold Story of America's Most Dangerous Amusement Park by Andy Mulvihill with Jake Rossen ("Action Park"), along with the documentary film Class Action Park, available on HBO Max. Other readings will be assigned and generally available online. The course will include guest speakers, including some who visited Action Park, as well as people from today's amusement park industry. Additionally, the author of the book and the director of the film will join the course, as will a psychologist who specializes in risk taking behavior by adolescents and young adults. The premise of the course is that we can sometimes learn the most about the development of various areas of law by exploring situations in which someone pushes those areas' boundaries. We will primarily explore tort law, but also touch on administrative law, the interplay of federal and state law and regulations, and insurance law.

Credit Hours

Min
2

LAW890 - Special Topics in Law

General

Subject Code ~
LAW

Course Number ~
890

Course Name (appears on the transcript) ~
Special Topic

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAW891 - Special Topics in Law

General

Subject Code ~
LAW

Course Number ~
891

Course Name (appears on the transcript) ~
Special Topic

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAW892 - Special Topics in Law

General

Subject Code ~
LAW

Course Number ~
892

Course Name (appears on the transcript) ~
Special Topic

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAW902 - Teaching Assistant

General

Subject Code ~
LAW

Course Number ~
902

Course Name (appears on the transcript) ~
Teaching Assistant

Content

Credit Hours

Max
3

Min
1

LAW906 - Mindfulness in Law Practice

General

Subject Code ~
LAW

Course Number ~
906

Course Name (appears on the transcript) ~
Mindfulness in Law Practice

Content

Description
This class provides an introduction to the benefits of incorporating contemplative practices and mindfulness into the study and practice of law. This course will include readings and exercises on contemplative practices, mindfulness, and the integration of mindfulness in the legal profession and in the formation of professional identity.

Credit Hours

Min
1

LAW914 - Teaching Assistant

General

Subject Code ~
LAW

Course Number ~
914

Course Name (appears on the transcript) ~
Teaching Assistant

Content

Credit Hours

Max
3

Min
1

LAW918 - Research Assistant

General

Subject Code ~
LAW

Course Number ~
918

Course Name (appears on the transcript) ~
Research Assistant

Content

Credit Hours

Max
2

Min
1

LAW919 - Digital Evidence

General

Subject Code ~
LAW

Course Number ~
919

Course Name (appears on the transcript) ~
Digital Evidence

Content

Description
This course will introduce the importance of digital evidence and explore how current information and technology aids in the conduct of criminal investigations and prosecutions, while also presenting new challenges to the existing framework of our criminal justice system. This course will include an in-depth review of how courts have attempted to balance the privacy interests of individuals with investigatory and evidentiary interests of law enforcement. This course will also include some practical components including an opportunity to review search warrants and draft legal memoranda regarding the procurement, and subsequent use, of various types of digital evidence in a criminal investigation and prosecution. By the end of this course, students will have an expanded understanding of how to identify possible sources of digital evidence, and how to defend against the use of digital evidence in criminal cases.

Credit Hours

Min
2

LAW926 - Diversity & Inclusion in the Legal Prof.

General

Subject Code ~
LAW

Course Number ~
926

Course Name (appears on the transcript) ~
Diversity & Inclusion

Content

Description
In this course students will explore the meaning of diversity and inclusion and the necessity for diversity and inclusion in every aspect of the legal profession, from lawyers to judges and even paralegals. Topics will include defining diversity, strategies for inclusivity, unconscious bias, conscious bias, microaggressions, macroaggressions, and other related topics. Students will also explore and analyze statutes from a diversity and inclusion perspective. (Credits may be applied towards the Public Interest Practice Concentration and Gender and Sexuality Law Concentration.)

Credit Hours

Min
2

LAW927 - IP Survey

General

Subject Code ~
LAW

Course Number ~
927

Course Name (appears on the transcript) ~
IP Survey

Content

Description
Intellectual property (IP) is all around us. It shapes our art, music, literature, architecture, film, and popular culture. It informs technology, medicine, and science, setting new trajectories for further innovation. It provides the building blocks of modern commerce, guarding economically valuable knowledge, protecting celebrities' images, and regulating marks that companies use to duild their brand. In so doing, IP draws lines that may seem arbitrary, at least without a proper understanding of legal doctrine and history. This survey provides an overview of the five main areas of IP law: trade secrets, patents, copyright, trademark and the right to publicity. We will also take up the issue of international intellectual property, and the United States' role in the globalization of IP standards. Students will be expected to write two papers of approximately 7 to 10 pages, plus take a final examination.

Credit Hours

Min
3

LAW929 - Technology and Law Practice

General

Subject Code ~
LAW

Course Number ~
929

Course Name (appears on the transcript) ~
Technology and Law Practice

Content

Description

This course will introduce you to the technological tools of law practice. Together we will explore real world-applications of technology to improve efficiencies in practice, provide better client service, and help improve access to justice. We will also discover how these technologies are envisioned and developed. In addition to hands-on learning and sampling specific tools, we will also explore how technology has and will continue to transform law practice, and how lawyers play an important role in the evolution and implementation of technology in law. Integrated into all topics will be discussions around issues arising from the use of technology, including ethics, privacy and security, well-being and distraction management, as well as connections between diversity, equity, and inclusion and technology.

Credit Hours

Min
2

LAW930 - Regulatory Compliance

General

Subject Code ~
LAW

Course Number ~
930

Course Name (appears on the transcript) ~
Regulatory Compliance

Content

Description

This interactive course will examine the regulatory structure of the financial services industry (broker-dealers), beginning with a review of the Securities Exchange Act of 1934. The course will examine registration requirements, discuss the purpose of industry regulation, and will look at how broker-dealer regulation has changed over the years under FINRA and the SEC - including a review of Regulation Best Interest.

Credit Hours

Min
2

LAW945 - Law Review Board 2 Credits

General

Subject Code ~
LAW

Course Number ~
945

Course Name (appears on the transcript) ~
Law Review Board 2 credits

Content

Description

Students who are Board members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Board members of the Law Review receive between 2 and 6 credits per year, depending on their position on the Law Review. The Associate Dean must approve departures from these semester credit allocations.

Credit Hours

Min
2

LAW946 - Law Review Board 3 Credits Fl

General

Subject Code ~
LAW

Course Number ~
946

Course Name (appears on the transcript) ~
Law Review Board 3 Credits Fl

Content

Description

Students who are Board members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Board members of the Law Review receive between 2 and 6 credits per year, depending on their position on the Law Review. The Associate Dean must approve departures from these semester credit allocations.

Credit Hours

Min

3

LAW951 - Indep Study: Tutorial

General

Subject Code ~

LAW

Course Number ~

951

Course Name (appears on the transcript) ~

Indep Study: Tutorial

Content

Description

In this form of independent study from one to three students can engage in tutorial study with a faculty member on a mutually agreed upon subject area. Typically, the subject studied will not be covered in depth in a regularly scheduled law school course and the students shall have the necessary background knowledge to engage in specialized study in the area. A full-time faculty member with expertise in the area to be studied must agree to be the tutorial instructor. Although a tutorial may have a one to one student/teacher ratio, at the discretion of the faculty member up to three students may enroll in a tutorial. The one to three students will meet with the instructor for weekly or bi-weekly sessions to discuss substantive issues that the student(s) are studying based upon outside reading or research assignments. One or more papers related to the subject matter of the tutorial shall be written by each student during the semester. In cases where more than one student is enrolled in a tutorial, the instructor shall have the discretion to require that each student write separate paper(s) or to allow each student to do a substantial part of a larger project. The faculty member shall decide the grading policy for the Tutorial Study and that policy shall be communicated to the student. The faculty member must choose either a numerical (55-99) or pass/fail grading system. Requirements: A student who has successfully completed 43 credits of law studies may take a Tutorial Study course with the approval of the Associate Dean for Academic Affairs. A Tutorial Study Form must be completed and signed by the faculty instructor and approved by the Associate Dean for Academic Affairs before registration in a Tutorial Study. Each Tutorial Study, including its scope, coverage, credit hours (from 1 to 3 credits), course guidelines, and method of grading must be approved by the faculty instructor and the Associate Dean for Academic Affairs after full disclosure by the student(s) of the content and scope of all prior independent studies (LAW 951 and LAW 952) undertaken by the student(s). A student may take up to 3 independent study courses at the Law School (including both LAW 951 and LAW 952). No more than 2 of the 3 may be taken in any one semester, and no more than 1 of the 3 may be taken under the sole instruction of any one faculty member.

Credit Hours

Max

3

Min

1

LAW952 - Indep Study: Adv Research

General

Subject Code ~

LAW

Course Number ~

952

Course Name (appears on the transcript) ~

Indep Study Adv Research

Content

Description

In this form of independent study, a student undertakes substantial and innovative study and research culminating in the writing of an original, high-quality research paper. The student work shall be overseen by a panel of at least two faculty members and shall culminate in the student making an oral defense of the research paper before the faculty panel. The subject matter of the paper shall be mutually agreed upon by the student and faculty supervisors. Periodic meetings shall be held with the student and the faculty supervisors to discuss the substantive area of the law the student is writing about and to review progress on the paper. All of the faculty members involved shall participate in the grading process. Before the student begins work, the faculty members shall decide the grading policy for the Independent Study: Advanced Research and that policy shall be communicated to the student. The faculty members must choose either a numerical (55-99) or a pass/fail grading system and must settle upon a method under which each faculty member involved has a voice in determining the final grade. Requirements: A student who has successfully completed 43 credits of law studies may take Advanced Research with the approval of the Associate Dean for Academic Affairs. An Advanced Research Form must be completed and signed by the faculty instructors and approved by the Associate Dean for Academic Affairs before registration in Advanced Research. Each Advanced Research, including its scope, coverage,

credit hours (from 1 to 3 credits), course guidelines, and method of grading must be approved by the faculty instructors and the Associate Dean for Academic Affairs after full disclosure by the student of the content and scope of all prior independent studies (LAW 951 and LAW 952) undertaken by the student. A student may take up to 3 independent study courses at the Law School (including both LAW 951 and LAW 952). No more than 2 of the 3 may be taken in any one semester, and no more than 1 of the 3 may be taken under the sole instruction of any one faculty member.

Credit Hours

Min
1

LAW954 - Law Review Board 1 credit

General

Subject Code ~
LAW

Course Number ~
954

Course Name (appears on the transcript) ~
Law Review Board 1 Credit Fl

Content

Description
Students who are Board members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Board members of the Law Review receive between 2 and 6 credits per year, depending on their position on the Law Review. The Associate Dean must approve departures from these semester credit allocations.

Credit Hours

Min
1

LAW955 - Adv Research

General

Subject Code ~
LAW

Course Number ~
955

Course Name (appears on the transcript) ~
Adv Research

Content

Credit Hours

Max
2

Min
1

LAW958 - Legal Issue Digital Media

General

Subject Code ~
LAW

Course Number ~
958

Course Name (appears on the transcript) ~
Legal Issue Digital Media

Content

Description
The course will provide students with an understanding of the current state of intellectual property and constitutional law with regard to digital media production and distribution. Students will learn who constitutes the press, what protections they are afforded, and how these protections are applied across a variety of mediums including air, satellite, cable, and internet; including learning limitations on these protections. Additional topics in copyright and trademark law will be discussed such as fair use exceptions and freedom of information.

Credit Hours

Min
2

LAW966 - Law Review Board 1CR SP

General

Subject Code ~
LAW

Course Number ~
966

Course Name (appears on the transcript) ~
Law Review Board 1CR SP

Content

Description
Students who are Board members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Board members of the Law Review receive between 2 and 6 credits per year, depending on their position on the Law Review. The Associate Dean must approve departures from these semester credit allocations.

Billing Hours

Min
1

Credit Hours

Min
1

LAW967 - Law Review Board 2CR SP

General

Subject Code ~
LAW

Course Number ~
967

Course Name (appears on the transcript) ~
Law Review Board 2CR SP

Content

Description
Students who are Board members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Board members of the Law Review receive between 2 and 6 credits per year, depending on their position on the Law Review. The Associate Dean must approve departures from these semester credit allocations.

Billing Hours

Min
2

Credit Hours

Min
2

LAW968 - Law Review Board 3CR SP

General

Subject Code ~
LAW

Course Number ~
968

Course Name (appears on the transcript) ~
Law Review Board 3CR SP

Content

Description
Students who are Board members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Board members of the Law Review receive between 2 and 6 credits per year, depending on their position on the Law Review. The Associate Dean must approve departures from these semester credit allocations.

Billing Hours

Min
3

Credit Hours

Min
3

LAW969 - Comparative Corporate Law

General

Subject Code ~
LAW

Course Number ~
969

Course Name (appears on the transcript) ~
Comparative Corporate Law

Content

Description
All modern industrialized countries have developed a business entity similar to the device we call a corporation. The legal systems in those countries must to deal with the challenges that corporation-like entities present. For example, in the rich nexus of interests that surround a collective enterprise like a corporation, the interests of management may conflict with the interests of owners; majority owners may have different interests than those of minority shareholders; and others, be they the state, employees, creditors, or society at large, may have interests that conflict with the corporation's goals. Our legal system and the others studied in this course have devised strategies to address these problems, but the specific approach employed in a given country is a function of many factors, including the country's legal tradition, the initial endowment and distribution of wealth in the country, pre-existing legal structures, and cultural attitudes generally. In this course, we will first confront the challenge of engaging in comparative law in general, and then we will undertake a comparative study of the legal strategies employed in the US, UK, France, Germany, Italy, Brazil, and Japan to address legal problems that arise in the most important categories of corporate actions and decisions. The course is designed around the current edition of the book The Anatomy of Corporate Law, which is written by a group of distinguished legal scholars from around the world and provides a conceptual framework for understanding corporate law that will be of value even to lawyers who never practice outside US borders. The final will be a take-home exam. Business Organizations is a pre-requisite. (Credits may be applied toward Transactional Law Practice and International and Comparative Law Practice concentrations.)

Credit Hours

Min
3

Requisites

Free Form Requirements
Take Law-551;

LAW970 - Independent Study II

General

Subject Code ~
LAW

Course Number ~
970

Course Name (appears on the transcript) ~
Independent Study II

Content

Credit Hours

Max
3

Min
1

LAW971 - TA Academic Success

General

Subject Code ~
LAW

Course Number ~
971

Course Name (appears on the transcript) ~
TA Academic Success

Content

Description
Teaching Assistant for Academic Success only.

Credit Hours

Max
2

Min
1

LAW972 - TA Academic Success

General

Subject Code ~
LAW

Course Number ~
972

Course Name (appears on the transcript) ~
TA Academic Success

Content

Credit Hours

Min
1

LAW975 - Money, Law and Power

General

Subject Code ~
LAW

Course Number ~
975

Course Name (appears on the transcript) ~
Money, Law and Power

Content

Description
In this course we read, discuss and write about (1) Black banks and the racial wealth gap; (2) how to fix the tax system so it stops impoverishing Black Americans, (3) white collar crime; and (4) the "deficit myth." Four books are assigned, and students will choose one them as a primary focus for either an essay on an in-class final exam (or, if they choose, a final paper that builds from that topic).

By immersing in contemporary non-fiction works by three law professors and one economist, this course teaches students new ways of thinking, talking, and writing about the relationship between money, power, and the law in America in the 21st Century. We will begin the course with a vocabulary/concept list and by the end of the term students will have developed definitions for these terms.

Credit Hours

Min
2

LAW984 - AAJ Moot Court Team

General

Subject Code ~
LAW

Course Number ~
984

Course Name (appears on the transcript) ~
AAJ Moot Court Team

Content

Credit Hours

Min
1

LAW998 - Real Estate Survey

General

Subject Code ~
LAW

Course Number ~
998

Course Name (appears on the transcript) ~
Real Estate Survey

Content

Description
This course covers the real property topics including ownership of real estate, rights in real property, real estate contracts, mortgages and security devices and titles. This is an elective that is highly recommended as preparation for the bar exam. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam. (Credits may be applied towards the Transactional Law Practice Concentraton.)

Credit Hours

Min
2

LAWA620 - Access to Justice

General

Subject Code ~
LAWA

Course Number ~
620

Course Name (appears on the transcript) ~
Access to Justice

Content

Description
Equal access to justice for all is a bedrock principle of our democracy but what does that mean? What constitutes equal access? How is justice defined? And how, as a practical matter, can this principle be realized for the vast number of people whose low and moderate incomes prelude their hiring an attorney? This course will explore these and other questions which arise and emerging initiatives designed to assist self-represented (pro-se) litigants, and the responsibility of the courts in access to justice. This will be a seminar style course, and will focus in particular on the Massachusetts justice system, including the courts. There will be a heavy emphasis on discussion and guest speakers, as well as opportunities for field trips. Students will be responsible for a final project designed to enhance access to justice. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
2

LAWA628 - Advanced Criminal Law

General

Subject Code ~
LAWA

Course Number ~
628

Course Name (appears on the transcript) ~
Advanced Criminal Law

Content

Description
This course is designed to give students more in-depth examination of the principles governing the criminalization of conduct. To this end, this course will concentrate on categories of offenses and defenses not addressed in-depth or marginally addressed in the First-Year criminal law course. Class discussions will focus on the competing interests and policies, which come into play when society has determined that certain conduct is criminal. This course will also examine to what extent criminal law ought to concern itself with unfair social, racial, and economic disadvantages. Lastly, this course will explore the intersections of law and morality regarding criminal responsibility and understand the nature and bounds of punishment. By the end of this course, students will gain more knowledge and familiarity of substantive criminal law. Identify and scrutinize principles of criminal responsibility and analyze and discuss implications of legal concepts within fact patterns. LAW 505 Criminal Law is a prerequisite course. (Credits may be applied towards the Criminal Law Practice concentration.)

Credit Hours

Min
3

LAWA630 - Race and the Law

General

Subject Code ~
LAWA

Course Number ~
630

Course Name (appears on the transcript) ~
Race and the Law

Content

Description
This course examines the use of the law both to perpetuate and eradicate racial injustice in the United States. The goals of the course are to achieve an understanding of the role of law in its social context and the use of legal institutions and law as tools for social change, including the responses of American courts and legislatures. This course will examine racial classification in the United States, the historical and legal framework of slavery, race-based citizenship, and immigration issues, segregation, and other issues from the Civil Rights Era to the present. We will examine cases, statutory law, and relevant sources that explore the effect that race and racial inequality have on American law and society. Students will be encouraged to actively participate in class and to share current examples of the effect that issues of race have on the law in the United States. (Credits may be applied toward Criminal Law Practice and Public Interest concentration.)

Credit Hours

Min
3

LAWA674 - Employment Discrimination

General

Subject Code ~
LAWA

Course Number ~
674

Course Name (appears on the transcript) ~
Employment Discrimination

Content

Description

This course concerns discrimination in the workplace, with emphasis on different theories of discrimination and the application of those theories in a variety of settings. The primary focus is on the text and interpretation of Title VII of the Civil Rights Act of 1964, as amended in 1991. Other areas studied may include the Age Discrimination Act of 1967, the Equal Pay Act of 1963, and the Americans with Disabilities Act of 1990. (Credits may be applied toward Public Interest Practice Concentration and Gender and Sexuality Law Concentration.)

Credit Hours

Min
2

LAWA690 - Sexual Orientation Gender Identity & Law

General

Subject Code ~
LAWA

Course Number ~
690

Course Name (appears on the transcript) ~
Sexual Orientation Gender Iden

Content

Description

This course is an examination of the legal and policy issues This course is an examination of the legal and policy issues surrounding state and private attempts to regulate and/or discriminate on the basis of sexual orientation and gender identity and expression. Topics covered in the course include (1) the due process right to privacy, (2) equal protection analysis, (3) family law issues (4) employment discrimination, with particular emphasis on possibilities to pursue non-discrimination law by transgender people (5) sexual orientation and gender expression as gender discrimination, among other relevant contemporary topics. (Credits may be applied toward Gender & Sexuality Law and Public Interest Practice concentrations.)

Credit Hours

Min
3

LAWA708 - Labor Law in Capitalist America

General

Subject Code ~
LAWA

Course Number ~
708

Course Name (appears on the transcript) ~
Labor Law Capitalist America

Content

Description

This course traces the development of American Labor Law, from its early beginnings at the dawn of the industrial revolution, through the great depression of the 1930s, the post-war years, and the modern era. It considers how workers have joined together to improve their material well-being, and how society regulates the inevitable conflict between workers and management. The course studies the National Labor Relations Act and its interpretation by the courts and the National Labor Relations Board. Areas covered include the right to join unions, to engage in collective bargaining, and the procedures to resolve labor disputes, jurisdictional disputes, board procedures, representation, elections, unfair labor practices, strikes and job actions, picketing, lockouts, secondary boycotts, arbitration of disputes, and union organizing. (Credits may be applied toward Transactional Law Practice concentration.) Formerly Labor Law

Credit Hours

Min
3

LAWA794 - Employment Law in Capitalist America

General

Subject Code ~
LAWA

Course Number ~
794

Course Name (appears on the transcript) ~
Employ. Law Capitalist America

Content

Description
This course provides a foundational survey of key state and federal laws that protect employee rights and employer interests in the workplace.After beginning with a discussion of the various legal paradigms implicit in workplace regulation, the course is organized around five themes: (1)The Rise and Questionable Fall of At-Will Employment; (2) Job Security, Employee Mobility & Workplace Freedom; (3) Wage andHourLegislation; (4) The Laws Governing Workplace Accidents and Safety, and (5) Private Dispute Resolution and Arbitration in the Workplace. Thecourse will address these themes in the contextof a globalized labor market, the safety net protecting the low-wage workforce, non-standardwork arrangements, and the impact of web-based communications in the workplace. For questionable pedagogical reasons, "employment law" isusually separated from the study of "labor law." and from "employment discrimination law." Consequently, by design the course does not cover ingreat depth the National Labor Relations Act public sector labor law, or the laws protecting workers from status-based discrimination (e.g. TitleVII of the Civil Rights Act the Americans with Disabilities Act). However, the course doesintroduce these laws and the legal rules governing theright to form unions and collectively bargain as well as the protections afforded to employees because of discrimination based on race,gender,disability, sexual orientation, etc. The readings are inevitably somewhat eclectic and the structure of this course attempts to grapple with whatare truly academic distinctions separating onearea of workplace law from another because employers and employees routinely grapple withworkplace disputes that arise under a complex web of interrelated and sometimes conflictinglegal rules. There is a final exam in this course.(Credits may be applied toward Public Interest Practice concentration and Transactional Law Practice concentration.)

Credit Hours

Min
3

LAWA890 - Special Topics

General

Subject Code ~
LAWA

Course Number ~
890

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWA891 - Special Topics

General

Subject Code ~
LAWA

Course Number ~
891

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWA892 - Special Topics

General

Subject Code ~
LAWA

Course Number ~
892

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWA893 - Special Topics

General

Subject Code ~
LAWA

Course Number ~
893

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWE609 - Negotiations Skills & Practice

General

Subject Code ~
LAWE

Course Number ~
609

Course Name (appears on the transcript) ~
Negotiations Skills & Practice

Content

Description
This course will focus on developing an understanding of theoretical and conceptual models of the negotiation process, as well as strategies for use in various situations, including business transactions, litigation and mediation settings.~ In-class simulations will replicate these settings and provide students an opportunity to apply these concepts in actual, interactive negotiation situations,both to reinforce their understanding and to allow an opportunity to develop an ethically informed but personal approach to negotiating. Class attendance and participation are mandatory. Students who have taken or are taking LAWE 769, Negotiation, Mediation and Arbitration [ADR Survey], may not enroll in this course. (Credits may be applied towards the Transactional Law Practice concentration.)

Credit Hours

Min
2

LAWE610 - National Veterans Moot Court

General

Subject Code ~
LAWE

Course Number ~
610

Course Name (appears on the transcript) ~
National Veterans Moot Court

Content

Description
TBD

Billing Hours

Min
3

Credit Hours

Max
3

Min
1

LAWE611 - National Environmental Moot Court Team

General

Subject Code ~
LAWE

Course Number ~
611

Course Name (appears on the transcript) ~
National Environ. Moot Court

Content

Description
National Environmental Moot Court Team.

Credit Hours

Max
3

Min
1

LAWE612 - Client Interviewing, and Legal Advocacy

General

Subject Code ~
LAWE

Course Number ~
612

Course Name (appears on the transcript) ~
Client Interview Coun. & Leg.

Content

Description
In this course, students will hone practical skills needed for effective legal advocacy. Just knowing the law is not enough to achieve most clients'goals. Through weekly seminars and on-your-feet case simulations, participants will develp foundational practice skills including: client interviewing and counseling, factual investigation, strategic litigation planning, and negotiation, and trial advocacy.

Credit Hours

Min
2

LAWE613 - National Environmental Moot Court

General

Subject Code ~
LAWE

Course Number ~
613

Course Name (appears on the transcript) ~
National Environmental Mt

Content

Description
National Environmental Moot Court 1 credit Spring.

Credit Hours

Max
3

Min
1

LAWE614 - Zealous Advocacy in the MA Trial Courts

General

Subject Code ~
LAWE

Course Number ~
614

Course Name (appears on the transcript) ~
Zealous Advocacy

Content

Description
This course will parallel the Public Defender's Zealous Advocacy Training for the Committee for Public Counsel Services (CPCS). Upon successful completion of this course, students will receive a certificate of completion and will be eligible to apply to Hampden County Lawyers for Justice (HCLJ) as a Bar Advocate, which is a contract attorney position. Students will learn how to defend a criminal case from bail to trial. This simulation course will provide students with the ability to conduct legal research, perform oral advocacy, and engage in trial practice. Throughout the semester, students will interview clients, conduct bail hearings, learn objections, motion practice, and participate in cross examination and voir dire workshops. At the end of the course, students will also participate in a mock trial. Each class will consist of lecturing, guest speakers and role-play exercises. Students must be in their final semester of law school to enroll in this course. Students will be selected for this course based on an application. (This course counts towards the Public Interest Law Practice and Criminal Law Practice concentrations.)

Credit Hours

Min
3

LAWE615 - Trademark Moot Court

General

Subject Code ~
LAWE

Course Number ~
615

Course Name (appears on the transcript) ~
Trademark Moot Court

Content

Description
TBA

Credit Hours

Max
3

Min
1

LAWE617 - Criminal Pre-Trial Practice

General

Subject Code ~
LAWE

Course Number ~
617

Course Name (appears on the transcript) ~
Criminal Pre-Trial Practice

Content

Description
This course is aimed at developing student written and oral advocacy skills in the pre-trial phase of criminal litigation. The course will concentrate on the pre-trial stages of a hypothetical criminal case. The course will allow students to work on this case from the pre-trial conference up to jury selection. Students will brief and argue typical evidentiary and discovery motions arising prior to trial. The course will also address pre-trial strategies and preparation, including motions in limine, and jury instructions. At the end of the term students will present oral arguments on motions to suppress statements, identification and evidence. The course will require at least 4 hours of preparation per session. Class attendance is mandatory. Enrollment is limited to 16 students. (This is a simulation course and satisfies 2 experiential learning credits.) (Credits may be applied toward Criminal Law Practice Concentration.)

Billing Hours

Min
2

Credit Hours

Min
2

LAWE652 - Appellate Advocacy

General

Subject Code ~
LAWE

Course Number ~
652

Course Name (appears on the transcript) ~
Appellate Advocacy

Content

Description
This course provides upper level instruction in appellate brief writing and oral argument. Students in the course will receive intensive instruction in appellate brief-writing, working with a teammate, and appellate oral argument. Students will have the opportunity to meet with faculty about their writing and to receive feedback on their oral argument skills. Students who are interested in joining one of WNE's moot court teams are encouraged to enroll in Appellate Advocacy.

Billing Hours

Min
2

Credit Hours

Min
2

LAWE681 - Trial Methods

General

Subject Code ~
LAWE

Course Number ~
681

Course Name (appears on the transcript) ~
Trial Methods

Content

Description
This course utilizes a clinical approach to trial advocacy. Emphasis is given to the two complementary abilities necessary for effective trial advocacy - preparation and execution. Students will learn effective methods for analyzing and preparing a case for trial. In addition, students will practice the technical skills necessary to present their side of a case persuasively during a trial, including tactics and strategy in the courtroom, opening statements and closing arguments, examination of witnesses, admission and exclusion of evidence, questions of burden of proof, and preservation of rights on appeal. Prerequisite: LAW 553, Evidence.

Credit Hours

Min
2

Requisites

Free Form Requirements
Complete LAW-553

LAWE684 - Adv Legal Research in the Age of AI

General

Subject Code ~
LAWE

Course Number ~
684

Course Name (appears on the transcript) ~
Adv. Legal Research Age of AI

Content

Description
This course offers an in-depth analysis of legal research methods and sources, covering AI and more traditional research methods. Classes will include a combination of lectures, discussions, and research exercises based on real-life and bar exam-tested scenarios. Emphasis is placed on analyzing research choices, evaluating the content and organization of resources, and understanding their appropriate use. If you want to sharpen your knowledge of statutes, regulations, legislative history, and using AI for legal research, this course is for you.

Credit Hours

Min
2

LAWE723 - Estate Planning

General

Subject Code ~
LAWE

Course Number ~
723

Course Name (appears on the transcript) ~
Estate Planning

Content

Description
This course is the study of the inter vivos and testamentary disposition of accumulated wealth. Students draft simple and complex estate plans. Emphasis is given also to the tax and non-tax considerations that influence the transfer and future management of wealth. Prerequisites: LAW 748 Trusts & Estates. (This is a simulation course and satisfies 3 experiential learning credits.)

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW 748

LAWE724 - Business Succession Planning

General

Subject Code ~
LAWE

Course Number ~
724

Course Name (appears on the transcript) ~
Business Succession Planning

Content

Description
This course will consider that issues that owners of closely held businesses face in the operation and disposition of their business interests.The course will consider the operational and transfer problems for unrelated business owners as well as the operational and transfer problems for family owned businesses.Areas of study will include buy/sell agreements, life insurance, and alternative methods of succession.Note: This course was formerly called Business & Estate Planning/Closely-Held Business Entities. Prerequisite: LAW 551 Businesss Organizations. (Credits may be applied toward Transactional Law Practice concentration.)

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW 551

LAWE728 - Mediation

General

Subject Code ~
LAWE

Course Number ~
728

Course Name (appears on the transcript) ~
Mediation

Content

Description
This course will provide training in both the theory and methodology of divorce and family mediation and essential mediation skills. The class is interactive, and students will have the opportunity, in almost every class to practice mediation skills. A basic understanding of Massachusetts divorce law and/or entry level family law course is strongly recommended. Some states, by statute or rule of court, set standards for court-based mediators. Massachusetts requires basic mediation training and professional practice under the supervision of a community-based mediation program before practitioners may serve as court-based mediators. This is a basic mediation course that qualifies successful students for an internship or practicum in a community dispute resolution program for supervised practice and for advanced mediation training. Mediators develop their skills through a lifetime of practice. This is the first step. Enrollment limited to 18 students. (This is a simulation course and satisfies 3 experiential learning credits.)

Credit Hours

Min
3

LAWE769 - Alternative Dispute Resolution Survey

General

Subject Code ~
LAWE

Course Number ~
769

Course Name (appears on the transcript) ~
ADR Survey

Content

Description
This course will focus on negotiation and other methods of dispute resolution, with emphasis on negotiated settlement, mediation and arbitration. Negotiation theory and alternative tactics and strategies will be examined, with focus on practical skills by way of example and simulated exercises. Various methods of alternative dispute resolution will be discussed in the context of different areas of legal practice and substantive law. Students will participate in both a simulated negotiation and a simulated mediation. In addition, the course will cover the arbitration process from both a substantive law and practical skills standpoint. Students who have taken LAW 609 Negotiation: Strategies & Practice may not enroll in this course. (This is a simulation course and satisfies 2 experiential learning credits.) (Credits may be applied toward Transactional Law Practice concentration.) Formerly Negotiation, Mediation, Arbitration.

Credit Hours

Min
2

LAWE777 - Transactional Lawyering Sem

General

Subject Code ~
LAWE

Course Number ~
777

Course Name (appears on the transcript) ~
Transactional Lawyering Sem

Content

Description
This course emphasizes the thought process and legal skills involved in the practice of transactional law. In this simulation course students will be broken up into law firms and will provide legal counsel to a party in a business transction. One half of the class will represent one side of the transaction and the other half will represent the other side. Using a simulated transaction as the reference point, students will acquire an understanding of the lawyer's role in business transactions and will develop an appreciation of the business and legal issues that arise in transactional practice. As part of the simulation students will be required to interview a client, draft deal documents, and negotiate some deal points. (This is a simulation course and satisfies 2 experiential learning credits.) (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

LAWE780 - Criminal Procedure Simulation

General

Subject Code ~
LAWE

Course Number ~
780

Course Name (appears on the transcript) ~
Criminal Procedure Simulation

Content

Description

This course concentrates on the procedural stages of two hypothetical criminal cases from arraignment through trial. The principal purpose of the course is to provide students with an opportunity to improve their writing and trial skills in the context of preparing and trying a state criminal case. Students will be required to research, write and re-write pretrial motions along with supporting affidavits and memoranda of law and to litigate two simulated exercises, a pretrial motion to suppress and a jury trial. Prerequisites: LAW 706 Criminal Procedure: Investigation or LAW 784 Criminal Procedure Survey and LAW 553 Evidence. Students, who have not taken or registered to take LAW 905 Criminal Law Clinic, will be given priority in registering for this course. Enrollment is limited to 12 students. (This course is a simulation course and satisfies 3 experiential learning units.) (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
3

LAWE788 - Child Protection Law Simulation

General

Subject Code ~
LAWE

Course Number ~
788

Course Name (appears on the transcript) ~
Child Protection Law Sim.

Content

Description

This class will focus on what happens when the state becomes involved in family life due to allegations of child abuse and neglect. Central to the class will be the balance between the right of the family to be free of state intervention in child-rearing decisions with the right of the child to be free of neglect and abuse. Writing assignments and class simulations will relate to an individual child protection case that we will track from inception to resolution. Additional topics may include: definitions of child abuse and neglect; special issues in child sexual abuse; and medical neglect, including cases involving parents withhold medical treatment because of their religious beliefs. The course will also cover the potential paths for state intervention, including short and long term foster care, termination of parental rights and adoption. This course satisfies 2 experiential learning credits. (Credits may be applied toward Public Interest Practice concentration.)(Formerly Child, Family & State.

Credit Hours

Min
2

LAWE790 - Legislation

General

Subject Code ~
LAWE

Course Number ~
790

Course Name (appears on the transcript) ~
Legislation

Content

Description

This course simulates and explores the modern legislative process. Students will research and draft or revise real and/or mock bills for Congress and state legislatures. They will examine substantive areas of law and public policy in order to propose or respond to amendments. They will also draft testimony and supporting materials including FAQs and 1-pagers to support their proposals. Students will also learn about lobbying, including about reporting requirements. This course will address statutory interpretation, among other topics. (Credits may be applied towards the Public Interest Concentration.)

Credit Hours

Min
3

LAWE797 - Federal Litigation Pre-Trial Phase

General

Subject Code ~
LAWE

Course Number ~
797

Course Name (appears on the transcript) ~
Federal Litigation Pre-Trial

Content

Description
This course is aimed at refining students' written and oral advocacy skills in the pretrial phase of litigaton. In weekly exercises, students will brief and argue typical motions arising prior to trial. The course will also address pretrial strategy, both in preparing pleadings, planning discovery and drafting motions. At the end of the term, students will draft a larger memorandum and present a more extensive oral argument on a motion for summary judgement or to dismiss. The course will require at least four to six hours of preparation for each session. Class attendance is mandatory.

Credit Hours

Min
3

LAWE814 - Law Practice Externship & Seminar

General

Subject Code ~
LAWE

Course Number ~
814

Course Name (appears on the transcript) ~
Law Practice Externship & Sem

Content

Description
Selected students engage in a variety of legal work under the supervision of an attorney in an approved public interest, government service, or private sector externship placement. Students may not receive compensation for work done in an Externship. Externships develop students' lawyering skills through participation in activities such as legal research and writing, client interviewing and counseling, factual investigation, development and implementation of case theory and strategy, negotiation, mediation, litigation and other forms of advocacy. Students may take no more than three externships during law school. Students enrolled in their first externship must also attend a weekly seminar. The seminar discusses varied aspects of professional practice, including ethics, judgment, professional identity, and self-reflection to cultivate your ability to "think like a lawyer". This externship is a Restricted Withdrawal Course. See the Clinic Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. Requisites: An externship is only open to students who have successfully completed 28 hours of law studies.

Credit Hours

Min
4

Requisites

Free Form Requirements
An externship is only open to students who have successfully completed 28 hours of law studies.

LAWE815 - Global Justice Clinic

General

Subject Code ~
LAWE

Course Number ~
815

Course Name (appears on the transcript) ~
Global Justice Clinic

Content

Description

Selected students work collaboratively on projects with domestic and international nongovernmental organizations, grass-roots organizations, solidarity networks, attorneys, stakeholders, and other institutions engaging in human rights work, to advance political, economic, social and cultural human rights across borders. Students also attend a weekly seminar. Prerequisites: The clinic is open to students who have successfully completed 28 hours of law studies and who have been selected through the clinic application process. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (This course satisfies 6 experiential learning credits.) (Credits may be applied toward International and Comparative Law Practice, Public Interest Practice, and Gender & Sexuality Law concentrations.)Formerly International Human Rights Clinic & Seminar.

Credit Hours

Min
6

LAWE890 - Mock Trial Competition Fall

General

Subject Code ~
LAWE

Course Number ~
890

Course Name (appears on the transcript) ~
Mock Trial Competition Fall

Content

Description

Selected students participate in Mock Trial Competition comprises trials built around a fictitious fact scenario including pleadings, affidavits, exhibits, and other materials. Students perform opening and closing statements, direct and cross examinations, and portray witnesses.

Credit Hours

Max
6

Min
2

LAWE891 - Mock Trial Competition Spring

General

Subject Code ~
LAWE

Course Number ~
891

Course Name (appears on the transcript) ~
Mock Trial Competition Spring

Content

Description

Selected students participate in Mock Trial Competition comprises trials built around a fictitious fact scenario including pleadings, affidavits, exhibits, and other materials. Students perform opening and closing statements, direct and cross examinations, and portray witnesses.

Credit Hours

Max
6

Min
3

LAWE892 - Special Topics

General

Subject Code ~
LAWE

Course Number ~
892

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWE907 - Faculty Supervised Externship

General

Subject Code ~
LAWE

Course Number ~
907

Course Name (appears on the transcript) ~
Faculty Supervised Externship

Content

Description
Selected students engage in a variety of legal work under the supervision of a judge or attorney in an approved externship placement. Students must secure a full-time faculty member to be an advisor prior to enrolling for the externship. Students may not receive compensation for work done in an Externship. Students may take no more than three externships during law school. Students must meet regularly with their faculty supervisor. Prerequisites: Student must have completed one externship placement and concurrent externship seminar. An externship is open to students who have successfully completed 28 hours of law studies. This externship is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (This course satisfies 3 experiential learning credits.)

Credit Hours

Min
3

LAWE908 - Faculty Supervised Externship

General

Subject Code ~
LAWE

Course Number ~
908

Course Name (appears on the transcript) ~
Faculty Supervised Externship

Content

Credit Hours

Min
3

LAWE912 - Judicial Externship & Seminar

General

Subject Code ~
LAWE

Course Number ~
912

Course Name (appears on the transcript) ~
Judicial Externship & Seminar

Content

Description

Selected students engage in a variety of legal work under the supervision of a judge attorney in an approved externship placement. Students may not receive compensation for work done in an Externship. Externships include varied levels of research, writing, and observation depending on the student's placement. Students may take no more than three externships during law school. Students enrolled in their first externship must also attend a weekly seminar. The seminar discusses varied aspects of professional practice, including ethics, judgment, professional identity, and self-reflection to cultivate your ability to "think like a lawyer". This externship is a Restricted Withdrawal Course. See the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. Requisites: An externship is only open to students who have successfully completed 28 hours of law studies.

Credit Hours

	Min
	4

Requisites

Free Form Requirements

An externship is only open to students who have successfully completed 28 hours of law studies.

LAWE920 - Crim Law Prosecution Clinic & Seminar

General

Subject Code ~
LAWE

Course Number ~
920

Course Name (appears on the transcript) ~
Crim Law Prosecution Clinic

Content

Description

Selected students in the Criminal Prosecution Clinic work as student assistant district attorneys within the Hampden County District Attorney's Office. By court rule, students in the Clinic are authorized to practice in any District Court case, which includes a mix of both misdemeanors and felonies. During the course of the semester, a student attorney will appear in three different sessions of the District Court: the arraignment session (in which students represent the Commonwealth in bail hearings), the motion session (in which students prepare and litigate oppositions to motions to suppress and motions to dismiss) and, ultimately, the trial session (in which a student prepare and litigate jury and jury-waived trials). This clinic allows students to gain substantial exposure over the course of the semester to the entire process of litigating a criminal case. In addition to the fieldwork, there is a classroom component which operates as a combination seminar/simulation. This part of the course is quite intensive for the first three or four weeks of the semester as well as the week prior to the start of classes. Students must attend a two-day orientation the week before classes begin; no exceptions will be made to this mandatory orientation. Following this initial training period, the class will meet at a designated time for a two-hour session on a weekly basis for the balance of the semester. Prerequisites: LAW 553 Evidence and LAW 706 Criminal Procedure Investigation or LAW 784 Criminal Procedure Survey. Enrollment is limited to third-year full time and forth-year part time students who have been selected through the clinic application process. No student may maintain outside legal employment while participating in this clinic. All students will be CORI/criminal records checked by the District Attorney's Office. A student is required to be SJC Rule 3:03 eligible. This clinic/externship is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (This course satisfies 6 experiential learning credits) (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

	Min
	6

Requisites

Free Form Requirements

Complete LAW-553, and LAW-706 or LAWW 706;

LAWE921 - Criminal Prosecution Practicum & Seminar

General

Subject Code ~
LAWE

Course Number ~
921

Course Name (appears on the transcript) ~
Criminal Prosecution Practicum

Content

Description
Selected students in the Criminal Prosecution Practicum work as student assistant district attorneys within the Hampden County District Attorney's Office. By court rule, students in the Practicum are authorized to practice in any District Court case, which includes a mix of both misdemeanors and felonies. During the course of the semester, a student attorney will appear in three different sessions of the District Court: the arraignment session (in which students represent the Commonwealth in bail hearings), the motion session (in which students prepare and litigate oppositions to motions to suppress and motions to dismiss) and, ultimately, the trial session (in which a student prepare and litigate jury and jury-waived trials). This practicum allows students to gain substantial exposure over the course of the semester to the entire process of litigating a criminal case. In addition to the fieldwork, there is a classroom component which operates as a combination seminar/simulation. This part of the course is quite intensive for the first three or four weeks of the semester as well as the week prior to the start of classes. Students must attend a two day orientation the week before classes begin; no exceptions will be made to this mandatory orientation. Following this initial training period, the class will meet at a designated time for a two-hour session on a weekly basis for the balance of the semester. Prerequisites: LAW 553 Evidence and LAW 706 Criminal Procedure Investigation. Enrollment is limited to third-year full time and forth-year part time students who have been selected through the clinic application process. No student may maintain outside legal employment while participating in this practicum. All students will be CORI/criminal records checked by the District Attorney's Office. A student is required to be SJC Rule 3:03 eligible. This is a Restricted Withdrawal Course. See Academic Standard Section 204. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
6

LAWE922 - Criminal Defense Practicum Seminar

General

Subject Code ~
LAWE

Course Number ~
922

Course Name (appears on the transcript) ~
Criminal Defense Practicum Sem

Content

Description
Students in the Criminal Defense Practicum work as student defense attorneys at the Committee for Public Counsel Services (CPCS) within the Hampden County District Courts. By court rule, students in the Practicum are authorized to practice in any District Court case, which includes a mix of both misdemeanors and felonies. During the course of the semester, a student attorney may appear in many different sessions of the District Court: the arraignment session (in which students represent indigent defendants in bail hearings), the motion session (in which students prepare and litigate pre-trial motions), the violation of probation session and, ultimately, the trial session (in which a student prepares and litigate jury and jury-waived trials.) This clinic allows students to gain substantial exposure over the course of the semester to the entire process of litigating a criminal case. In addition to the fieldwork, there is a classroom component which operates as a combination seminar/simulation. Students must attend a two day orientation the week before classes begin; no exceptions will be made to this mandatory orientation. Following this initial training period, the class will meet at a designated time for a two-hour session on a weekly basis for the balance of the semester. Prerequisites: LAW 553, Evidence. Enrollment is limited to 4 third-year full time and fourth-year part time students who have been selected through the clinic application process. A student is required to be SJC Rule 3:03 eligible. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (Credits may be applied to the Criminal Law Practice Concentration.)

Billing Hours

Min
6

Credit Hours

Min
6

Requisites

Free Form Requirements
LAW 553 Evidence

LAWE928 - Legal Project Management

General

Subject Code ~
LAWE

Course Number ~
928

Course Name (appears on the transcript) ~
Legal Project Management

Content

Description
Students in this course will learn how to manage a legal project involving electronic data and how to apply Project Management Principles through the Lifecycle of a Legal Matter. Students will learn how to evaluate, assess, analyze, plan a course of action, manage stakeholders, and leverage eDiscovery tools to effectively manage a legal matter. The course will address different aspects of project management as part of a hypothetical legal scenario and students will complete assigned projects. Performance will be evaluated and feedback provided for each project to ensure understanding of requirements and criteria. Class time will be used to provide background, guidance, and direction on legal project management best practices. (Electronic Discovery - Law 601 is recommended). This course satisfies 2 experiential learning credits. Limited to 24 students.

Credit Hours

Min
2

LAWE944 - Small Business Clinic and Seminar

General

Subject Code ~
LAWE

Course Number ~
944

Course Name (appears on the transcript) ~
Small Business Clinic and Sem

Content

Description
The Small Business Clinic provides students with the opportunity to handle legal matters for small business clients under the supervision of the professor. Students work on transactional legal matters that are typical in the start-up phase of a business including entity formation, trademark, contract drafting, employment law and regulatory compliance. The goal of the clinic is to expose students to the methodology and mindset of business lawyering. Law students work with the entrepreneurs to identify the legal issues new businesses confront. Clinic students participate in weekly one-on-one meetings with the professor, meetings with clients (often in the evenings) and participation in walk-in legal assistance. The clinical component will involve client interviewing, assessment and intake, along with legal research, drafting, and counseling as the situation requires. In an effort to operate the clinic as close to an actual law firm as possible, students are required to maintain client billing records through use of the clinic's time/document management software. Students are also required to attend a regularly scheduled weekly seminar meeting. Finally, students are expected to attend two full days of a mandatory orientation prior to the start of the semester. Prerequisites: LAW 551 Business Organizations. The clinic is open to students who have successfully completed 28 hours of law studies and who have been selected through the clinic application process. This clinic/externship is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
6

Requisites

Free Form Requirements
Complete LAW-551;

LAWE965 - Contract Drafting

General

Subject Code ~
LAWE

Course Number ~
965

Course Name (appears on the transcript) ~
Contract Drafting

Content

Description
This objective of this course is to provide students with practical contract drafting skills through the drafting, review and editing of documents used in business transactions. Students will gain an understanding of the business deal process and the techniques of concise and unambiguous drafting to memorialize transactions. The following topics will be addressed: deal timeline; drafting process; document elements; drafting rules and conventions; and document review techniques. The class will be interactive with guest presenters and periodic assignments. (Credits earned in this course can be applied to the Transactional Law Practice concentration.) Prerequisite: LAW 503 Contracts.

Credit Hours

	Min
	2

Requisites

Free Form Requirements
LAW503 Contracts

LAWE973 - Family Law Mediation Clinic and Seminar

General

Subject Code ~
LAWE

Course Number ~
973

Course Name (appears on the transcript) ~
Family Law Med. Clinic & Sem

Content

Description
The Family Law Mediation Clinic provides students with the opportunity to mediate family law cases at the Hampden Probate and Family Court under the supervision of the professor who will co-mediate cases assigned to the clinic by the Court. The clinic will include observing and learning court process, including involvement in the screening process in conjunction with The Mediation and Training Collaborative, a local Community mediation organization. Students also attend a weekly seminar. Prerequisite: Mediation LAW 728. The clinic is open to students who have successfully completed 28 hours of law studies and who have been selected through the clinic application process. Students are selected through the clinic application process. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (Credits may be applied towards the Public Interest Law Practice Concentration.)

Billing Hours

	Min
	3

Credit Hours

	Min
	3

LAWE975 - Family Defense Practicum

General

Subject Code ~
LAWE

Course Number ~
975

Course Name (appears on the transcript) ~
Family Defense Practicum

Content

Description

The Family Defense Practicum (6 experiential learning credits total) is a collaboration between Western New England School of Law and the Committee for Public Counsel Services (CPCS), the statewide public defender system. Participants in the Family Defense Practicum will spend sixteen hours a week at their jobsite working as student lawyers under the supervision of staff attorneys in the Children and Family Law (CAFL) division of CPCS. The CAFL division provides legal representation to both children and indigent parents in child welfare matters, including care and protection proceedings, actions to terminate parental rights, guardianship-of-a-minor cases, and any other child custody proceeding where the Department of Children and Families (DCF) is a party or where the court is considering granting custody to DCF. Student lawyers will have the chance to represent parents in child welfare proceedings as well as child clients who are verbal and can articulate their position. Students may also have the opportunity to represent infants and toddlers, in which the student lawyer will aid in substituting judgment for the child. Students will gain experience in interviewing clients and witnesses, legal research and writing, engaging in negotiations in the context of multiple party litigation. Further, students may also have the chance to litigate portions of hearings. In addition to the fieldwork, Family Defense Practicum students attend a regularly scheduled weekly seminar meeting. (The course can be counted toward the Public Interest Practice concentration.) Prerequisite: LAWE788 or LAWW788, Child Protection Simulation; Co-requisite: Law 553 Evidence.

Credit Hours

Min
6

LAWE976 - Elder Law Clinic and Seminar

General

Subject Code ~
LAWE

Course Number ~
976

Course Name (appears on the transcript) ~
Elder Law Clinic and Seminar

Content

Description

Students in the Elder Law Clinic will represent elders in a range of matters under the supervision of the clinic supervisor. Representation may include planning for incapacity with powers of attorney and heath care proxies, planning for the disposition of property at death via joint ownership, beneficiary designation, and simple Wills, and planning for eligibility for public benefits for long-term care. Students will gain experience in identifying the client and assessing client capacity, two areas of special importance in elder law. Students usually have an opportunity to speak before groups of senior citizens. Students will also gain experience in interviewing and counseling, drafting documents, memoranda and letters, and overseeing the valid execution of documents. Students enrolled in this clinic also attend a weekly seminar. Prerequisite: Elder Law LLME 807. The clinic is open to students who have successfully completed 28 hours of law studies and who have been selected through the clinic application process. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (This course satisfies 4 experiential learning credits) (Credits may be applied toward Transactional Law Practice concentration.)

Billing Hours

Min
4

Credit Hours

Min
4

LAWE980 - AAJ Junior Moot Court Team

General

Subject Code ~
LAWE

Course Number ~
980

Course Name (appears on the transcript) ~
AAJ Junior Moot Court Team

Content

Description

AAJ Junior Moot Court Team.

Credit Hours

Max
3

Min
1

LAWE981 - First Amendment Moot Court 3 Credits

General

Subject Code ~
LAWE

Course Number ~
981

Course Name (appears on the transcript) ~
First Amendment Mtct 3CR

Content

Description
Selected students participate in the First Amendment Moot Court competition which addresses current issues involving the First Amendment to the United States Constitution. Student competitors will prepare a brief for the petitioner or the respondent in a hypothetical case pending before the United States Supreme Court. (This course satisfies 3 experiential learning credits.) (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
3

LAWE984 - AAJ Moot Court

General

Subject Code ~
LAWE

Course Number ~
984

Course Name (appears on the transcript) ~
AAJ Moot Court

Content

Description
Selected students participate in the national AAJ Student Trial Advocacy Competition. The competition comprises trials built around a fictitious fact scenario including pleadings, affidavits, exhibits, and other materials. Students perform opening and closing statements, direct and cross examinations, and portray witnesses.

Credit Hours

Min
1

LAWE985 - First Amendment Moot Court

General

Subject Code ~
LAWE

Course Number ~
985

Course Name (appears on the transcript) ~
First Amendment Mt

Content

Description
Selected students participate in the First Amendment Moot Court competition which addresses current issues involving the First Amendment to the United States Constitution. Student competitors will prepare a brief for the petitioner or the respondent in a hypothetical case pending before the United States Supreme Court. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
1

LAWE986 - First Amendment Moot Court

General

Subject Code ~
LAWE

Course Number ~
986

Course Name (appears on the transcript) ~
First Amendment Moot Court

Content

Description
Selected students participate in the First Amendment Moot Court competition which addresses current issues involving the First Amendment to the United States Constitution. Student competitors will prepare a brief for the petitioner or the respondent in a hypothetical case pending before the United States Supreme Court. (This course satisfies 2 experiential learning credits.) (Credits may be applied toward Public Interest Practice concentration.)

Billing Hours

Min
2

Credit Hours

Max
3

Min
1

LAWE990 - Jessup Moot Court

General

Subject Code ~
LAWE

Course Number ~
990

Course Name (appears on the transcript) ~
Jessup Moot Court

Content

Description
Selected students participate in the Philip C. Jessup International Law Moot Court Competition. Student competitors argue a hypothetical case on issues of international law as if before the International Court of Justice. The hypothetical case usually involves topical issues in international law. Student competitors prepare oral and written pleadings arguing both the applicant and respondent positions of the case. "Requisite or Co-requisite: International Law, International Human Rights, or other international law course."

Credit Hours

Max
3

Min
1

LAWE992 - National Moot Court Team

General

Subject Code ~
LAWE

Course Number ~
992

Course Name (appears on the transcript) ~
National Moot Court Team

Content

Description
Selected students participate in the National Moot Court Competition. This competition allows students to develop appellate advocacy skills through intellectual rigor, legal research, and persuasive argument. Student competitors will prepare a brief and argue a case, generally concerning statutory or constitutional issues, in the United States Supreme Court. National Moot Court Team.

Credit Hours

Max
3

Min
1

LAWE993 - Rendigs Products Liabililty Moot Court

General

Subject Code ~
LAWE

Course Number ~
993

Course Name (appears on the transcript) ~
Rendigs Products Liabililty Mt

Content

Description
Selected students participate in the August A. Rendigs National Products Liability Moot Court Competition designed to explore issues in products liability law through an appellate briefing and argument competition. (3 credits Spring / 3 experiential learning credits.)

Credit Hours

Min
3

LAWE996 - Real Estate Practicum & Seminar

General

Subject Code ~
LAWE

Course Number ~
996

Course Name (appears on the transcript) ~
Real Estate Practicum & Sem

Content

Description
In the Real Estate Practicum, selected students are placed with real estate practice and title companies. Placements are done as a member of a two-person team. One member of the team is initially placed with a real estate attorney specializing in residential real estate, the other with an attorney at a title insurance company. Each team member works for six weeks with one attorney or the other and then switches in the middle of the semester. In both placements, students work on a variety of title, closing, contract and related problems and will observe the operation of a law office and the interaction with clients, staff and other real estate professionals (brokers, lenders, appraisers, and surveyors. In addition to the field placement, students attend a regularly scheduled weekly seminar meeting. The seminar will have required readings and discussions frequently featuring presentations by experts in different aspects of real estate transactions. Prerequisites: One of the following courses: Conveyancing, Real Estate Survey, and Municipal and Land Use Law. With prior instructor approval and in limited circumstances, students will be permitted to complete the prerequisite concurrently with the Practicum. Additionally, students will be required to complete two additional on-line modules prior to enrolling in the practicum. A student must have successfully completed 28 hours of law studies and been selected through the clinic application process. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. This course satisfies 4 experiential learning credits. (Credits may be applied toward Transactional Law Practice concentration.)

Billing Hours

Min
4

Credit Hours

Min
4

LAWE998 - AAJ Moot Court Sp

General

Subject Code ~
LAWE

Course Number ~
998

Course Name (appears on the transcript) ~
AAJ Moot Court SP

Content

Credit Hours

Min
2

LAWEA815 - Global Justice Clinic & Seminar

General

Subject Code ~
LAWEA

Course Number ~
815

Course Name (appears on the transcript) ~
Global Justice Clinic & Sem

Content

Description
Selected students work collaboratively on projects with domestic and international nongovernmental organizations, grass-roots organizations, solidarity networks, attorneys, stakeholders, and other institutions engaging in human rights work, to advance political, economic, social and cultural human rights across borders. Students also attend a weekly seminar. Prerequisites: The clinic is open to students who have successfully completed 28 hours of law studies and who have been selected through the clinic application process. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (Credits may be applied toward International and Comparative Law Practice, Public Interest Practice, and Gender & Sexuality Law concentrations.)

Credit Hours

Min
6

LAWEA816 - Spanish for Client-Centered Lawyering

General

Subject Code ~
LAWEA

Course Number ~
816

Course Name (appears on the transcript) ~
Spanish/Client-Centered Lawyer

Content

Description
In this experiential learning course students will learn the skills necessary for bilingual Spanish-English legal practice. Through the lens of client-centered lawyering, the goal of this course is to support students in developing the skills and cultural competency to effectively represent Spanish-speaking clients by improving their ability to interview Spanish-speaking clients and explain complex legal concepts in several areas of practice including immigration and asylum law, family law, criminal law, and housing law. This course is open to any student who has completed a Spanish 101 course whether formally (for example, two semesters in university) or informally (a study abroad program, or growing up in a Spanish-speaking household). All are encouraged to join as the exercises and at-home work are tailored to all levels of Spanish. Participation in this course will include answering questions, assisting other students, and reading out loud. All reading materials for this course have been prepared by the instructor and will be available online.

Credit Hours

Min
2

LAWEA817 - Criminal Immigration Simulation

General

Subject Code ~
LAWEA

Course Number ~
817

Course Name (appears on the transcript) ~
Criminal Immigration Sim.

Content

Description
This course will examine the laws and policies that create immigration consequences for criminal arrests and convictions (commonly known as "Crim-Imm"). Students will learn to analyze criminal statutes in the context of deportability, eligibility for lawful status, and detention. Students will gain practice-oriented perspectives, including the obligations of defense attorneys to advise their clients and the roles of judges, prosecutors, and law enforcement agencies. We will also examine the cooperation between local, state, and federal mass incarceration systems with federal immigration agencies. This course is highly recommended for students interested in pursuing careers in direct legal services, such as criminal defense, prosecution, and immigration representation and is also useful for clerkships and careers in the federal government. (This course counts towards the Public Interest Law Practice Concentrations and the Criminal Law Practice Concentration.)

Credit Hours

Min
2

LAWEA890 - Special Topics

General

Subject Code ~
LAWEA

Course Number ~
890

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWEA891 - Special Topics

General

Subject Code ~
LAWEA

Course Number ~
891

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWEA892 - Special Topics

General

Subject Code ~
LAWEA

Course Number ~
892

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWEA916 - Legal Aid Clinic and Seminar

General

Subject Code ~
LAWEA

Course Number ~
916

Course Name (appears on the transcript) ~
Legal Aid Clinic and Seminar

Content

Description
Selected students work in the office of Community Legal Aid (CLA), a local non-profit organization charged with providing free civil legal services to low-income and elderly persons. Under the supervision of CLA attorneys, students assume primary professional responsibility for actual cases, including client interviews, counseling, case development, negotiation, and representation of clients in court and administrative proceedings. Students also attend a weekly seminar. Prerequisites: LAW 553 Evidence. Evidence may be taken concurrently with the Clinic. A student is required to be SJC Rule 3:03 eligible. The clinic is open to students who have successfully completed 28 hours of law studies and who have been selected through the clinic application process. This clinic is a Restricted Withdrawal Course. See Academic Standard Section 204 and the Clinic and Externship materials for the applicable time restrictions and policies. A student may not simultaneously enroll in more than one clinic, more than one externship, or a clinic and an externship. (This course satisfies 6 experiential learning credits.) (Formerly known as Legal Services Clinic and Seminar) (Credits may be applied toward Gender & Sexuality Law and Public Interest Practice concentrations.)

Credit Hours

Min
6

Requisites

Free Form Requirements
Complete LAW-553;

LAWM500 - Intro to the Law

General

Subject Code ~
LAWM

Course Number ~
500

Course Name (appears on the transcript) ~
Intro to the Law

Content

Description
Introduction to the Law is a one-credit course required in the first year for all entering students, offered prior to the beginning of the first term, and graded on a pass-fall basis. This class introduces students to the study of law. It is designed to give students the knowledge and skills that will enable them to get the most out of their other first-year courses. The goals of the course include introducing students to the purposes and pedagogy of law school, providing techniques and strategies for learning the law, and providing information on background concepts. Students will gain an understanding of the American legal system, explore the function of case law and how it relates to other sources of the law, and learn to actively engage in case analysis. The class is graded pass/fail. (Required course)

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

LAWM501 - Constitutional Law

General

Subject Code ~
LAWM

Course Number ~
501

Course Name (appears on the transcript) ~
Constitutional Law

Content

Description
This course is a study of the allocation of governmental authority and the limitations on that authority as defined by the Constitution of the United States. The course will deal with the problems of defining the scope of federal power, the relationship between the federal government and the states, the scope of state authority, and the rights of individuals with an emphasis on those rights guaranteed by the Due Process and Equal Protection Clauses of the Constitution. (Required Course)

Credit Hours

Min
4

LAWM503 - Contracts

General

Subject Code ~
LAWM

Course Number ~
503

Course Name (appears on the transcript) ~
Contracts

Content

Description
This course introduces students to the law governing legally enforceable agreements with a focus on the rights and duties of contracting parties. In focusing on how promissory relationships are created by the parties, the course emphasizes how these relationships are interpreted, limited, discharged, breached, and enforced. The course also addresses the ethical and equitable considerations affecting the contracting parties. (Required course.)

Credit Hours

Min
4

LAWM505 - Criminal Law

General

Subject Code ~
LAWM

Course Number ~
505

Course Name (appears on the transcript) ~
Criminal Law

Content

Description
This course deals with the competing interests and policies that come into action when the individual clashes with society. The course also explores the underlying philosophical premises of various penal rules. The theories and purposes of punishment, the relationship between law and morality, definitions of criminal intent, principles of necessity, justification and excuse, and inchoate crime and group criminality may also be studied. (Required Course)

Credit Hours

Min
4

LAWM507 - Lawyering Skills I

General

Subject Code ~
LAWM

Course Number ~
507

Course Name (appears on the transcript) ~
Lawyering Skills I

Content

Description
Lawyering Skills I is a required first-year course designed to introduce students to the essential problem-solving and communication skills of the legal profession. The legal research and writing faculty work closely with students in smaller classroom settings to introduce techniques of legal analysis, the basic sources and processes of legal research, and the principles of legal writing and oral advocacy. Through a series of assignments of increasing complexity, students learn how to analyze legal problems, research legal issues, frame legal arguments, and gain experience in drafting the major forms of predictive and persuasive legal writing. During the first semester, in Lawyering Skills I, students will be placed in the role of lawyer as advisor and counselor by focusing on predictive, advisory writing while learning other lawyering skills such as fact gathering and analysis, interviewing, and client counseling. Students will write legal memoranda, conduct interviews, draft professional emails and letters, and conduct office meetings, all in the context of completing practice based assignments. Students will receive individualized feedback throughout the semester. (required course; graded; 2 credits)

Billing Hours

Min
2

Credit Hours

Min
2

LAWM551 - Business Organization

General

Subject Code ~
LAWM

Course Number ~
551

Course Name (appears on the transcript) ~
Business Organization

Content

Description

This course focuses on the fundamental conceptual framework of business organizations law including the formation and conduct of business in the agency, partnership, corporate, and limited liability company forms. It provides an introduction to the terminology of business organizations and finance, and transmits some sense of what business lawyers do. It also raises questions of ethics, professional responsibility and critical analysis of numerous aspects of business law.

Credit Hours

Min
3

LAWM555 - Income Tax I

General

Subject Code ~
LAWM

Course Number ~
555

Course Name (appears on the transcript) ~
Income Tax I

Content

Description

A study of the codified law as it relates to the federal taxation of the income of individuals. This course emphasizes the concepts of gross income, taxable income, and deductions. Special emphasis is given to the federal tax policy considerations inherent in resolving tax issues. A survey of selected topics such as the tax consequences of divorce and administrative practice before the Internal Revenue Service and the Tax Court may be included in the course. (Required Course)

Credit Hours

Min
3

LAWM601 - Climate and Environ. Justice

General

Subject Code ~
LAWM

Course Number ~
601

Course Name (appears on the transcript) ~
Climate and Environ. Justice

Content

Credit Hours

Min
3

LAWM602 - Law & Religion

General

Subject Code ~
LAWM

Course Number ~
602

Course Name (appears on the transcript) ~
Law & Religion

Content

Credit Hours

Min
2

LAWM620 - Access to Justice

General

Subject Code ~
LAWM

Course Number ~
620

Course Name (appears on the transcript) ~
Access to Justice

Content

Credit Hours

Min
2

LAWM631 - Critical Race Theory

General

Subject Code ~
LAWM

Course Number ~
631

Course Name (appears on the transcript) ~
Critical Race Theory

Content

Credit Hours

Min
3

LAWM642 - Law & Social Change

General

Subject Code ~
LAWM

Course Number ~
642

Course Name (appears on the transcript) ~
Law & Social Change

Content

Description
This seminar offers an investigation of issues faced by lawyers representing low-income clients and serving under-represented, disenfranchised groups. Cases, theoretical readings and historical texts are interwoven with several ends in mind: first, to provide a glimpse into the range of public interest work lawyers are engaged in and the intellectual foundations that guide these efforts; second, to consider the contexts in which the tools of public interest advocacy are more or less effective, with particular emphasis on the relationship of public interest lawyering to social movements of disenfranchised groups in American society. Third, to expose students to ethical issues and career development challenges that arise for public interest practitioners. The course grade will be based on students completing a variety of short written exercises, class participation and a major research paper. There will be no final exam. Enrollment limited to 20 students. This course satisfies 2 Writing Units (Credits may be applied toward Gender & Sexuality Law and Public Interest Practice concentrations.)

Credit Hours

Min
2

LAWM664 - Domestic Violence

General

Subject Code ~
LAWM

Course Number ~
664

Course Name (appears on the transcript) ~
Domestic Violence

Content

Credit Hours

Min
2

LAWM669 - Medical Malpractice

General

Subject Code ~
LAWM

Course Number ~
669

Course Name (appears on the transcript) ~
Medical Malpractice

Content

Credit Hours

Min
2

LAWM674 - Employment Discrimination

General

Subject Code ~
LAWM

Course Number ~
674

Course Name (appears on the transcript) ~
Employment Discrimination

Content

Description
This course concerns discrimination in the workplace, with emphasis on different theories of discrimination and the application of those theories in a variety of settings. The primary focus is on the text and interpretation of Title VII of the Civil Rights Act of 1964, as amended in 1991. Other areas studied may include the Age Discrimination Act of 1967, the Equal Pay Act of 1963, and the Americans with Disabilities Act of 1990.

Billing Hours

Min
3

Credit Hours

Min
3

LAWM688 - Bioeithics

General

Subject Code ~
LAWM

Course Number ~
688

Course Name (appears on the transcript) ~
Bioeithics

Content

Description
This is a survey course that will cover a variety of bioethics topics through the lenses of law, ethics, medicine, and public policy. Topics may include reproductive technologies and rights, medical decision-making, end of life care, distributive justice topics, and research on human subjects.

Credit Hours

Min
3

LAWM705 - Adminstrative Law

General

Subject Code ~
LAWM

Course Number ~
705

Course Name (appears on the transcript) ~
Adminstrative Law

Content

Description
This course examines the system through which a vast array of governmental power is exercised in the United States: the administrative process. Its focus will be the ways in which private interests are arranged, rearranged, and/or protected in that system against the background of the public interest. The course will address agency powers to gather and utilize information, promulgate regulations, and adjudicate rights and remedies under applicable statutes and regulations. Judicial review of adverse agency action will also be explored. (Credits may be applied toward Public Interest Concentration.)

Credit Hours

Min
3

LAWM706 - Crim Pro: Investigation

General

Subject Code ~
LAWM

Course Number ~
706

Course Name (appears on the transcript) ~
Crim Pro: Investigation

Content

Description
This course examines the constitutional limits on police investigations. The course focuses primarily on the development of federal constitutional law (4th, 5th, and 6th amendments) in the United States Supreme Court as a way to balance society's need for effective law enforcement against the rights of individuals to be free from unreasonable searches and seizures, coercive interrogations, and unfair pretrial identification procedures Students taking this course may not enroll in LAW 784 Criminal Procedure: Survey. (This course counts towards the upper level writing requirement.) (Credits may be applied toward Criminal Law Practice concentration.)Limited to 24 students.

Credit Hours

Min
3

LAWM712 - Insurance Law

General

Subject Code ~
LAWM

Course Number ~
712

Course Name (appears on the transcript) ~
Insurance Law

Content

Credit Hours

Min
2

LAWM716 - First Amendment Rights

General

Subject Code ~
LAWM

Course Number ~
716

Course Name (appears on the transcript) ~
First Amendment Rights

Content

Description
This course is a basic introduction to the First Amendment of the United States Constitution, focusing on the free speech and free press guarantees. Among the topics to be studied are the special problems of particular kinds of speech, including advocacy of violence as a political tool for change, libel, obscenity, hate speech, commercial speech, and symbolic speech, such as flag burning. The course will also address particular techniques employed by the government to censor speech, such as prior restraints, time, place, and manner restrictions on speech , and access to public streets and parks to exercise rights of expression. If time allows, the course may also address the two religion clauses of the First Amendment.

Credit Hours

Min
2

LAWM735 - Civil Rights Police Misconduct

General

Subject Code ~
LAWM

Course Number ~
735

Course Name (appears on the transcript) ~
Civil Rights Police Misconduct

Content

Billing Hours

Min
3

Credit Hours

Min
3

LAWM748 - Trusts and Estates

General

Subject Code ~
LAWM

Course Number ~
748

Course Name (appears on the transcript) ~
Trusts and Estates

Content

Description
This course is a study of the inter-vivos and testamentary gratuitous transfer of property, including intestate succession, wills, and trusts. Also discussed are the duties and liability of the fiduciary, the use of charitable donations, and the raising of constructive and resulting trusts. Prerequisite: Law 511 Property. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
3

LAWM749 - Worker's Compensation

General

Subject Code ~
LAWM

Course Number ~
749

Course Name (appears on the transcript) ~
Worker's Compensation

Content

Description
Since as far back as Ancient Rome and Greece, society has compensated injured workers for work-related accidents. This course analyzes the history and the principles of the system for compensating employees for work-related injuries. This course will provide an understanding of the core concepts of Workers' Compensation law and the mechanics of litigating and defending claims for workers' compensation benefits.

Credit Hours

Min
2

LAWM762 - International Law

General

Subject Code ~
LAWM

Course Number ~
762

Course Name (appears on the transcript) ~
International Law

Content

Credit Hours

Min
3

LAWM788 - Child Protection Law Sim.

General

Subject Code ~
LAWM

Course Number ~
788

Course Name (appears on the transcript) ~
Child Protection Law Sim.

Content

Description
This class will focus on what happens when the state becomes involved in family life due to allegations of child abuse and neglect. Central to the class will be the balance between the right of the family to be free of state intervention in child-rearing decisions with the right of the child to be free of neglect and abuse. Writing assignments and class simulations will relate to an individual child protection case that we will track from inception to resolution. Additional topics may include: definitions of child abuse and neglect; special issues in child sexual abuse; and medical neglect, including cases involving parents withhold medical treatment because of their religious beliefs. The course will also cover the potential paths for state intervention, including short and long term foster care, termination of parental rights and adoption. This course satisfies 2 experiential learning credits. (Credits may be applied toward Public Interest Practice concentration.)(Formerly Child, Family & State.

Credit Hours

Min
2

LAWM794 - Employment Law

General

Subject Code ~
LAWM

Course Number ~
794

Course Name (appears on the transcript) ~
Employment Law

Content

Description
This course provides a foundational survey of key state and federal laws that protect employee rights and employer interests in the workplace. After beginning with a discussion of the various legal paradigms implicit in workplace regulation, the course is organized around five themes: (1) The Rise and Questionable Fall of At-Will Employment; (2) Job Security, Employee Mobility & Workplace Freedom; (3) Wage and Hour Legislation; (4) The Laws Governing Workplace Accidents and Safety, and (5) Private Dispute Resolution and Arbitration in the Workplace. The course will address these themes in the context of a globalized labor market, the safety net protecting the low-wage workforce, non-standard work arrangements, and the impact of web-based communications in the workplace. For questionable pedagogical reasons, "employment law" is usually separated from the study of "labor law." and from "employment discrimination law." Consequently, by design the course does not cover in great depth the National Labor Relations Act public sector labor law, or the laws protecting workers from status-based discrimination (e.g. Title VII of the Civil Rights Act the Americans with Disabilities Act). However, the course does introduce these laws and the legal rules governing the right to form unions and collectively bargain as well as the protections afforded to employees because of discrimination based on race, gender, disability, sexual orientation, etc. The readings are inevitably somewhat eclectic and the structure of this course attempts to grapple with what are truly academic distinctions separating one area of workplace law from another because employers and employees routinely grapple with workplace disputes that arise under a complex web of interrelated and sometimes conflicting legal rules. There is a final exam in this course. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
3

LAWM900 - Comparative Law

General

Subject Code ~
LAWM

Course Number ~
900

Course Name (appears on the transcript) ~
Comparative Law

Content

Credit Hours

Min
3

LAWM906 - Mindfulness in Law Practice

General

Subject Code ~
LAWM

Course Number ~
906

Course Name (appears on the transcript) ~
Mindfulness in Law Practice

Content

Credit Hours

Min
1

LAWM951 - Advanced Research Study

General

Subject Code ~
LAWM

Course Number ~
951

Course Name (appears on the transcript) ~
Advanced Research Study

Content

Credit Hours

Min
3

LAWM958 - Legal Issue Digital Media

General

Subject Code ~
LAWM

Course Number ~
958

Course Name (appears on the transcript) ~
Legal Issue Digital Media

Content

Credit Hours

Min
2

LAWM998 - Real Estate Survey

General

Subject Code ~
LAWM

Course Number ~
998

Course Name (appears on the transcript) ~
Real Estate Survey

Content

Credit Hours

Min
2

LAWP903 - Faculty Supervised Externship

General

Subject Code ~
LAWP

Course Number ~
903

Course Name (appears on the transcript) ~
Faculty Supervised Externship

Content

Credit Hours

Min
3

LAWP951 - Indep Tutorial Study

General

Subject Code ~
LAWP

Course Number ~
951

Course Name (appears on the transcript) ~
Indep Tutorial Study

Content

Credit Hours

Max
3

Min
1

LAWP952 - Indep Tutorial Study

General

Subject Code ~
LAWP

Course Number ~
952

Course Name (appears on the transcript) ~
Indep Tutorial Study

Content

Credit Hours

Min
2

LAWP953 - Indep Tutorial Study

General

Subject Code ~
LAWP

Course Number ~
953

Course Name (appears on the transcript) ~
Indep Tutorial Study

Content

Credit Hours

Min
3

LAWW600 - Selected Issues in Alt. Reprod Tech

General

Subject Code ~
LAWW

Course Number ~
600

Course Name (appears on the transcript) ~
Selected Issues in Alt. Reprod

Content

Description
This class will focus on selected legal issues that arise as increasing numbers of individuals and couples turn to alternative reproductive technologies for bringing children into the world and their families. Topics addressed will be determined by class participants but may include disputes over control and use of frozen embryos and pre-embryos, and other genetic material, arising out of family dissolution; establishing parentage for non-genetic/non-biological parents; resolution of parentage in surrogacy arrangements; contract drafting for clients using and providing access to alternative reproductive technology, among other topics. Students are expected to have already taken Family Law or have basic knowledge of the area. This is a writing course and not open to students who have previously taken Alternative Reproductive Technology. (This course is limited to 12 students)

Credit Hours

Min
2

LAWW601 - Climate & Environmental Justice

General

Subject Code ~
LAWW

Course Number ~
601

Course Name (appears on the transcript) ~
Climate & Environ Justice

Content

Description
This course will introduce the overlapping climate and environmental justice movements. Students will learn about the conflicting values and interests that animate environmental policy and explore ways to remedy inequities in environmental and public health based on membership in intersecting and marginalized groups, including race, class, gender and global location. The course will also cover the role of climate change in forcing groups from their homes, who are now centered in debates over the growing global refugee crisis. We will also explore how these displacements have created opportunities for collective responses to confront climate change that are rooted in migrant, indigenous, land, and human rights. The class format will be a combination of discussion, guest speakers, and student-led class presentations. Students will select a topic to research and write a 25 page policy paper. (Credits may be applied towards the Public Interest Practice concentration.)

Credit Hours

Min
3

LAWW602 - Separation of Powers

General

Subject Code ~
LAWW

Course Number ~
602

Course Name (appears on the transcript) ~
Separation of Powers

Content

Description
This course will examine the structure of our national government and our system of separated powers with checks and balances. We will review cases and matters pertaining to separation of powers issues. Topics will include, among other things: electing the president; presidential authority; appointment and removal of executive officers; executive privilege; presidential pardon power; the president's involvement with the legislative process; the interaction of the three Branches, including with regard to war and national security; executive criminal law enforcement; the role and power of executive agencies; Congressional spending power; Congressional oversight of the executive; appointment of federal judges; the role of the Judiciary; and Judiciary involvement with disputes between the other Branches. As we explore these topics, will review historical precedents related to these issues. We will also analyze modern day separation of power controversies and events. Students will complete a semester-long research and argument-based essay during which they identify a separation of powers problem and the steps that must be taken in which to resolve it.

Credit Hours

Min
2

LAWW603 - International Criminal Justice

General

Subject Code ~
LAWW

Course Number ~
603

Course Name (appears on the transcript) ~
International Criminal Justice

Content

Description
In this course we will discuss the application of domestic and international law to questions of jurisdiction over international criminal activities, international cooperation in criminal matters, substantive international law contained in multilateral treaties concerning war crimes and terrorism, and the permanent International Criminal Court. The course consists of a series of topics, organized around the principles and offenses of international criminal law, including: nature and sources of international criminal law; nature and elements of responsibility and defenses against responsibility; basis of jurisdictional competence of states under international law; methods for obtaining persons abroad; attempts over time, including through international tribunals, to secure punishment for international crimes; offenses against peace; war crimes; crimes against humanity; genocide; terrorism; and the intersection between international crimes and human rights. (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
2

LAWW604 - Advertising Law

General

Subject Code ~
LAWW

Course Number ~
604

Course Name (appears on the transcript) ~
Advertising Law

Content

Description

This course concerns the regulation of advertising under U.S. federal and state laws. The course will discuss the interaction of the federal statutory false advertising regime as well as Federal Trade Commission regulations, state attorney general actions, and consumer class actions. This course utilizes principles of contracts, torts, intellectual property, consumer protection, professional responsibility, and constitutional law as it tackles issues including contests and sweepstakes, influencer marketing, and artificial intelligence in advertising metrics. (Credits may be applied toward Transactional Law Practice concentration.)

Credit Hours

Min
2

LAWW605 - Corporate Social Responsibility

General

Subject Code ~
LAWW

Course Number ~
605

Course Name (appears on the transcript) ~
Corporate Social Respon.

Content

Description

As an advanced corporate law seminar, this course will introduce students to corporate social responsibility (CSR) as an amalgam of legal and economic strategies used nationally and internationally in order to influence, regulate and police corporate decision-making and behavior. The purpose of this course is to explore both historical and contemporary normative trends of CSR challenging large-scale business enterprises and the various prescriptive jurisdictions in which they operate in areas of corporate legal theory, corporate (self-)governance, securities regulation, transaction cost economics and corporate risk management. Prerequisite: LAW 551 Business Organization. This course counts towards the upper level writing requirement. (Credits may be applied toward International and Comparative Law Practice and Transactional Law Practice concentrations.)Limited to 24 students.

Credit Hours

Min
3

LAWW625 - Land Use

General

Subject Code ~
LAWW

Course Number ~
625

Course Name (appears on the transcript) ~
Land Use

Content

Description

This course will cover the fundamental concepts in domestic land use and planning law. The course begins with zoning fundamentals, including zoning enabling acts, ordinances, variances, incentive zoning, transferrable development rights and accessory uses. The course will also cover takings, sustainable development, including New Urbanism and smart growth; historic preservation; and aesthetic regulation. This course satisfies 3 writing units. (Credits may be applied toward Transactional Law Practice and Public Interest Practice concentrations.)

Credit Hours

Min
3

LAWW631 - Critical Race Theory

General

Subject Code ~
LAWW

Course Number ~
631

Course Name (appears on the transcript) ~
Critical Race Theory

Content

Description
CRT examines how the social category of race is defined and produced by the law but also how race shapes and gives meaning to the law. CRT challenges both the substance and style of conventional legal scholarship by thinking or outright rejecting formal notions of equality, individual right, and color-blind approaches to solving legal problems. By deploying both controversial and innovative methodologies, Critical Race scholarship has transformed how we understand the relationship between race, social power, and the law. This course will discuss the origins and major tenets of Critical Race Theory, examine the development of Critical Race Theory as a significant paradigm of legal scholarship and advocacy, and outline its connection to Critical Legal Studies, Feminist jurisprudence, and Queer Theory. (This course counts towards the upper level writing requirement.)

Credit Hours

Min
3

LAWW640 - Federal Income Tax Simulation

General

Subject Code ~
LAWW

Course Number ~
640

Course Name (appears on the transcript) ~
Federal Income Tax Simulation

Content

Description
This course is designed to provide two-person teams of students with the opportunity to engage in research and writing in the context of solving a tax problem which might arise in everyday tax practice. Each team will be required to prepare a detailed outline of tax issues raised by the problem, three drafts of a memorandum of law to a senior partner and two drafts of a client letter, explaining their analysis, conclusions and recommendations for client action. Students will also be required to keep detailed time sheets. Teams will meet with the instructor at regular, mutually agreed upon times. The course may utilize the tax problem which is the subject of the ABA Section of Taxation Law Student Tax Challenge competition, in which case teams may submit their work product to that competition by the deadline date set by that competition (before the second week of November). Prerequisite: Law 555, Income Tax I. Enrollment is by two-person teams of students and is limited to 8 teams. Enrollment limited to 16 students. This course counts towards the upper level writing requirement. (Credits may be applied toward the Transactional Law Practice concentration.)

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW-555

LAWW642 - Law & Social Change

General

Subject Code ~
LAWW

Course Number ~
642

Course Name (appears on the transcript) ~
Law & Social Change

Content

Description
This seminar offers an investigation of issues faced by lawyers representing low-income clients and serving under-represented, disenfranchised groups. Cases, theoretical readings and historical texts are interwoven with several ends in mind: first, to provide a glimpse into the range of public interest work lawyers are engaged in and the intellectual foundations that guide these efforts; second, to consider the contexts in which the tools of public interest advocacy are more or less effective, with particular emphasis on the relationship of public interest lawyering to social movements of disenfranchised groups in American society. Third, to expose students to ethical issues and

career development challenges that arise for public interest practitioners. The course grade will be based on students completing a variety of short written exercises, class participation and a major research paper. There will be no final exam. (This course counts towards the upper level writing requirement.) (Credits may be applied toward Gender & Sexuality Law and Public Interest Practice concentrations.)

Credit Hours

Min
2

LAWW644 - Domestic Violence

General

Subject Code ~
LAWW

Course Number ~
644

Course Name (appears on the transcript) ~
Domestic Violence

Content

Description
This course combines a scholarly and practice-oriented approach to understanding the legal response to domestic violence. Throughout the course, we will focus on the social context of battering, including how the experience of abuse is shaped by gender, race, cultural identity, immigration status, sexual orientation, and disabilities. We will cover the various legal remedies in both civil and criminal contexts and examine their efficacy. These include the role of protective orders in both civil and criminal courts. We will also discuss domestic violence in relation to divorce, child custody, support, visitation, and the child protection matters. Gender violence as a human rights violation, sexual assault law, and the role of the domestic violence movement are also introduced. The focus of this course is to examine current challenges and shortcomings in the legal response to domestic violence, and then consider proposals for alternative strategies for systemic change. (Credits may be applied toward Criminal Law Practice, Gender & Sexuality Law, and Public Interest Practice concentrations.)

Credit Hours

Min
2

LAWW652 - Appellate Advocacy

General

Subject Code ~
LAWW

Course Number ~
652

Course Name (appears on the transcript) ~
Appellate Advocacy

Content

Description
This course provides upper level instruction in appellate brief writing and oral argument. Students in the course will receive intensive instruction in appellate brief-writing, working with a teammate, and appellate oral argument. Students will have the opportunity to meet with faculty about their writing and to receive feedback on their oral argument skills. *First 4 class sessions online. Students who are interested in joining one of WNE's moot court teams are encouraged to enroll in Appellate Advocacy.

Credit Hours

Min
2

LAWW676 - Cannabis Law and Policy

General

Subject Code ~
LAWW

Course Number ~
676

Course Name (appears on the transcript) ~
Cannabis Law and Policy

Content

Description

This course will focus on how society regulates cannabis. This course takes an in-depth look at the history and current evolving approaches to cannabis regulation, including preemption; legal, professional and business ethics; and enforcement policy. Students enrolling in the seminar must prepare a research paper, make a presentation to the class, and actively participate in class discussion. Students will work with the professor to select a topic for the research paper, which can be drawn from topics covered in class or another topic of interest to the student and acceptable to the professor. This course counts towards the upper level writing requirement. (Course formerly known as Marijuana Law) (Credits may be applied toward Public Interest Practice and Transactional Law Practice concentrations.)

Billing Hours

Min
3

Credit Hours

Min
3

LAWW678 - Legal Writing and Analysis I

General

Subject Code ~
LAWW

Course Number ~
678

Course Name (appears on the transcript) ~
Legal Writing and Analysis I

Content

Description

This limited-enrollment, two-credit course is designed to provide in-depth training in legal reasoning for law school exams, the bar exam, and legal practice. This course is intended to benefit students who wish to improve their legal analysis skills; improve their exam performance; and prepare for bar-related performance exams. The course will encourage students to learn how to apply substantive law in the context of performance tests. This course addresses how to prepare for and take essay and performance exams; prepare a course study outline; synthesize and formulate a rule of law from one or more legal authorities; place a rule in a rule-structure; analyze application of the rule to a set of facts; and organize legal discussion of that analysis. Students will receive guidance and feedback on all written work from the professor about ways to improve their legal reasoning skills. The final grade is based on two performance exams and other small projects, assignments, and quizzes. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam.

Credit Hours

Min
2

LAWW679 - Legal Writing and Analysis II

General

Subject Code ~
LAWW

Course Number ~
679

Course Name (appears on the transcript) ~
Legal Writing and Analysis II

Content

Description

This limited-enrollment, two-credit course is designed to provide in-depth training in legal reasoning for law school exams, the bar exam, and legal practice. This course is intended to benefit students who wish to improve their legal analysis skills; improve their exam performance; and prepare for bar-related performance exams. The course will encourage students to learn how to apply substantive law in the context of performance tests. This course addresses how to prepare for and take essay and performance exams; prepare a course study outline; synthesize and formulate a rule of law from one or more legal authorities; place a rule in a rule-structure; analyze application of the rule to a set of facts; and organize legal discussion of that analysis. Students will receive guidance and feedback on all written work from the professor about ways to improve their legal reasoning skills. The final grade is based on two performance exams and other small projects, assignments, and quizzes. Legal Writing and Analysis I is not a prerequisite to this course. The courses share the same learning outcomes but use different assignments. A student may take either of these courses or both in any sequence. A significant portion of this elective course content is material that may be tested on the UBE Bar Exam.

Credit Hours

Min
2

LAWW684 - Adv Legal Research in the Age of Ai

General

Subject Code ~
LAWW

Course Number ~
684

Course Name (appears on the transcript) ~
Adv. Legal Research Age of AI

Content

Description
This course offers an in-depth analysis of legal research methods and sources, covering AI and more traditional research methods. Classes will include a combination of lectures, discussions, and research exercises based on real-life and bar exam-tested scenarios. Emphasis is placed on analyzing research choices, evaluating the content and organization of resources, and understanding their appropriate use. If you want to sharpen your knowledge of statutes, regulations, legislative history, and using AI for legal research, this course is for you.

Credit Hours

Min
2

LAWW686 - Health Care Fin. & Del. System

General

Subject Code ~
LAWW

Course Number ~
686

Course Name (appears on the transcript) ~
Health Care Fin. & Del. System

Content

Description
This is a survey course that will cover a variety of issues relating to health care access, delivery and reimbursement for services. Topics may include the institutional duty to provide care, discrination in access to health care, insurance contract interpretation, federal regulation of insurance including ERISA, professional relationships in health care enterprises, and fraud and abuse.

Credit Hours

Min
2

LAWW690 - Sexual Orientation and the Law

General

Subject Code ~
LAWW

Course Number ~
690

Course Name (appears on the transcript) ~
Sexual Orientation and the Law

Content

Description

This course is an examination of the legal and policy issues surrounding state and private attempts to regulate and/or discriminate on the basis of sexual orientation and gender identity and expression. Topics covered in the course include (1) the due process right to privacy, (2) equal protection analysis, (3) family law issues including current cases challenging marriage exclusion (4) employment discrimination, with particular emphasis on possibilities to pursue non-discrimination law by transgender people (5) sexual orientation and gender expression as gender discrimination, among other relevant contemporary topics. (This course counts towards the upper level writing requirement.)

Credit Hours

Min
3

LAWW705 - Investigations and Exoneration

General

Subject Code ~
LAWW

Course Number ~
705

Course Name (appears on the transcript) ~
Investigations and Exoneration

Content

Description

When errors occur in the criminal justice process, innocent people lose their freedom and sometimes their lives. The objective of this course is to acquaint students with the imperfections and systemic errors the criminal justice system which often lead to wrongful convictions. Students will be exposed to the issues of mistakes and misconduct by law enforcement, witnesses, lawyers and judges, including racial bias, false confessions, witness misidentification and ineffective assistance of counsel, as we examine cases of wrongful conviction. Students will gain an understanding of the constitutional rights implicated in these cases, with a strong focus on the fourth, fifth, sixth, eighth and fourteenth amendments. Through the examination of these cases, students will strengthen their knowledge of criminal investigations, criminal law and criminal procedure. Students will research and write papers regarding misconduct and errors in the criminal justice system and the effects of those mistakes on individuals. Students will research the exoneration process and write a final paper on death row inmates to determine whether such inmates are guilty or not guilty, and raise concern of wrongful convictions. This course counts towards the upper level writing requirement. (Credits earned in this course count towards the Criminal Law Practice concentration.)

Credit Hours

Min
2

LAWW706 - Crim Pro: Investigation

General

Subject Code ~
LAWW

Course Number ~
706

Course Name (appears on the transcript) ~
Crim Pro: Investigation

Content

Description

This course examines the constitutional limits on police investigations. The course focuses primarily on the development of federal constitutional law (4th, 5th, and 6th amendments) in the United States Supreme Court as a way to balance society's need for effective law enforcement against the rights of individuals to be free from unreasonable searches and seizures, coercive interrogations, and unfair pretrial identification procedures Students taking this course may not enroll in LAW 784 Criminal Procedure: Survey. (Credits may be applied toward Criminal Law Practice concentration.)Prerequisite: LAW 505 Criminal Law

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Students registered for LAWW 706 should not register for LAW 784

LAWW716 - First Amendment Rights

General

Subject Code ~
LAWW

Course Number ~
716

Course Name (appears on the transcript) ~
First Amendment Rights

Content

Description
This course is a basic introduction to the First Amendment of the United States Constitution, focusing on the free speech and free press guarantees. Among the topics to be studied are the special problems of particular kinds of speech, including advocacy of violence as a political tool for change, libel, obscenity, hate speech, commercial speech, and symbolic speech, such as flag burning. The course will also address particular techniques employed by the government to censor speech, such as prior restraints, time, place, and manner restrictions on speech , and access to public streets and parks to exercise rights of expression. If time allows, the course may also address two regligion clauses of the First Amendment. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
2

LAWW723 - Estate Planning

General

Subject Code ~
LAWW

Course Number ~
723

Course Name (appears on the transcript) ~
Estate Planning

Content

Description
This course is the study of the inter vivos and testamentary disposition of accumulated wealth. Students draft simple and complex estate plans. Emphasis is given also to the tax and non-tax considerations that influence the transfer and future management of wealth. Prerequisites: LAW 748 Trusts & Estates. (This course counts towards the upper level writing requirement.)

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW 748

LAWW724 - Business Succession Planning

General

Subject Code ~
LAWW

Course Number ~
724

Course Name (appears on the transcript) ~
Business Succession Planning

Content

Description
This course will consider that issues that owners of closely held businesses face in the operation and disposition of their business interests.The course will consider the operational and transfer problems for unrelated business owners as well as the operational and transfer problems for family owned businesses.Areas of study will include buy/sell agreements, life insurance, and alternative methods of succession.Note: This course was formerly called Business & Estate Planning/Closely-Held Business Entities. Prerequisite: LAW 551 Business Organizations (Credits may be applied toward Transactional Law Practice concentration.)

Billing Hours

Min
3

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW-551

LAWW737 - Federal Civil Rights Litigation

General

Subject Code ~
LAWW

Course Number ~
737

Course Name (appears on the transcript) ~
Federal Civil Rts Litigation

Content

Description
This course will examine the use and limits of federal civil rights litigation as a tool for social and institutional reform. The focus will be on recent litigation brought under the authority of the civil rights legislation passed by Congress after the Civil War, specifically 42 U.S.C Section 1983. Among topics that may be included are: (1) the definition of civil rights deserving of judicial protection; (2) local government liability for civil rights violations; (3) the scope of public officials' immunity from suit; (4) remedies for violations of civil rights; and (5) attorney's fees. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
2

LAWW762 - International Law

General

Subject Code ~
LAWW

Course Number ~
762

Course Name (appears on the transcript) ~
International Law

Content

Description
This course provides an overview of public international law with a focus on the framework and development of international law. We will examine how the doctrines, institutions and methodologies of international law have developed in recent years, with attention to the application of those doctrines and methodologies to legal aspects of current international controversies. We will also discuss the structure, goals, processes and institutions of international law, with detailed consideration of issues such as the sources of international law, the recognition and responsibility of states, and the role of organizations, corporations, and individuals in the application of international law. (Credits may be applied toward International and Comparative Law Practice concentration.)

Credit Hours

Min
3

LAWW780 - Criminal Procedure Simulation

General

Subject Code ~
LAWW

Course Number ~
780

Course Name (appears on the transcript) ~
Criminal Procedure Simulation

Content

Description
This course concentrates on the procedural stages of two hypothetical criminal cases from arraignment through trial. The principal purpose of the course is to provide students with an opportunity to improve their writing and trial skills in the context of preparing and trying a state criminal case. Students will be required to research, write and re-write pretrial motions along with supporting affidavits and memoranda of law and to litigate two simulated exercises, a pretrial motion to suppress and a jury trial. Prerequisites: LAW 706 Criminal Procedure: Investigation or LAW 784 Criminal Procedure Survey and LAW 553 Evidence. Students, who have not taken or registered to take LAW 905 Criminal Law Clinic, will be given priority in registering for this course. Enrollment is limited to 12 students. (This course satisfies 3 writing units) (Credits may be applied toward Criminal Law Practice concentration.)

Credit Hours

Min
3

LAWW786 - Corporate Governance Seminar

General

Subject Code ~
LAWW

Course Number ~
786

Course Name (appears on the transcript) ~
Corporate Governance Seminar

Content

Description
As an advanced corporate law seminar, this course will provide students with a detailed overview and discussion of modern systems of, and trends in, corporate governance. It will combine current academic thinking about corporate governance and ownership with practical developments and applications that exemplify ongoing debates on the elusive sociolegal governance of modern business entities. Topics will include: the business structure of the firm, the role of institutional investors in the public corporation, the role of gatekeepers, major differences and convergence in large-firm corporate governance around the world, current thinking on jurisdictional competition in producing corporate law, and shareholder/stakeholder primacy. Prerequisite: LAW 551 Business Organization. This course counts towards the upper-level writing requirement. Credits may be applied toward International and Comparative Law Practice and Transactional Law Practice concentrations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete LAW-551;

LAWW788 - Child Protection Law Simulation

General

Subject Code ~
LAWW

Course Number ~
788

Course Name (appears on the transcript) ~
Child Protection Law Sim.

Content

Description
This class will focus on what happens when the state becomes involved in family life due to allegations of child abuse and neglect. Central to the class will be the balance between the right of the family to be free of state intervention in child-rearing decisions with the right of the child to be free of neglect and abuse. Writing assignments and class simulations will relate to an individual child protection case that we will track from inception to resolution. Additional topics may include: definitions of child abuse and neglect; special issues in child sexual abuse; and medical neglect, including cases involving parents withhold medical treatment because of their religious beliefs. The course will also cover the potential paths for state intervention, including short and long term foster care, termination of parental rights and adoption. This course satisfies 2 experiential learning credits. (Credits may be applied toward Public Interest Practice concentration.)(Formerly Child, Family & State.

Credit Hours

Min
2

LAWW792 - International Human Rights

General

Subject Code ~
LAWW

Course Number ~
792

Course Name (appears on the transcript) ~
International Human Rights

Content

Description
The international human rights project attempts to apply inalienable, indivisible, interdependent, and universal protections/rights ahead of the dictates of a "sovereign" leader or community. This course asks students to consider the development of those rights (political, economic, and cultural); the context for the application of rights; and the impact on a legal system that historically required the agreement of a sovereign that speaks for a state in an international system. Rights will be considered on a local, national, regional, and international level, including through the United Nations system. (This course counts towards the upper level writing requirement.) (Credits may be applied toward International and Comparative Law Practice and Public Interest Practice concentrations.)Limited to 24 students.

Credit Hours

Min
3

LAWW797 - Federal Litigation Pre-Trial Phase

General

Subject Code ~
LAWW

Course Number ~
797

Course Name (appears on the transcript) ~
Federal Litigation Pre-Trial

Content

Description
This course is aimed at refining students' written and oral advocacy skills in the pretrial phase of litigation. In weekly exercises, students will brief and argue typical motions arising prior to trial. The course will also address pretrial strategy, both in preparing pleadings, planning discovery and drafting motions. At the end of the term, students will draft a larger memorandum and present a more extensive oral argument on a motion for summary judgement or to dismiss. The course will require at least four to six hours of preparation for each session. Class attendance is mandatory. Enrollment limited to 16 students. This course counts towards the upper level writing requirement.

Credit Hours

Min
3

LAWW819 - International Law & Digital Technologies

General

Subject Code ~
LAWW

Course Number ~
819

Course Name (appears on the transcript) ~
Int'l Law & Digital Tech

Content

Description
This course will examine the relationship between international law and digital technologies from a critical international law perspective. This course will deal with several topics at the intersection between international law and digital technology, including: (1) international digital governance; (2) state responsibility and cyber operations; (3) content moderation and international human rights; (4) extremist content and hate speech in online platforms; (5) online political microtargeting and data protection; and (6) technological experimentation and vulnerable communities. Upon completing this course, students will have a nuanced understanding of digital technologies and its challenges to international law and legal order. Second, students will develop research and writing skills on the intersection between international law and digital technologies. (Credits may be applied towards the International Law Practice concentration.)

Credit Hours

Min
3

LAWW830 - Law Review Staff 1CR Spring

General

Subject Code ~
LAWW

Course Number ~
830

Course Name (appears on the transcript) ~
Law Review Staff 1CR Spring

Content

Description
Students who are staff members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Staff members of Law Review receive 2 credits in the fall and 1 credit in the spring for the successful completion of their Law Review Staff year.

Billing Hours

Min
1

Credit Hours

Min
1

LAWW835 - Business Law & Racism

General

Subject Code ~
LAWW

Course Number ~
835

Course Name (appears on the transcript) ~
Business Law & Racism

Content

Description
Laws that regulate, control, facilitate, support or encourage economic development (collectively, "business law"), are one foundational aspect of the United States socio-economic system. Racism is also a foundational aspect of the United States socio-economic system. This class will explore the intersection of business law and racism and the impacts business law has had, both intentionally and inadvertently, on perpetuating systemic racism in the United States. The goal is that students will increase their knowledge of substantive principles of business law and concurrently develop their own cultural competency by exploring how any law, as a foundational aspect of our

"system," has and can continue to directly perpetuate or alleviate systemic racism.

Understanding how race impacts business law, and vice-versa, will not be a tangential aspect of the class addressed through occasional anecdotal diversions, but rather the intersection will be at the forefront of all discussions. The seminars will require participation in those "uncomfortable conversations" that will undoubtedly expose the implicit and explicit biases we all (students, faculty, guest facilitators) possess. However, it is the goal that the seminar will create a safe space to have these conversations wherein there is mutual respect and humility and, at the same time, a recognition that each person is at a different stage in their personal development of cultural competency.

There is no textbook that addresses business law in this manner (yet) and therefore the material will consist entirely of collected readings. These readings have been compiled based both on the instructor's frame of reference as well as suggestions from colleagues. It is a work in progress from that perspective and student input is welcome.

This course satisfies writing requirement. Limited to 20 students.

Billing Hours

Min
2

Credit Hours

Min
2

LAWW890 - Special Topics

General

Subject Code ~
LAWW

Course Number ~
890

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWW891 - Special Topics

General

Subject Code ~
LAWW

Course Number ~
891

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWW892 - Special Topics

General

Subject Code ~
LAWW

Course Number ~
892

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWW900 - Comparative Law

General

Subject Code ~
LAWW

Course Number ~
900

Course Name (appears on the transcript) ~
Comparative Law

Content

Description
Comparative Law is, at base, the study of foreign legal systems. This course exposes students to the major legal systems of the world, discusses methods for understanding law across nations, and explores the educational and professional training of lawyers around the world. With this basis, we then explore several discrete topics relevant to many legal systems: constitutionalism, judicial review, sources of law, and the incorporation of international law into the domestic sphere. The main legal systems of study will include the United States, Japan, China, France, Germany, and select other European jurisdictions. Students will write a 25-page paper (approximately 7,500-words, including footnotes) as the final assignment. There will be shorter writing assignments (outlines, bibliographies, draft papers) to work up to the final paper. (Credits may be applied towards the International & Comparative Practice Concentrations.)

Credit Hours

Min
3

LAWW927 - Intellectual Property Survey

General

Subject Code ~
LAWW

Course Number ~
927

Course Name (appears on the transcript) ~
Intellectual Property Survey

Content

Description
Intellectual property (IP) is all around us. It shapes our art, music, literature, architecture, film, and popular culture. It informs technology, medicine, and science, setting new trajectories for further innovation. It provides the building blocks of modern commerce, guarding economically valuable knowledge, setting parameters around what intangible assets can be owned and how they can be used, and regulating marks that companies use to build their brand. In so doing, IP draws lines that may seem arbitrary, at least without a proper understanding of legal doctrine and history. This survey provides an overview of four areas of IP law: trade secrets, patents, copyrights, and trademarks. We will also take up the issue of international intellectual property, and the United States' role in the globalization of IP standards. (Credits may be applied toward Transactional Law Practice Concentration.)

Credit Hours

Min
3

LAWW931 - Food Law and Policy

General

Subject Code ~
LAWW

Course Number ~
931

Course Name (appears on the transcript) ~
Food Law and Policy

Content

Description
This course examines the relationship between food and the law through a survey of legal topics related to food and farming. We will examine historic and contemporary regulation at the local, regional, state, and national level and cover numerous topics concerning agriculture and food. By tracing regulation of food from seed to fork to landfill, students will learn about and explore legal topics including: farmland access and preservation; the federal farm bill; recalls, food safety, and labeling; farm labor, genetic engineering and patents, food access, and food waste. As a qualified writing course, students will complete two writing assignments over the course of the term. First, students will draft a policy brief to an appropriate government level and agency that explains a food-related problem and advocates for a specific policy change. Additionally, in lieu of a final examination, students will draft a research paper of publishable quality. Students will work with the professor to select and develop the topic for the research paper over the course of the semester. The topic can be drawn from topics covered in class or another topic of interest to the student and acceptable to the professor. (Credits may be applied toward Public Interest Practice concentration.)

Credit Hours

Min
2

LAWW950 - Law Review Staff 2CR Fall

General

Subject Code ~
LAWW

Course Number ~
950

Course Name (appears on the transcript) ~
Law Review Staff 2CR Fall

Content

Description
Students who are staff members of Law Review are required to attend the mandatory weekly Law Review staff meeting for both the fall and spring semesters. Staff members of Law Review receive 2 credits in the fall and 1 credit in the spring for the successful completion of their Law Review Staff year. This course counts towards the upper level writing requirement.

Credit Hours

Min
2

LAWW951 - Independent Study Writing Units

General

Subject Code ~
LAWW

Course Number ~
951

Course Name (appears on the transcript) ~
Independ. Study Writing Units

Content

Credit Hours

Max
3

Min
1

LAWW953 - Specialized Independent Study

General

Subject Code ~
LAWW

Course Number ~
953

Course Name (appears on the transcript) ~
Specialized Independent Study

Content

Description
Students design research and writing projects, on topics of individualized and specialized interest, under the direct supervision of professor. Students would pursue directed readings and engage in regular meetings with professor throughout the semester to discuss their work. Students would submit a paper or papers as their work product for their selected project. Interested students should contact professor. This courss is limited to 4 students. This course counts towards the upper level writing requirement.

Credit Hours

Min
1

LAWW959 - End of Life Law and Ethics

General

Subject Code ~
LAWW

Course Number ~
959

Course Name (appears on the transcript) ~
End of Life Law and Ethics

Content

Description
This course explores topics in end of life law in more depth and builds on concepts learned in Bioethics & Law. Topics include right to refuse treatment, informed consent, surrogate decision-making, physician aid in dying, withdrawal of life-supportive therapies, and end of life care dispute resolution. The course begins with coverage of key legal and ethical concepts in end of life law and will also emphasize the complex interplay between law, ethics, and the provision of medical care. Activities for the course include mock Ethics Committee meetings, client interviewing and counseling, completion of advance care planning documents, student-led discussion, and a substantial original research paper on a topic approved by the instructor.

Billing Hours

Min
3

Credit Hours

Min
2

LAWWA600 - Racial Equity in the Workplace

General

Subject Code ~
LAWWA

Course Number ~
600

Course Name (appears on the transcript) ~
Racial Equity in the Workplace

Content

Description

In this course, students will immerse themselves into the intricate web of laws and policies that shape our understanding of race, discrimination, and employment rights. Through an exploration of Title VII of the Civil Rights Act of 1964 and its counterparts, students will unravel the complexities surrounding race discrimination and its profound impact on workplace dynamics. This dynamic journey goes beyond mere legalities. We will dissect the very fabric of societal norms, practices, and biases that often relegate minoritized individuals to "racial subgroups," leaving them vulnerable to discrimination and harassment. From analyzing historical precedent, to scrutinizing contemporary challenges, students will confront pressing questions related to racial discrimination in the workplace that demand innovative solutions. Additionally, by critically evaluating diversity, equity, and inclusion initiatives, we will assess their efficacy in dismantling barriers and fostering genuine inclusivity in the workplace. (Formerly called Race, Diversity and Employment Law) (Credits may be applied toward the Public Interest Practice concentrations.)

Credit Hours

Min
3

LAWWA601 - Comparative Equality Law

General

Subject Code ~
LAWWA

Course Number ~
601

Course Name (appears on the transcript) ~
Comparative Equality Law

Content

Description

By now, most states agree that the people, or at least citizens, enjoy equality before the law. How jurisdictions conceive of difference, create remedial mechanisms to address difference, and implement those mechanisms vary widely across the world. This class examines the material conditions of difference (race, gender, indigeneity, religion, sexuality, caste, etc.), legislation at domestic and international levels, and law's impact on eradicating discrimination, overcoming difference, redistributing social goods, and ensuring equality. We will read case law, legislation, and equality strategies from Canada, China, France, Germany, Hong Kong, India, Japan, South Korea, Turkey, US, UK, and leading opinions from the major international human rights tribunals: ECHR, UNHRC, IACHR. Students will develop insight into the strengths and weaknesses of the US equality models, what international law can and cannot do, and the limits on law more generally. (Credit may be applied toward Internatonal & Comparative Law Practice Concentration.)

Credit Hours

Min
2

LAWWA602 - Law & Religion

General

Subject Code ~
LAWWA

Course Number ~
602

Course Name (appears on the transcript) ~
Law & Religion

Content

Description

This course explores the First Amendment's Establishment and Free Exercise Clauses. The course will examine Supreme Court opinions interpreting the Religion Clauses from early cases up to the present. This examination will make clear the significant changes that have occurred in the Court's approach to the Establishment and Free Exercise Clauses and the relationship between the two clauses. Some of the topics to be studied include public school prayer, government funding of religious education, religious symbols on government property, and the right of religious believers to be exempt from the need to comply with laws that burden their religious beliefs and practices. This course counts towards the upper-level writing requirement. (This course can be counted towards the Public Interest Practice concentration.)

Credit Hours

Min
2

LAWWA623 - Title IX: Sex Discrimination in Edu.

General

Subject Code ~
LAWWA

Course Number ~
623

Course Name (appears on the transcript) ~
Title IX: Sex Discrim. in Edu.

Content

Description
Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex ineducational institutions receiving federal funds. In the course, students will examine Title IX'sapplications in the context of athletics, curriculum, single-sex education, sexual harassment, pregnancy and parenting, and employment of teachers and coaches. Students will be invited to analyze and evaluate the statute's efficacy at securing gender equality in education, both in absolute terms and relative to othersources of law such as the federal and state constitution equal protection clauses, and stateand local antidiscrimination statutes. Title IX will also serve as a lens through which studentswill engage with broader topics such as statutory and regulatory interpretation, damages andimmunity, feminist legal theory, and cultural studies. (Credits may be applied toward Gender & Sexuality Law concentration.)

Credit Hours

Min
2

LAWWA631 - Critical Race Theory

General

Subject Code ~
LAWWA

Course Number ~
631

Course Name (appears on the transcript) ~
Critical Race Theory

Content

Description
CRT examines how the social category of race is defined and produced by the law but also how race shapes and gives meaning to the law. CRT challenges both the substance and style of conventional legal scholarship by thinking or outright rejecting formal notions of equality, individual right, and color-blind approaches to solving legal problems. By deploying both controversial and innovative methodologies, Critical Race scholarship has transformed how we understand the relationship between race, social power, and the law. This course will discuss the origins and major tenets of Critical Race Theory, examine the development of Critical Race Theory as a significant paradigm of legal scholarship and advocacy, and outline its connection to Critical Legal Studies, Feminist jurisprudence, and Queer Theory. (Credits may be applied towards Criminal Law Practice, Public Interest Practice and Gender & Sexuality Law Concentrations)

Credit Hours

Min
2

LAWWA642 - Law & Social Change

General

Subject Code ~
LAWWA

Course Number ~
642

Course Name (appears on the transcript) ~
Law & Social Change

Content

Description
This seminar offers an investigation of issues faced by lawyers representing low-income clients and serving under-represented, disenfranchised groups. Cases, theoretical readings and historical texts are interwoven with several ends in mind: first, to provide a glimpse into the range of public interest work lawyers are engaged in and the intellectual foundations that guide these efforts; second, to consider the contexts in which the tools of public interest advocacy are more or less effective, with particular

emphasis on the relationship of public interest lawyering to social movements of disenfranchised groups in American society. Third, to expose students to ethical issues and career development challenges that arise for public interest practitioners. The course grade will be based on students completing a variety of short written exercises, class participation and a major research paper. (Credits may be applied toward Gender & Sexuality Law and Public Interest Practice concentrations.)

Credit Hours

Min
2

LAWWA644 - Domestic Violence

General

Subject Code ~
LAWWA

Course Number ~
644

Course Name (appears on the transcript) ~
Domestic Violence

Content

Description
This course combines a scholarly and practice-oriented approach to understanding the legal response to domestic violence. Throughout the course, we will focus on the social context of battering, including how the experience of abuse is shaped by gender, race, cultural identity, immigration status, sexual orientation, and disabilities. We will cover the various legal remedies in both civil and criminal contexts and examine their efficacy. These include the role of protective orders in both civil and criminal courts. We will also discuss domestic violence in relation to divorce, child custody, support, visitation, and the child protection matters. Gender violence as a human rights violation, sexual assault law, and the role of the domestic violence movement are also introduced. The focus of this course is to examine current challenges and shortcomings in the legal response to domestic violence, and then consider proposals for alternative strategies for systemic change. (Credits may be applied toward Criminal Law Practice, Gender & Sexuality Law, and Public Interest Practice concentrations.)

Credit Hours

Min
2

LAWWA676 - Cannabis Law and Policy

General

Subject Code ~
LAWWA

Course Number ~
676

Course Name (appears on the transcript) ~
Cannabis Law and Policy

Content

Description
This course will focus on how society regulates cannabis. This course takes an in-depth look at the history and current evolving approaches to cannabis regulation, including preemption; legal, professional and business ethics; and enforcement policy. Students enrolling in the seminar must prepare a research paper, make a presentation to the class, and actively participate in class discussion. Students will work with the professor to select a topic for the research paper, which can be drawn from topics covered in class or another topic of interest to the student and acceptable to the professor. This course counts towards the upper level writing requirement. (Course formerly known as Marijuana Law) (Credits may be applied toward Public Interest Practice and Transactional Law Practice concentrations.)

Credit Hours

Min
3

LAWWA690 - Sexual Orientation Gender Identity & Law

General

Subject Code ~
LAWWA

Course Number ~
690

Course Name (appears on the transcript) ~
Sexual Orientation, Gender Law

Content

Description
This course is an examination of the legal and policy issues surrounding state and private attempts to regulate and/or discriminate on the basis of sexual orientation and gender identity and expression. Topics covered in the course include (1) the due process right to privacy, (2) equal protection analysis, (3) family law issues including current cases challenging marriage exclusion (4) employment discrimination, with particular emphasis on possibilities to pursue non-discrimination law by transgender people (5) sexual orientation and gender expression as gender discrimination, among other relevant contemporary topics. (This course counts towards the upper level writing requirement.)

Credit Hours

Min
3

LAWWA705 - Investigations & Exonerations

General

Subject Code ~
LAWWA

Course Number ~
705

Course Name (appears on the transcript) ~
Investigations & Exonerations

Content

Description
TBA

Credit Hours

Min
2

LAWWA792 - International Human Rights

General

Subject Code ~
LAWWA

Course Number ~
792

Course Name (appears on the transcript) ~
International Human Rights

Content

Description
The international human rights project attempts to apply inalienable, indivisible, interdependent,and universal protections/rights ahead of the dictates of a "sovereign" leader or community.This course asks students to consider the development of those rights (political, economic,and cultural); the context for the application of rights; and the impact on a legal system that historically required the agreement of a sovereign that speaks for a state in an internationalsystem. Rights will be considered on a local, national, regional, and international level,including through the United Nations system. (This course counts towards the upper level writingrequirement.) (Credits may be applied toward International and Comparative Law Practice andPublic Interest Practice concentrations.)

Credit Hours

Min
3

LAWWA835 - Business Law & Racism

General

Subject Code ~
LAWWA

Course Number ~
835

Course Name (appears on the transcript) ~
Business Law & Racism

Content

Description
Laws that regulate, control, facilitate, support or encourage economic development (collectively, "business law"), are one foundational aspect of the United States socio-economic system. Racism is also a foundational aspect of the United States socio-economic system. This class will explore the intersection of business law and racism and the impacts business law has had, both intentionally and inadvertently, on perpetuating systemic racism in the United States. The goal is that students will increase their knowledge of substantive principles of business law and concurrently develop their own cultural competency by exploring how any law, as a foundational aspect of our "system," has and can continue to directly perpetuate or alleviate systemic racism. Understanding how race impacts business law, and vice-versa, will not be a tangential aspect of the class addressed through occasional anecdotal diversions, but rather the intersection will be at the forefront of all discussions. The seminars will require participation in those "uncomfortable conversations" that will undoubtedly expose the implicit and explicit biases we all (students, faculty, guest facilitators) possess. However, it is the goal that the seminar will create a safe space to have these conversations wherein there is mutual respect and humility and, at the same time, a recognition that each person is at a different stage in their personal development of cultural competency. There is no textbook that addresses business law in this manner (yet) and therefore the material will consist entirely of collected readings. These readings have been compiled based both on the instructor's frame of reference as well as suggestions from colleagues. It is a work in progress from that perspective and student input is welcome.

Credit Hours

Min
2

LAWWA890 - Special Topics

General

Subject Code ~
LAWWA

Course Number ~
890

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWWA891 - Special Topics

General

Subject Code ~
LAWWA

Course Number ~
891

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWWA892 - Special Topics

General

Subject Code ~
LAWWA

Course Number ~
892

Course Name (appears on the transcript) ~
Special Topics

Content

Description
Topics offered depend upon student interests as well as particular interests of instructors. This course is offered as often as faculty time and student interest permit and may be repeated for credit if the topic differs.

Credit Hours

Max
6

Min
1

LAWWA975 - Money, Law and Power

General

Subject Code ~
LAWWA

Course Number ~
975

Course Name (appears on the transcript) ~
Money, Law and Power

Content

Description
In this course we read, discuss and write about (1) Black banks and the racial wealth gap; (2) how to fix the tax system so it stops impoverishing Black Americans, (3) white collar crime; and (4) the deficit myth. Four books are assigned, and students will choose one them as a primary focus for either an essay on an in-class final exam (or, if they choose, a final paper that builds from that topic). By immersing in contemporary non-fiction works by three law professors and one economist, this course teaches students new ways of thinking, talking, and writing about the relationship between money, power, and the law in America in the 21st Century. We will begin the course with a vocabulary/concept list and by the end of the term students will have developed definitions for these terms.

Credit Hours

Min
2

LLME801 - Wills & Trusts: Design, Drft, Impl

General

Subject Code ~
LLME

Course Number ~
801

Course Name (appears on the transcript) ~
Wills & Trusts: Design & Draft

Content

Description
In this course, students will learn to design and draft wills and trusts. The course is an intensive study of the laws of wills and trusts. Students will learn the basic skills necessary to transfer property from the owner to the beneficiary in an efficient manner and to draft the documents and presentations that are an integral part of estate planning.

Credit Hours

Min
2

Requisites

Free Form Requirements
Admission to the LLM Program at the School of Law

LLME802 - Fiduciary Administration

General

Subject Code ~
LLME

Course Number ~
802

Course Name (appears on the transcript) ~
Fiduciary Administration

Content

Description
This course is a survey of the fiduciary powers and duties of executors and trustees in the administration of estates and trusts. Topics will include qualifications of a fiduciary, potential liabilities, and conflicts of interests of a fiduciary. Special consideration will be given to an attorney's role in representing the estate, the trust, and/or the fiduciary.

Credit Hours

Min
2

Requisites

Free Form Requirements
Admission to the LLM Program at the School of Law

LLME803 - Federal Wealth Transfer Taxes

General

Subject Code ~
LLME

Course Number ~
803

Course Name (appears on the transcript) ~
Federal Wealth Transfer Taxes

Content

Description
This course is a study of the basic principles of the federal transfer tax system, including estate tax, gift tax, and generation-skipping tax. The topics included in this course are retained interests, powers of appointment, lifetime transfers, life insurance, marital deduction, definition of gift, transfers to revocable and irrevocable trusts, and gifts to minors.

Credit Hours

Min
2

Requisites

Free Form Requirements
Admission to the LLM Program at the School of Law

LLME804 - Federal Income Tax Estates & Trusts

General

Subject Code ~
LLME

Course Number ~
804

Course Name (appears on the transcript) ~
Fed Income Tax Estate & Trusts

Content

Description
This course studies the income tax issues for estates, trusts, and beneficiaries. Topics that will be examined include grantor trust rules, simple trusts, complex trusts, distributable net income, distributions in-kind, assignment of income, and income in respect of a decedent.

Credit Hours

Min
2

Requisites

Free Form Requirements
Admission to the LLM Program at the School of Law

LLME805 - Wealth Planning w/Life Insurance

General

Subject Code ~
LLME

Course Number ~
805

Course Name (appears on the transcript) ~
Wealth Plan w/Life Insurance

Content

Description
This course will consider the various uses of life insurance in wealth planning, including funding buy/sell agreements, providing liquidity for the estate, and restoring capital used for taxes. Areas of study will include the use of irrevocable life insurance trusts, as well as various life insurance products.

Credit Hours

Min
2

Requisites

Free Form Requirements
Admission to the LLM Program at the School of Law

LLME806 - LLM Final Drafting Project

General

Subject Code ~
LLME

Course Number ~
806

Course Name (appears on the transcript) ~
LLM Final Drafting Project

Content

Description
The final project is a simulation course in which the student must design and draft a comprehensive estate plan under the supervision of an estate planner. The student will be given a hypothetical problem that will require complex estate planning. The student will be required to prepare detailed memoranda to the estate planner explaining the student's proposed estate plan design. The project will culminate with the drafting of sophisticated estate planning documents. This course is limited to 8 students.

Credit Hours

Min
4

LLME807 - Elder Law

General

Subject Code ~
LLME

Course Number ~
807

Course Name (appears on the transcript) ~
Elder Law

Content

Description
This course concentrates on the legal problems associated with the elderly and issues of aging. Topics of discussion will include social, psychological, legal, and financial aspects of planning for the elderly. Issues will include Medicare benefits, Medicaid benefits, nursing home institutionalization, social security, and estate planning. This course is limited to 12 students.

Credit Hours

Min
2

LLME813 - Probate Litigation

General

Subject Code ~
LLME

Course Number ~
813

Course Name (appears on the transcript) ~
Probate Litigation

Content

Description
Probate Litigation is a course on how probate courts handle matters, such as admitting wills and assigning executors, guardianship and conservatorship, powers of attorney, advocate designations and living wills.

Credit Hours

Min
2

LLME814 - Law Practice Management

General

Subject Code ~
LLME

Course Number ~
814

Course Name (appears on the transcript) ~
Law Practice Management

Content

Description
Law Practice Management is a course that supports the lawyer to become business owner. The course will present the practical aspects of entrepreneurship that will facilitate the growth, development and success of a Law Firm.

Credit Hours

Min
2

LLME815 - Special Needs Trust Administration

General

Subject Code ~
LLME

Course Number ~
815

Course Name (appears on the transcript) ~
Special Needs Trust Admin

Content

Description
A special needs trust is a mechanism allowing a disabled person to receive distributions/income without disturbing their eligibility for means tested government benefits. Just as important as properly drafting a special needs trust is the administration of the trust. This course will examine, in detail, the applicable Supplemental Security Income ("SSI") and Medicaid rules for benefit eligibility and special needs trusts, the different types of special needs trusts, funding a special needs trust, the unique duties of a special needs trustee, allowable distributions/payments from a special needs trust, reporting requirements, and terminating a special needs trust.

Credit Hours

Min
2

LLME816 - Legal Capacity, Adv.Direc.&guardianship

General

Subject Code ~
LLME

Course Number ~
816

Course Name (appears on the transcript) ~
Legal Capacity, Adv.Directives

Content

Description
Cognitive competency is the presumed foundation for all legal transactions and medical decision making. This course guides the elder law/ trust and estates practitioner through the thorny issue of legal capacity in contractual, testamentary and medical settings. We discuss the legal definition of capacity, and the various issues and setting affecting capacity, including cognitive decline, minority, intellectual and physical disability and undue influence and duress. We will discuss the different legal standards for determining if the requite level of capacity exists and discuss the tools that can be used to make capacity determination, and advance directives and planning that can assist loved ones/professionals in caring for the temporarily and permanently incapacitated. The second part of the class is devoted to guardianship proceedings to protect and care for the incapacitated, usually in the absence of advance directives. The course work will include researching assigned reading, relevant state legislation and case law, drafting advance directives and a moot guardianship proceeding.

Credit Hours

Min
2

LLME820 - Income Tax for Estate Planners

General

Subject Code ~
LLME

Course Number ~
820

Course Name (appears on the transcript) ~
Income Tax for Estate Planners

Content

Description
This course will focus on income tax issues that are essential for estate planning. The topics in this course will include the income tax treatment of bequests and inheritances; the income tax treatment of gifts; basis rules; income taxation of life insurance and annuities; tax rules for sale of a personal residence; taxation of exchanges; fundamentals of capital gains; tax deferred like-kind exchanges; concepts concerning the time value of money, imputed interest and the original issue discount rules; installment sales; income in respect of a decedent; assignment of income and the income taxation of deferred compensation.

Credit Hours

Min
2

LLME832 - Business Succession Planning

General

Subject Code ~
LLME

Course Number ~
832

Course Name (appears on the transcript) ~
Business Succession Planning

Content

Description
This course will consider the issues that owners of closely held businesses face in the operation and disposition of their business interests. The course will consider the operational and transfer problems for unrelated business owners as well as the operational and transfer problems for family owned businesses. Areas of study will include buy/sell agreements, life insurance, and alternative methods of succession.

Credit Hours

Min
2

LLME833 - Life & Estate Planning for Retire. Plans

General

Subject Code ~
LLME

Course Number ~
833

Course Name (appears on the transcript) ~
Life & Est. Plan. Retire Plans

Content

Description
This course will examine and provide solutions to the problems presented in both lifetime planning and estate planning for traditional and Roth retirement plans such as IRAs, 401(k)s, and 403(b)s. Areas of discussion will include spousal rights, designation of beneficiaries, rollover options, with a heavy emphasis on the Required Minimum Distribution Rules and naming trusts as death beneficiaries of retirement plans. Course instruction is newly updated for the SECURE Act which became effective January 1, 2020. Professor Worthington wrote the Issues Brief submitted to Congress by the National Academy of Elder Law Attorneys which resulted in the Joint Committee on Taxation redrafting of the Act to preserve lifetime Required Minimum Distribution for Special Needs Trusts. (Formerly: Estate Planning Retirement Benefit)

Credit Hours

Min
2

LLME834 - Planning for Charitable Transfers

General

Subject Code ~
LLME

Course Number ~
834

Course Name (appears on the transcript) ~
Planning Charitable Transfers

Content

Description
This course will explore the income, estate and gift tax consequences of gifts to charities. The course will focus on the use of both public charities and private charities. Topics will include the design and drafting of charitable remainder trusts and other split interest gifts, and the use of private foundations in the estate planning process.

Credit Hours

Min
2

LLME836 - Income Tax of Pass-Through Entities

General

Subject Code ~
LLME

Course Number ~
836

Course Name (appears on the transcript) ~
Income Tax Pass-Through Ent

Content

Description
This course focuses on the income tax treatment of partnerships, limited liability companies, and Subchapter S corporations. Areas of study will include tax consequences from the operation of the entity, the tax consequences from retirement or death of an owner, from the redemption of an owner's interest, and from the liquidation or sale of the entity.

Credit Hours

Min
2

LLME838 - Adv Issues Elder Law

General

Subject Code ~
LLME

Course Number ~
838

Course Name (appears on the transcript) ~
Adv Issues Elder Law

Content

Description
This course will be an in-depth study of a selective number of advanced topics in Elder Law that have not been covered in the basic Elder Law course, including legal capacity issues, governmental benefits, and financial and estate planning. Prerequisite is LLME 807 Elder Law.

Billing Hours

Min
2

Credit Hours

Min
2

LLME840 - Special Needs Planning

General

Subject Code ~
LLME

Course Number ~
840

Course Name (appears on the transcript) ~
Special Needs Planning

Content

Description
Special needs trusts and supplemental needs trusts (both commonly known as SNTs) allow a disabled beneficiary to receive gifts, inheritances, lawsuit settlements, or other funds and yet not lose his or her eligibility for certain government programs such as Supplemental Security income (SSI) and Medicaid. SNTs can be set up by parents or other persons for a disabled child or relative and later receives the proceeds of a personal injury award or settlement. This course is designed to provide a practical guide to using different types of SNTs each with its own eligibility standards-planning for and administering the trusts, integrating them into larger estate plans, and drafting tips and common traps for the planner and clients.

Credit Hours

Min
2

LLME841 - Drafting Revocable Trusts

General

Subject Code ~
LLME

Course Number ~
841

Course Name (appears on the transcript) ~
Drafting Revocable Trusts

Content

Description
This course is a detailed review and analysis of revocable living trusts and the role they play in estate planning, including an in-depth understanding of the effective use of various tax-based clauses.

Credit Hours

Min
2

LLME843 - International Estate Planning

General

Subject Code ~
LLME

Course Number ~
843

Course Name (appears on the transcript) ~
International Estate Planning

Content

Description
Clients with international interests are on the rise. This course examines the profile of a multinational client in need of estate and income tax planning. Foundational concepts, such as the reach of the U.S. transfer and income tax system outside U.S. borders are covered, as well as the situs rules for various types of assets and the concept of residency. The operation of both credits and deductions available in an international context are explored as well as a focus on charitable planning for charities overseas. Pre-immigration planning for the multinational coming to the U.S., as well as expatriation planning for the U.S. citizen or resident is explored, along with a focus on the recent exit tax and federal inheritance tax laws. Income tax planning for both of these populations will also be covered, as well as the recent foreign bank account income and reporting issues common to these populations. Foreign Trusts, estates and beneficiaries will be discussed. The use of tax treaties throughout all of the topics will be discussed.

Credit Hours

Min
2

LLME844 - Medicaid Planning

General

Subject Code ~
LLME

Course Number ~
844

Course Name (appears on the transcript) ~
Medicaid Planning

Content

Description
This course covers Community and Institutional Medicaid; Medicaid Waivers; Rules regarding Categorical, Medical, and Financial Eligibility; Relationship to Social Security Supplemental Security Income; Rules regarding Asset Transfers, Liens and Estate Recovery; Treatment of Spouses and other Special Individuals; and Rules regarding Trusts; Use of Trusts and Trust Drafting. If time permits, we will examine the relationship with VA Aid & Attendance benefits and how VA benefits influence Medicaid trust drafting. There is a final paper, but a significant emphasis on class participation (especially student discussion of hypotheticals via non-real-time posts to Kodiak in between classes). Helpful but not required: Law 807 Elder Law; Law 804 Federal Income Taxation of Trusts & Estates; Law 803 Federal Wealth Transfer Taxes; Law 801 Wills and Trusts: Design, Drafting and Implementation.

Credit Hours

Min
2

LLME845 - Planning w/Grantor Trusts

General

Subject Code ~
LLME

Course Number ~
845

Course Name (appears on the transcript) ~
Planning w/Grantor Trusts

Content

Description
The Grantor Trust Rules govern when a transfer to trust is a completed transfer for income tax purposes; if the transfer is incomplete, the trust is a Grantor Trust and the trust income is taxed as though belonging to the grantor. From this simple concept flows powerful consequences. But while the concept is simple, the rules are not. This class walks through the Grantor Trust Rules more slowly and in much greater depth than possible in a one-semester class on Income Taxation of Trusts & Estates. In addition, students will learn the advantages and disadvantages of Grantor Trust Status as well as pitfalls and opportunities in drafting and trustee selection. We will compare & contrast the Grantor Trust Rules with the less complex rules for when a transfer is complete for gift & estate tax purposes, as well as Medicaid and SSI purposes, and thereby derive methods of drafting so that a transfer to trust is incomplete for some purposes while being complete for other purposes. Knowledge of the Grantor Trust Rules permits one to become truly a virtuoso draftsperson! Course grading is based on a combination of class participation, informal homework, and a take-home final examination. Prerequisites: LLME 804: Federal Income Tax of Estates & Trusts; LLME 803: Federal Wealth Transfer Taxes.

Credit Hours

Min
2

LLME846 - Policy and Planning

General

Subject Code ~
LLME

Course Number ~
846

Course Name (appears on the transcript) ~
Policy and Planning

Content

Description

This course will provide an in-depth survey of aging and elder issues related to financial security, Social Security, Medicare, Medicaid, tax policies, health care policies, elder fraud, and emerging technologies. The nexus between politics and policy will be examined. Moreover, we will explore elder advocacy and grassroots mobilization in states and the federal government.

Billing Hours

Min
2

Credit Hours

Min
2

LLME847 - Elder Abuse

General

Subject Code ~
LLME

Course Number ~
847

Course Name (appears on the transcript) ~
Elder Abuse

Content

Description

This course will examine the legal implication of the physical, emotional and sexual abuse, as well as the financial exploitation of elders. Topics will include healthcare fraud, criminal liability for intentional, reckless and negligent conduct resulting in physical harm, and a survey of State and Federal statutes, including the 2010 Elder Justice Act and the 2017 Elder Abuse and Prevention and Prosecution Act.

Credit Hours

Min
2

LMSE802 - Fiduciary Adminnistration

General

Subject Code ~
LMSE

Course Number ~
802

Course Name (appears on the transcript) ~
Fiduciary Adminnistration

Content

Description

This course is a survey of the fiduciary powers and duties of executors and trustees in the administration of estates and trusts. Topics will include qualifications of a fiduciary, potential liabilities, and conflicts of interests of a fiduciary. Special consideration will be given to an attorney's role in representing the estate, the trust, and/or the fiduciary.

Credit Hours

Min
2

LMSE803 - Federal Wealth Transfer Taxes

General

Subject Code ~
LMSE

Course Number ~
803

Course Name (appears on the transcript) ~
Federal Wealth Transfer Taxes

Content

Description
This course is a study of the basic principles of the federal transfer tax system, including estate tax, gift tax, and generation-skipping tax. The topics included in this course are retained interests, powers of appointment, lifetime transfers, life insurance, marital deduction, definition of gift, transfers to revocable and irrevocable trusts, and gifts to minors.

Credit Hours

Min
2

LMSE804 - Federal Icome Tax Estates & Trusts

General

Subject Code ~
LMSE

Course Number ~
804

Course Name (appears on the transcript) ~
Federal Icome Tax Estates

Content

Credit Hours

Min
2

LMSE805 - Wealth Planning With Life Insurance

General

Subject Code ~
LMSE

Course Number ~
805

Course Name (appears on the transcript) ~
Wealth Planning With Life Ins.

Content

Description
This course will consider the various uses of life insurance in wealth planning, including funding buy/sell agreements, providing liquidity for the estate, and restoring capital used for taxes. Areas of study will include the use of irrevocable life insurance trusts, as well as various life insurance products.

Credit Hours

Min
2

LMSE807 - Elder Law

General

Subject Code ~
LMSE

Course Number ~
807

Course Name (appears on the transcript) ~
Elder Law

Content

Credit Hours

Min
2

LMSE814 - Law Practice Management

General

Subject Code ~
LMSE

Course Number ~
814

Course Name (appears on the transcript) ~
Law Practice Management

Content

Credit Hours

Min
2

LMSE816 - Leg. Cap. Adv. Direct. & Guardianship

General

Subject Code ~
LMSE

Course Number ~
816

Course Name (appears on the transcript) ~
Legal Capacity, Adv.Directives

Content

Credit Hours

Min
2

LMSE820 - Income Tax for Estate Planners

General

Subject Code ~
LMSE

Course Number ~
820

Course Name (appears on the transcript) ~
Income Tax for Estate Planners

Content

Credit Hours

Min
2

LMSE832 - Business Succession Planning

General

Subject Code ~
LMSE

Course Number ~
832

Course Name (appears on the transcript) ~
Business Succession Planning

Content

Description

This course will consider the issues that owners of closely held businesses face in the operation and disposition of their business interests. The course will consider the operational and transfer problems for unrelated business owners as well as the operational and transfer problems for family owned businesses. Areas of study will include buy/sell agreements, life insurance, and alternative methods of succession.

Billing Hours

Min
2

Credit Hours

Min
2

LMSE833 - Estate Planning for Reitrement Plans

General

Subject Code ~
LMSE

Course Number ~
833

Course Name (appears on the transcript) ~
Estate Planning for Reitrement

Content

Credit Hours

Min
2

LMSE834 - Planning Charitable Transfers

General

Subject Code ~
LMSE

Course Number ~
834

Course Name (appears on the transcript) ~
Planning Charitable Transfers

Content

Credit Hours

Min
2

LMSE836 - Income Tax of Pass Through Entities

General

Subject Code ~
LMSE

Course Number ~
836

Course Name (appears on the transcript) ~
Income Tax of Pass Through Ent

Content

Description

This course focuses on the income tax treatment of partnerships, limited liability companies, and Subchapter S corporations. Areas of study will include tax consequences from the operation of the entity, the tax consequences from retirement or death of an owner, from the redemption of an owner's interest, and from the liquidation or sale of the entity.

Credit Hours

Min
2

LMSE840 - Special Needs Planning

General

Subject Code ~
LMSE

Course Number ~
840

Course Name (appears on the transcript) ~
Special Needs Planning

Content

Credit Hours

Min
2

LMSE844 - Medicaid Planning

General

Subject Code ~
LMSE

Course Number ~
844

Course Name (appears on the transcript) ~
Medicaid Planning

Content

Billing Hours

Min
2

Credit Hours

Min
2

LMSE845 - Planning W/Grantor Trusts

General

Subject Code ~
LMSE

Course Number ~
845

Course Name (appears on the transcript) ~
Planning W/Grantor Trusts

Content

Credit Hours

Min
2

LMSE847 - Elder Abuse

General

Subject Code ~
LMSE

Course Number ~
847

Course Name (appears on the transcript) ~
Elder Abuse

Content

Credit Hours

Min
2

LSOC101 - Law & Society I: Intro to Law & Society

General

Subject Code ~
LSOC

Course Number ~
101

Course Name (appears on the transcript) ~
Law & Society I: Law & Society

Content

Description
This is an introductory survey course which examines the interrelation between law and society, viewing law as a cultural development and a product of history, religion, philosophy, economics, politics, and geography. The survey will emphasize the development of legal concepts and institutions in the United States, as well as in other societies and on the international level.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

LSOC102 - Law & Society Ii: Legal/Social Just

General

Subject Code ~
LSOC

Course Number ~
102

Course Name (appears on the transcript) ~
Law & Society II: Legal

Content

Description
This course explores the relationship between various conceptions of legal and social justice as well as the relationships between law, justice, and politics. Featured prominently are the nature and the sociopolitical implications of the American "carceral state" and the rise of "crimmigration".

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

LSOC207 - Introduction to Political Theory

General

Subject Code ~
LSOC

Course Number ~
207

Course Name (appears on the transcript) ~
Introduction Political Theory

Content

Description
Survey course designed to introduce students to major political thinkers and schools of thought with an emphasis on classical liberalism and the social contract tradition.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
POSC 101 or POSC 102 or INST 101, or 3 crs of European history, or Sophomore Standing

LSOC225 - Law & Judicial Politics

General

Subject Code ~
LSOC

Course Number ~
225

Course Name (appears on the transcript) ~
Law & Judicial Politics

Content

Description
This course will explore the basic principles and categories of American law, its processes and institutions. We will look at the legal profession, the guardians of the law, from their education to their roles in the legal system, and we will examine our courts and judges and the politics that surround their work.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete POSC 102 Not open to those w/POSC 325, POSC 326 or CJ 234

LSOC226 - The Legal Profession

General

Subject Code ~
LSOC

Course Number ~
226

Course Name (appears on the transcript) ~
The Legal Profession

Content

Description
This course introduces the legal profession from the perspective of both law practitioners and the social sciences; provides an inside view of the practice of law as well as social science perspectives on the role of the lawyer in society; considers issues associated with access to justice, legal ethics, and cause-lawyering among others; clarifies the connections between the goals of liberal education, on the one hand, and legal education, on the other; and compares and contrasts the values, perspectives, and assumptions of social science and ethics with those of the legal profession.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete one of: POSC 101, 102, LSOC 101, 102, or CJ 101 or Sophomore Standing

LSOC290 - Special Topics in Law & Society

General

Subject Code ~
LSOC

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics Law & Society

Content

Description
Topics in law and society that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

LSOC307 - Justice, Diversity, and Democratic Citiz

General

Subject Code ~
LSOC

Course Number ~
307

Course Name (appears on the transcript) ~
Justice, Diversity, and Democr

Content

Description
LSOC 307/POSC 307 examines how contemporary liberal democracies can and should come to terms with issues of national, cultural, ethnic, religious, and racial diversity. The course considers (1) whether, under what conditions, and to what extent national, cultural, ethnic, religious, and racial minorities can and should be accommodated, integrated, and/or assimilated in society and (2) to what extent (and in what ways) the state can and should promote a particular ideal of liberal democratic citizenship.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior Standing

LSOC325 - Constitutional Law

General

Subject Code ~
LSOC

Course Number ~
325

Course Name (appears on the transcript) ~
Constitutional Law

Content

Description
This is a study of constitutional principles as decided by the U.S. Supreme Court. Emphasis is on the Court's roles as arbiter of federalism and separation of powers and interpreter of the Bill of Rights and the Civil War Amendments.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 102, and Junior Standing

LSOC330 - Contemporary Political Theory

General

Subject Code ~
LSOC

Course Number ~
330

Course Name (appears on the transcript) ~
Contemporary Political Theory

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

LSOC333 - Indep Study in Law & Society

General

Subject Code ~
LSOC

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Law & Society

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

LSOC334 - Indep Study in Law & Society

General

Subject Code ~
LSOC

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Law & Society

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

LSOC340 - International Law & Organization

General

Subject Code ~
LSOC

Course Number ~
340

Course Name (appears on the transcript) ~
Int'l Law & Organization

Content

Description
This is analysis of international law and organization in the 20th century. Special attention is paid to landmark cases and principles as well as to the structure and processes of the United Nations, European Community, and other experiments in international organization.

Credit Hours

Min
3

Requisites

Free Form Requirements
POSC 101/INST 101 or POSC 102 Junior Standing

LSOC344 - Comparative Law & Justice

General

Subject Code ~
LSOC

Course Number ~
344

Course Name (appears on the transcript) ~
Comparative Law & Justice

Content

Description
This course is designed to familiarize students with courts, legal practice, and the administration of justice in countries outside of the United States. Students will survey the world's major legal traditions and the way in which these different systems deliver justice. This includes an examination of constitutional foundations, law enforcement, rules of procedure, court organization, legal professionals, sentencing, and corrections. Throughout the semester, students will be challenged to consider comparisons and contrasts between the justice system of the U.S. with those of select countries from Europe, Asia, Latin America and Africa.Students cannot receive credit for both LSOC-344 and CJ-344.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete one of: LSOC 101, 102, POSC 101, 102, or Sophomore standing

LSOC390 - Special Topics in Law & Society

General

Subject Code ~
LSOC

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics Law & Society

Content

Description
Topics in law and society that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

LSOC391 - Special Topics in Law & Society

General

Subject Code ~
LSOC

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics Law & Society

Content

Description
Topics in law and society that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

LSOC395 - Special Topics in Law & Society

General

Subject Code ~
LSOC

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics Law & Society

Content

Description
Topics in law and society that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

LSOC440 - Undergrad Research in Law & Society

General

Subject Code ~
LSOC

Course Number ~
440

Course Name (appears on the transcript) ~
Undergrad Resrch Law & Society

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing or permission of instructor

LSOC441 - Undergrad Research in Law & Society

General

Subject Code ~
LSOC

Course Number ~
441

Course Name (appears on the transcript) ~
Undergrad Resrch Law & Society

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing or permission of the instructor

LSOC480 - Internship in Law & Society

General

Subject Code ~
LSOC

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Law & Society

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

LSOC481 - Internship in Law & Society

General

Subject Code ~
LSOC

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Law & Society

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

LSOC490 - Senior Seminar Law & Society

General

Subject Code ~
LSOC

Course Number ~
490

Course Name (appears on the transcript) ~
Senior Seminar Law & Society

Content

Description
This course explores advanced topics in law and society, with a particular focus on questions of civil and criminal justice and individuals' access thereto. Students in the course will be required to research and write a substantial research term paper.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing or permission of the Chair of the Department

MADR101 - Elementary Spanish I

General

Subject Code ~
MADR

Course Number ~
101

Course Name (appears on the transcript) ~
Elementary Spanish I

Content

Credit Hours

Min
3

MADR119 - Ethics

General

Subject Code ~
MADR

Course Number ~
119

Course Name (appears on the transcript) ~
Ethics

Content

Credit Hours

Min
3

MADR332 - Indep Study

General

Subject Code ~
MADR

Course Number ~
332

Course Name (appears on the transcript) ~
Indep Study

Content

Credit Hours

Min
3

MADR367 - Politics of Spain

General

Subject Code ~
MADR

Course Number ~
367

Course Name (appears on the transcript) ~
Politics of Spain

Content

Credit Hours

Min
3

MADR407 - Hispanic Cinema

General

Subject Code ~
MADR

Course Number ~
407

Course Name (appears on the transcript) ~
Hispanic Cinema

Content

Credit Hours

Min
3

MADR450 - Study Abroad University of Madrid

General

Subject Code ~
MADR

Course Number ~
450

Course Name (appears on the transcript) ~
Study Abroad Univ Madrid

Content

Credit Hours

Min
6

MADR451 - Study Abroad University of Madrid

General

Subject Code ~
MADR

Course Number ~
451

Course Name (appears on the transcript) ~
Study Abroad Univ Madrid

Content

Credit Hours

Min
6

MAET533 - Indep Study in English for Teachers

General

Subject Code ~
MAET

Course Number ~
533

Course Name (appears on the transcript) ~
Indep Study in Engl for Teach

Content

Credit Hours

Min
3

MAET552 - Adv Grammar

General

Subject Code ~
MAET

Course Number ~
552

Course Name (appears on the transcript) ~
Adv Grammar

Content

Description
This course reviews the rules and conventions of Standard Written English, with emphasis on the assessment and development of student writing.

Credit Hours

Min
3

MAET553 - Teaching Writing English Curriculum

General

Subject Code ~
MAET

Course Number ~
553

Course Name (appears on the transcript) ~
Teaching Writing English Curr

Content

Description
This course covers principles of rhetoric, including both composition theory and the application of rhetorical principles to the evaluation and development of student writing

Credit Hours

Min
3

MAET554 - Teaching Engl in Multicultural Clrm

General

Subject Code ~
MAET

Course Number ~
554

Course Name (appears on the transcript) ~
Teach English in Multicul Clrm

Content

Description
This course focuses on the need to develop pedagogical strategies for the multicultural English classroom. Goals for the course are to develop an understanding of contrastive rhetoric, sociolinguistics, and cross-cultural communication in educational settings.

Credit Hours

Min
3

MAET556 - Reading Process in Engl Curriculum

General

Subject Code ~
MAET

Course Number ~
556

Course Name (appears on the transcript) ~
Reading Process in Engl Curr

Content

Description
This course applies the hierarchy of skills in the reading process to the English curriculum. Emphasis is on a) assessing needs and approaching remedies and b) developing skill in critical analysis of literature.

Credit Hours

Min
3

MAET557 - Reading/Teaching Young Adult Literature

General

Subject Code ~
MAET

Course Number ~
557

Course Name (appears on the transcript) ~
Read/Teaching Young Adult Lit

Content

Description
This course will examine the genre of young adult literature and present various approaches to some key texts. It will begin by situating YA as a genre - as well as the relatively new designation of "teenagers" as a distinct group of people, let alone as a group of readers - and go back to some nineteenth century texts that laid the foundation for contemporary YA lit. Examination will include traditional "canonical" novels, lyric novels, graphic novels, fantasy, realism, bestsellers and more "literary" YA fiction and explore the ways in which the texts present the complexities of gender, race, ethnicity, and sexuality in a world in which those concepts are shifting and for readers for whose identities are equally in flux. Many of these texts can be used in middle and high school classrooms, alone or in tandem with a more "classic" text, as will be demonstrated.

Credit Hours

Min
3

Requisites

Free Form Requirements
For students in MAET program or with instructor's permission

MAET560 - Lit Studies: Shakespeare & Eliz Age

General

Subject Code ~
MAET

Course Number ~
560

Course Name (appears on the transcript) ~
Lit St: Shakespeare

Content

Description
This course examines representative Shakespearean plays and the culture in which they were produced. Relevant historical documents from Elizabethan and Jacobean England are studied alongside the plays, and pedagogical techniques for the teaching of Shakespeare and English Renaissance culture are both discussed and practiced.

Credit Hours

Min
3

MAET561 - Literary Studies: Poetry

General

Subject Code ~
MAET

Course Number ~
561

Course Name (appears on the transcript) ~
Lit St: Poetry

Content

Description
This is a comprehensive course, studying poetry with an eye towards teaching methods of interpretation. The class considers ways to make reading poetry more rewarding and enjoyable, but it also discusses questions of form and genre, meter and scansion, the use of historical and biographical approaches in tandem with close readings, the combinations of art and music with poetry, and philosophies of the purpose of poetry. Pedagogical techniques, especially creating assignments to help students understand and write about poetry from their own experiences in writing poems, are explored.

Credit Hours

Min
3

MAET563 - Lit St: Lit Genres in Amer & Wld Wrt

General

Subject Code ~
MAET

Course Number ~
563

Course Name (appears on the transcript) ~
Lit St: Lit Genres Am & Wld

Content

Description
Using selected texts from around the world, this course offers in-depth study of a range of literary genres and the conventions that distinguish them. Goals of the course include exploring how literary form reflects an author's purpose, how it shapes meaning, and how combining forms can uniquely express complex themes and issues. Genres studied are likely to include short stories, novels, plays, and memoirs.

Course may be repeated for credit if topic differs.

Credit Hours

Min
3

MAET564 - Lit St: Cultural Literary Connection

General

Subject Code ~
MAET

Course Number ~
564

Course Name (appears on the transcript) ~
Lit St: Cultural Lit Conn

Content

Description
This course examines representative works from a period of literature and studies the culture in which they were produced. Pedagogical techniques for relating literature to cultural context or historical backgrounds are discussed. This course may be repeated for credit if the topic differs.

Credit Hours

Min
3

MAET565 - Lit St: Great Works of American Lit

General

Subject Code ~
MAET

Course Number ~
565

Course Name (appears on the transcript) ~
Lit St: Great Wk Amer Lit

Content

Description
This course examines major works from the range of American literature, along with a few lesser known works that are important for context. It introduces various tools for fundamental literary analysis.

Credit Hours

Min
3

MAET566 - Literacy Studies-Mod American Lit

General

Subject Code ~
MAET

Course Number ~
566

Course Name (appears on the transcript) ~
Lit St: Mod American Lit

Content

Description
This course examines works of the second half of the 20th century, with an emphasis on literature from representative American cultural groups.

Credit Hours

Min
3

MAET567 - Lit Studies: 20th American Poetry

General

Subject Code ~
MAET

Course Number ~
567

Course Name (appears on the transcript) ~
Lit St: 20th Amer Poetry

Content

Description
This course introduces students to a representative selection of modern American poetry from the mid 18th century to the present. The course will concentrate on the poetry of Emily Dickinson, Robert Frost, Wallace Stevens, E. E. Cummings, Langston Hughes, T. S. Eliot, Robert Lowell, Sylvia Plath, and Billy Collins. Students will also have the opportunity to explore the works of other poets through oral presentations and written reports and to reinforce knowledge of poetic techniques as stipulated in the Massachusetts Curriculum Frameworks.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

MAET568 - Literature of the Harlem Renaissance

General

Subject Code ~
MAET

Course Number ~
568

Course Name (appears on the transcript) ~
Lit of the Harlem Renaissance

Content

Description
This course will engage in a study of African American literature from the early 1900s to the 1930s. Attention will be paid to the origins of the Harlem Renaissance, with particular focus on the political, social, and literary influences. We will address the debates that surrounded the movement, evaluating the Renaissance not only as a literary moment in Black History but also as a social movement that addressed the status and experience of Blacks in America during this time. We will read essays, novels, poetry and short stories from the movement, including but not limited to Du Bois, McKay, Hughes, Hurston, Fauset, and Larsen

Credit Hours

Min
3

Requisites

Free Form Requirements
Enrolled in MAET program, or approval of instructor

MAET569 - Literary Theory: Sources & Application

General

Subject Code ~
MAET

Course Number ~
569

Course Name (appears on the transcript) ~
Literary Theory: Sources & App

Content

Description
As teaching the reading of texts through a variety of "critical lenses" is a crucial part of both the Massachusetts grades 5-12 requirement and necessary for literary analysis in general, this course is essential. It provides the foundations of contemporary literary theories in their philosophical roots, from Aristotle to Hegel to Marx to Foucault, and examines contemporary critical lenses including Marxism, feminism, psychoanalytic criticism, deconstruction, and post-colonial critiques. Adding praxis to theory, students will apply a variety of these modes of analysis to multiple literary texts.

Credit Hours

Min
3

Requisites

Free Form Requirements
A student in good Standing in MAET program, or with instructor's permission

MAET570 - Capstone Project

General

Subject Code ~
MAET

Course Number ~
570

Course Name (appears on the transcript) ~
Capstone Project

Content

Description
The capstone seminar provides students with a broad understanding of contemporary literary theory and with the opportunity to reflect on how their coursework has impacted their teaching. The primary component of the seminar, however, is the production of an article-length piece of literary scholarship. Students work with the instructor and their classmates in developing topics, which may or may not involve pedagogical issues, and in researching and writing their projects. At least half of each class session is held in a workshop format, and the course concludes with the presentation of projects to all Master of Arts in English for Teachers students and faculty.

Credit Hours

Min
3

MAET573 - Women Writers and Feminist Theory

General

Subject Code ~
MAET

Course Number ~
573

Course Name (appears on the transcript) ~
Women Writers & Feminist Theor

Content

Description
This course focuses on important women writers of the twentieth and twenty-first century. We'll be looking at women writers from a variety of eras, genres, approaches, and perspectives, paying special consideration to issues of gender, race, sexuality, socioeconomics, and politics, as well as feminist work in psychology, history, philosophy, and linguistics.?

Credit Hours

Min
3

MAET590 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET591 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET592 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
592

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET593 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
593

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET594 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
594

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET595 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
595

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET596 - Special Topics in English for Teachers

General

Subject Code ~
MAET

Course Number ~
596

Course Name (appears on the transcript) ~
Special Topics Engl for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAET633 - Indep Study in English for Teachers

General

Subject Code ~
MAET

Course Number ~
633

Course Name (appears on the transcript) ~
Indep Study in Engl for Teach

Content

Credit Hours

Min
3

MAMT533 - Indep Study in Math for Teachers

General

Subject Code ~
MAMT

Course Number ~
533

Course Name (appears on the transcript) ~
Indep Study in Math for Teach

Content

Credit Hours

Min
3

MAMT540 - Calculus Revisited: Theory & Application

General

Subject Code ~
MAMT

Course Number ~
540

Course Name (appears on the transcript) ~
Calculus Revisited: Thry & App

Content

Description
A review of differential and integral calculus from single-variable to multi-variable with an emphasis on theory and applications. Topics include functions, limits, continuity, differentiation, integration, infinite sequences, infinite series, partial differentiation, and multiple integration. Technology will be used when appropriate.

Credit Hours

Min
3

MAMT542 - History of Mathematics

General

Subject Code ~
MAMT

Course Number ~
542

Course Name (appears on the transcript) ~
History of Mathematics

Content

Description
Although mathematics can be studied with little or no knowledge of its history, it would be a mistake to believe that history has no place in a mathematics classroom. Understanding how the early Greeks thought about such matters can only enhance the study of geometry. Understanding Book I of Euclid's elements can explain what motivated 19th century mathematicians to consider non-Euclidean geometry. We often ask students to experiment with integers, but rarely tell them that some of the greatest mathematicians became famous because of their work in number theory. Recalling that the origins of probability theory came from a correspondence between Pascal and Fermat regarding a gambling game can enliven the study of probability. This course will examine several of these important contributions from their beginnings and place them in a historical context. The goal of the course is to make mathematics more meaningful to students and teachers because they will have seen mathematics from the moment of discovery.

Credit Hours

Min
3

MAMT543 - Linear Algebra

General

Subject Code ~
MAMT

Course Number ~
543

Course Name (appears on the transcript) ~
Linear Algebra

Content

Description
This course is the study of the topics and techniques of linear algebra. There are many real world problems in engineering, economics, and the sciences that can be reduced to solving systems of linear equations. In the course, we shall consider the problem of solving linear systems; we shall then study matrices and determinants and the role they play in solving linear systems. Then the course turns to the study of Euclidean n-space and linear transformations, eigenvectors and eigenvalues. The course will introduce one to mathematical modeling and its role in problem solving, as well as to an axiomatic approach to studying mathematics. Many applications will be considered throughout the course, and a TI-83 or TI-84 graphing calculator will be used extensively.

Credit Hours

Min
3

MAMT544 - Creative Problem Solving in Math

General

Subject Code ~
MAMT

Course Number ~
544

Course Name (appears on the transcript) ~
Creative Prob Solv in Math

Content

Description
How do we solve problems in mathematics? This question has many nuances, ranging from specific techniques (should one use algebra or geometry?) to general strategies (try an example!) to psychology (don't give up immediately out of intimidation). In this class we will examine the strategies, tactics, and tools of mathematical problem solving that encompass all of these nuances, as well as touch on how an awareness of problem solving can influence the way we teach mathematics. We will use many different areas of math to solve a wide variety of problems, and there will be emphasis on communicating problem solutions, both in writing and orally.

Credit Hours

Min
3

MAMT545 - Cryptology

General

Subject Code ~
MAMT

Course Number ~
545

Course Name (appears on the transcript) ~
Cryptology

Content

Description
This course presents the history of and the mathematics behind the major developments in cryptography and cryptanalysis over the centuries. Symmetric ciphers such as monoalphabetic, polyalphabetic, and polygraphic are covered, as well as the modern-day public-key cryptosystem known as RSA. Emphasis is placed on gaining a deeper understanding of the mathematics used in these cryptographic methods and of the statistical tools for cryptanalysis.

Credit Hours

Min
3

MAMT547 - Statistics

General

Subject Code ~
MAMT

Course Number ~
547

Course Name (appears on the transcript) ~
Statistics

Content

Description
This course introduces statistical thinking in applied settings, with the goal of enabling students to use such thinking in their everyday lives. Topics may include: interpretations of probability, axioms and rules of probability, independence, random variables, distributions, graphical and numerical techniques for presenting data, central limit theorem, introduction to linear regression, point estimation, and hypothesis testing. Emphasis is on understanding and interpreting, not on computations.

Credit Hours

Min
3

MAMT548 - What Is Mathematics?

General

Subject Code ~
MAMT

Course Number ~
548

Course Name (appears on the transcript) ~
What Is Mathematics?

Content

Description
This course considers some of the greatest ideas of humankind - ideas comparable to the works of Shakespeare, Plato, and Michelangelo. The great ideas that will be explored are within the realm of mathematics. What is mathematics? Mathematics is an artistic endeavor which requires both imagination and creativity. Students will experience what mathematics is all about by delving into some beautiful and intriguing issues in such areas as topology, number theory, analysis, logic, graph theory, and probability. Although students will be challenged, the overriding theme of the course is to gain an appreciation for mathematics, to discover the power of mathematical thinking, and to have each student realize his or her own individual answer to the question What is mathematics?

Credit Hours

Min
3

MAMT550 - Discrete Mathematics

General

Subject Code ~
MAMT

Course Number ~
550

Course Name (appears on the transcript) ~
Discrete Mathematics

Content

Description
This is an introduction to mathematical thinking with emphasis on finding patterns, making conjectures, and learning methods to solve problems and prove theorems. The topics include sets, relations, functions, the language of mathematics, exploration and proof, mathematical induction, cardinality, algorithms, and recursion. Cross-listed with MATH-550.

Credit Hours

Min
3

MAMT552 - Geometry Revisited

General

Subject Code ~
MAMT

Course Number ~
552

Course Name (appears on the transcript) ~
Geometry Revisited

Content

Description
Most of us have studied the geometry of Euclid in a single secondary school course, but many new ideas have sprouted since his time. New topics will include transformations, isometrics, vectors, and non-Euclidean geometries. Selected classical topics of angle measurement, length, area, volume, polygons, circles, spheres, and deductive reasoning will also be included.

Credit Hours

Min
3

MAMT554 - Number Theory

General

Subject Code ~
MAMT

Course Number ~
554

Course Name (appears on the transcript) ~
Number Theory

Content

Description
This course explores patterns and relationships between numbers, beginning with basic properties of the integers first encountered in elementary school: even and odd numbers, clock arithmetic, and divisibility tests. Generalizations of these topics, such as modular arithmetic and congruences, will be covered, along with such topics as the Euclidean algorithm, prime factorization, the greatest common divisor, linear Diophantine equations, the Chinese Remainder Theorem, and Euler's phi-function.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAMT 550, or permission of the department

MAMT556 - Graph Theory

General

Subject Code ~
MAMT

Course Number ~
556

Course Name (appears on the transcript) ~
Graph Theory

Content

Description
This course is a study of structures such as nets of polyhedra and, more generally, graphs and digraphs. Fundamental concepts include paths, cycles, trees, connectivity, matchings, networks, tournaments, planarity, Hamiltonian graphs, Eulerian graphs, and graph colorings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAMT 550, or permission of the department

MAMT561 - Probabilty

General

Subject Code ~
MAMT

Course Number ~
561

Course Name (appears on the transcript) ~
Probability

Content

Description
Probability theory originated in games of chance during the late fifteenth and the early sixteenth centuries. In modern times, probability is typically coupled with statistics which requires a basic understanding of the subject, but this course will focus almost entirely on the pure probability side with reference to statistics in passing. The course begins with methods of streamlined counting known as combinatorics and move to discrete probabilities and then on to continuous probability models. There are many interesting, classic problems in counting and probability, especially the counterintuitive ones. As a check on the classical approach, solutions to some difficult probability problems, students will use simulations in R to empirically study probability. When appropriate, we will see how to introduce some topics to middle or high school students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAMT 550, or permission of the department

MAMT564 - Analysis

General

Subject Code ~
MAMT

Course Number ~
564

Course Name (appears on the transcript) ~
Analysis

Content

Description
After the discovery of calculus by Newton and Leibniz in the late 17th century, many advances in the solution of difficult mathematical and physical problems became possible. In the late 19th century and early 20th century, mathematicians attempted to put calculus and the study of real numbers on firmer logical ground. In this course, will study calculus from this more modern, rigorous viewpoint, emphasizing the important theorems and proofs that lead to a deeper understanding of the calculus. Topics will include sequences, limits, continuity, differentiation, integration, and the Fundamental Theorem of Calculus.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAMT 550, or permission of the department

MAMT566 - Algebraic Structures

General

Subject Code ~
MAMT

Course Number ~
566

Course Name (appears on the transcript) ~
Algebraic Structures

Content

Description
Elementary algebra consists of sets of real numbers and their operations with properties such as closure, commutativity, associativity, distributivity, inverses, and identity elements. At the more abstract level, algebraic structures called groups, rings, and fields have some, or all, of the same properties. This course, will examine these algebraic structures from a general point of view, compare different structures, and study structure-preserving maps. Applications of these structures in mathematics and the applied sciences will also be introduced.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAMT 550 or MAMT 554, or permission of department

MAMT568 - Mathematical Modeling

General

Subject Code ~
MAMT

Course Number ~
568

Course Name (appears on the transcript) ~
Mathematical Modeling

Content

Description
This course is an introduction to mathematical modeling. The emphasis will be on learning to analyze a real-world situation or problem, in order to distill from it important information, and to learn mathematical techniques to encode this information in equation form, and then solve the equations, interpreting the mathematical solution back in the real-world situation. Topics covered will be selected from difference equations, Markov chains, graph theory, regression analysis, and linear programming, as well as other areas depending upon the interests of the students.

Credit Hours

Min
3

MAMT570 - The Mathematics of Symmetry

General

Subject Code ~
MAMT

Course Number ~
570

Course Name (appears on the transcript) ~
Mathematics of Symmetry

Content

Description
The goal of the course is to learn the rudiments of basic Group Theory through the symmetry of planar designs, both finite and infinite. Emphasis is placed on using pattern and symmetry to motivate properties of groups and on gaining mathematical sophis-tication by studying and doing proofs about various properties of groups.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAMT 550 or MAMT 554, or permission of the department

MAMT590 - Special Topics in Math for Teachers

General

Subject Code ~
MAMT

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics Math for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAMT591 - Special Topics in Math for Teachers

General

Subject Code ~
MAMT

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics Math for Teach

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

MAN190 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description
This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
3

MAN204 - Management & Organizational Behavior

General

Subject Code ~
MAN

Course Number ~
204

Course Name (appears on the transcript) ~
Mgmt & Organization Behavior

Content

Description

The course examines individual, interpersonal, and group behavior in organizations. Coverage includes OB concepts as they influence effective management practice and leadership. Course content is designed to facilitate the attainment of key learning outcomes focused on the understanding and recognition of: the role that personality and perception play in influencing behavior in organizations; concepts associated with effective work design; theories and concepts of decision-making and problem solving; theories and concepts of motivation; theories and concepts of leadership; and theories and concepts from the behavioral sciences in developing strategies for effective teamwork and other organizational processes.

Offered: Fall and Spring

Credit Hours

Min
3

MAN240 - Business & Society

General

Subject Code ~
MAN

Course Number ~
240

Course Name (appears on the transcript) ~
Business & Society

Content

Description

This course explores the connections between businesses and the wider social environment of which they are a part. Key learning outcomes focus on: recognition of ethical issues with respect to business activities, the basis for government regulation of business and business' involvement in the public policy process, identification and analysis of stakeholder issues, and the nature of corporate social responsibility.This course can be taken to fulfill the PH 211 requirement.Students cannot take both PH 211 and MAN 240/HONB 240 for credit.This course does not fulfill the ethics requirement for COAS or COE students.Offered: Fall and Spring

Credit Hours

Min
3

Requisites

No Requirements

MAN290 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description

This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
1

MAN303 - Interpersonal Skills for Leading

General

Subject Code ~
MAN

Course Number ~
303

Course Name (appears on the transcript) ~
Interpersonal Skills for Lead

Content

Description
Competency in interpersonal skills is essential for leadership in organizations. This course utilizes theory and research in the social and behavioral sciences to identify best practices in the interpersonal dimensions of leading. Key learning outcomes include the development of interpersonal skills involved in active listening, providing feedback, effective persuasion, and managing conflict in a diverse workplace. Course includes career readiness element.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MAN 204/HONB 204 and COMM 233

MAN311 - International Management

General

Subject Code ~
MAN

Course Number ~
311

Course Name (appears on the transcript) ~
International Management

Content

Description
This course focuses on issues of nations and cultures with respect to central themes in management practice including motivation, communication, negotiation, leadership, ethics and social responsibility, organizational structure, human resources, and diversity. Learning outcomes are focused on the recognition and application of relevant concepts and practices with respect to: an awareness of the influence of culture on behavior, particularly in terms of leadership, motivation, decision-making, and conflict; familiarity with the types of situations and issues that managers many confront when working internationally and/or returning home; and an appreciation for the complexity of ethics and social responsibility in the global environment.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete MAN 204/HONB 204

MAN315 - Organizational Theory

General

Subject Code ~
MAN

Course Number ~
315

Course Name (appears on the transcript) ~
Organizational Theory

Content

Description
The course examines organizations at a macrolevel in order to develop skills for analyzing the complicated situations in contemporary organizations. Key learning outcomes focus on the understanding and application of: vocabular y of organization theory; recognizing existing organizational theories, models, and concepts; historical approaches to organizational theorizing; strengths and weaknesses of different organizational designs; the role of conflicting perspectives, ambiguity, paradox, and contradictions as they relate to organizational life; inherent tensions of specialization, and integration that characterize organizational designs and processes.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MAN 204/HONB 204 or SO-101

MAN322 - Managing a Diverse Workforce

General

Subject Code ~
MAN

Course Number ~
322

Course Name (appears on the transcript) ~
Managing a Diverse Workforce

Content

Description
As the labor force becomes increasingly diverse, a strong emphasis is being placed on diversity-related issues of all kinds in the workplace. Diversity in the workplace may result from differences in individual characteristics such as gender, race, ethnicity, national origin, age, religion, and physical ability/disability. Organizations need to address diversity issues in some manner if they are to compete effectively in a global economy. But what should an organization actually do about increased diversity in the workplace other than watch it happen? To address this question, this course examines issues related to managing and being a member of an increasingly diverse workforce. Learning how to deal with these issues in a manner that preserves the integrity and takes advantage of the contributions of all members of the workforce, regardless of their personal characteristics and group memberships, is encouraged.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Completer MAN 204/HONB 204, PSY 101, or SO 101

MAN331 - Humanistic Apprch to Ldrshp & Mgmt

General

Subject Code ~
MAN

Course Number ~
331

Course Name (appears on the transcript) ~
Hum Apprch to Ldrshp Mgmt

Content

Description
The course provides a study of fiction, biography, drama, and film as primary sources to arrive at a better understanding of how effective leadership and management occur. Key learning outcomes focus on the understanding, use, and problem solving applications associated with: the basic differences among successful leadership styles and situational factors; personal leadership styles; leadership skills such as initiative, planning, and risk taking; application of humanistic leadership principles to work and family situations; effective leadership decisions; non-traditional learning sources in everyday leadership opportunities.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAN 204/HONB 204

MAN333 - Indep Study in Management

General

Subject Code ~
MAN

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Management

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

MAN334 - Indep Study in Management

General

Subject Code ~
MAN

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Management

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

MAN341 - Leadership & Change

General

Subject Code ~
MAN

Course Number ~
341

Course Name (appears on the transcript) ~
Leadership & Change

Content

Description
This course focuses on the leadership challenges in organizations pursuing change. Key learning outcomes in the course include the understanding, use, and problem-solving applications associated with a range of current perspectives on the key elements of effective leadership, the fundamental elements and best practices in the area of organizational change, and the concepts of leadership and change.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MAN 204/HONB 204

MAN353 - Leadership & Team Skills

General

Subject Code ~
MAN

Course Number ~
353

Course Name (appears on the transcript) ~
Leadership & Team Skill

Content

Description
This course provides the opportunity to examine leadership issues from historical, sociological, and psychological perspectives, and to practice leadership and group skills within the classroom. Readings from historical biographies, sociology, and psychology will be used to gain insights into a range of leadership qualities and abilities. Students will also take a number of assessment instruments that will help them determine their own leadership profiles and will guide them in refining their skills during the semester. Students will be assigned to a specific small group that will perform an array of activities and serve as the context for personal skill building. Students will learn how to analyze a variety of leadership functions and develop a reflective practice that will enable them to continue to perfect their leadership skills in the future.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior or Senior Standing

MAN370 - Project Management

General

Subject Code ~
MAN

Course Number ~
370

Course Name (appears on the transcript) ~
Project Management

Content

Description
This course introduces the project management discipline and focuses on critical success factors in achieving project success. The roles managers and technical professionals fulfill in the project development process will be explored with emphasis on the skill set demanded for successful project participation, contribution, and completion. Current trends in project management will be analyzed with emphasis on the impact of globalization. Key learning outcomes include: an understanding of standard project management processes, analytical techniques used in project management, and the different roles and responsibilities in projects.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MAN 204/HONB 204

MAN390 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description
This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
3

MAN391 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description
This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
3

MAN393 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description
This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
3

MAN422 - Conflict Resolution

General

Subject Code ~
MAN

Course Number ~
422

Course Name (appears on the transcript) ~
Conflict Resolution

Content

Description
This course provides in-depth coverage of conflict-resolution in organizational settings. Key learning outcomes focus on conflict styles and response alternatives along with various modes of resolution including alternative dispute resolution, third-party intervention, mediation, and arbitration.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete MAN 204/HONB 204

MAN466 - Senior Seminar Management & Leadership

General

Subject Code ~
MAN

Course Number ~
466

Course Name (appears on the transcript) ~
Senior Sem in Mgmt & Leadersh

Content

Description
The course provides students with an enhanced understanding of current perspectives on management and leadership. Key learning outcomes focus on new models of leadership practice the integration of management and leadership imperatives in global and diverse organizations, and current practices of ethical, socially responsible, and creative managerial problem-solving. Course includes career readiness element.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MAN 303, HRM 323, and MAN 370, and Senior Management and Leadership majors only

MAN480 - Internship in Management

General

Subject Code ~
MAN

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Management

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MAN481 - Internship in Management

General

Subject Code ~
MAN

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Management

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MAN490 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description
This is a study of advanced topics in management of special interest to management majors, but not offered on a regular basis.

Credit Hours

Min
3

MAN600 - Foundations of Leadership Practice

General

Subject Code ~
MAN

Course Number ~
600

Course Name (appears on the transcript) ~
Foundations of Leadership

Content

Description
This course provides an introduction to the development of individual leadership practice. This is accomplished through consideration of various theories and models of leadership as well as related skills and competencies. Key learning outcomes include: leadership models relevant to life and work; effective leadership techniques for organizational success; importance of followership to leadership; relevance of diversity to leadership.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN605 - Leadership, Problem Solve & Dec Mak

General

Subject Code ~
MAN

Course Number ~
605

Course Name (appears on the transcript) ~
Leadership Prob Sol & Dec

Content

Description
Organizations need leaders at all levels with the capacity to identify problems and make decisions in the development and support of strategic and operational goals. This course examines the role of leaders in conjunction with different problem solving and decision making processes for creatively addressing organizational challenges. Key learning outcomes include: explain leadership's role in individual or organizational performance; generate alternative solutions to organizational challenges or opportunities; assess the strengths and weaknesses of both rational and intuitive approaches to decision making, explain a creative problem solving process, and identify ethical considerations in problem solving and decision making.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN610 - Organizational Behavior & Theory

General

Subject Code ~
MAN

Course Number ~
610

Course Name (appears on the transcript) ~
Organiz Behavior & Theory

Content

Description
This course examines structural and behavioral factors influencing performance in organizations. Key learning outcomes include: integration of international and cross-cultural variables relating to OB and organizational theory; analysis of the behavioral aspects of existing organizational problems; structural aspects of organizational challenges; the relevance of individual, group, and organizational dynamics; and ethical issues and challenges in organizations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN611 - Business & Its Environment

General

Subject Code ~
MAN

Course Number ~
611

Course Name (appears on the transcript) ~
Business & Its Environment

Content

Description
This course examines the social, economic, and political environment facing business and its leaders in the 21st century. Coverage includes the economic dynamics of the global marketplace, demographic trends and their impact on the organization, public policy and regulatory issues, the relationship between business and governments, and the nature of business ethics and corporate social responsibility. The goal of this course is to enhance students' ability to meet multifaceted challenges facing managers in the business environment.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN630 - Leadership & the Human Experience

General

Subject Code ~
MAN

Course Number ~
630

Course Name (appears on the transcript) ~
Leadership & Human Exper

Content

Description
This course explores leadership and the human experience as it is depicted in fiction, biography, drama and film in order to better understand the historical and social construction of leadership theory and practice. Key learning outcomes include: an appreciation for the historical nature of leadership theory and practice, increased awareness of the value of literature and film in framing effective leadership practices; differences among successful-and unsuccessful leadership styles; areas of strength and deficiency in personal leadership styles; humanistic principles in analyzing ethical conflicts in leadership and management situations; leadership/management challenges such as initiative, planning, and assessment of calculated risk-taking; decision-making utilizing non-traditional learning sources in everyday leadership opportunities.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN631 - Human Resource Management

General

Subject Code ~
MAN

Course Number ~
631

Course Name (appears on the transcript) ~
Human Resource Management

Content

Description
This course considers the management of human resources in an enterprise. Key learning outcomes include: managerial decision-making that recognizes the strategic role of HRM; legal issues associated with HR activities such as selection and compensation; effective hiring practices in training; setting and administration of compensation levels; effectiveness of pay for performance systems; performance appraisal systems; theories of job design and the motivational impact of jobs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN632 - Diversity in the Workplace

General

Subject Code ~
MAN

Course Number ~
632

Course Name (appears on the transcript) ~
Diversity in Workplace

Content

Description
This course examines issues related to managing and being a member of an increasingly diverse workforce. Diversity in the workplace may result from differences in individual characteristics such as gender, race, ethnicity, national origin, age, religion, physical ability/disability, and sexual orientation. Organizations that wish to be successful must address diversity issues in some manner in order to compete effectively in a global economy. The goal of this course is for students to learn to manage a pluralistic work force in such a way as to maximize personal and organizational goals while preserving integrity and taking advantage of the contributions of all members of the workforce. Key learning outcomes include: legal, moral and businesses arguments for effective management of workplace diversity, theoretical perspectives at the individual, interpersonal and macro-structural level used to analyze issues associated with workplace diversity, human resource strategies to effectively manage workforce diversity, the role of power and privilege in issues of workplace diversity, evaluate the effectiveness of diversity training.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN640 - Management & Conflict Resolution

General

Subject Code ~
MAN

Course Number ~
640

Course Name (appears on the transcript) ~
Mngt & Conflict Resolutn

Content

Description
This course provides an overview of the broad range of conflict situations that occur in organizations, including employee-relations issues. Key learning outcomes focus on conflict resolution processes including grievance procedures, alternative dispute resolution (ADR), and other conflict resolution strategies. Managerial practices are current trends and explored.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN642 - Leading Change

General

Subject Code ~
MAN

Course Number ~
642

Course Name (appears on the transcript) ~
Leading Change

Content

Description
This course examines the system-wide application of behavioral science knowledge to the planned development, improvement, and reinforcement of the strategies, structures, and processes that lead to organizational effectiveness. Key learning outcomes include; the nature of planned change, the diagnostic relationship, designing interventions, and leading and managing change.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing, or admission to Leadership Certificate program

MAN645 - Methods of Organizational Research

General

Subject Code ~
MAN

Course Number ~
645

Course Name (appears on the transcript) ~
Methods Organiza Research

Content

Description
This course introduces students to various quantitative and qualitative research methods used to study organizational life. The intent of the course is to provide students with an understanding of the underlying philosophies and approaches pursued by organizational researchers and different methodological approaches for investigating organizational research questions. Key learning outcomes include: different approaches to organizational research and their underlying philosophical assumptions, methodologies suitable for investigating different types of research questions, the meaning of important statistical indicators featured in quantitative analyses, the main features of different qualitative methods, and the ability to evaluate organizational research in published studies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MAN651 - Ethical Leadership Practice

General

Subject Code ~
MAN

Course Number ~
651

Course Name (appears on the transcript) ~
Ethical Leadership Pract

Content

Description
This course examines and reflects upon the inevitable moral dilemmas and ethical responsibilities facing business professionals. Learning outcomes include: role of corporate governance; relative needs of stakeholders; arguments from moral philosophy legal arguments; social and cultural customs; and a personal code of ethics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing, or admission to certificate program

MAN652 - Contemp Issues in Leadership

General

Subject Code ~
MAN

Course Number ~
652

Course Name (appears on the transcript) ~
Contemp Issues in Leaders

Content

Description
This course examines current issues in leadership practice. Topics may include leading for creativity, leading for sustainability, leading in the electronic age, leading a diverse workforce, and leadership as it relates to particular industries or domains such as health care, non-profits, education, etc. Course content and topics will vary.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or admission to certificate program

MAN690 - Special Topics in Management

General

Subject Code ~
MAN

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Management

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MATH100 - Algebra Fundamentals

General

Subject Code ~
MATH

Course Number ~
100

Course Name (appears on the transcript) ~
Algebra Fundamentals

Content

Description
This course is a review of the fundamentals of high school algebra, as well as some of college algebra, and is designed for students who need a review in preparation for mathematics courses required by their major. Topics include a review of algebra concepts of real numbers, solving equations and inequalities in both one and two variables, systems of equations and inequalities, and rational expressions.

May not be counted toward the GUR Mathematical Analysis requirement. May be taken for credit only as a general elective.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
One year of secondary school algebra, or placement recommendation

MATH101 - Essential Math Skills

General

Subject Code ~
MATH

Course Number ~
101

Course Name (appears on the transcript) ~
Essential Math Skills

Content

Description
This course is designed to assist students who need extra practice in many of the skills necessary to be successful in MATH 111. This includes reading for understanding and writing for clarity as well as working with linear, quadratic, polynomial and exponential functions. Students will practice essential Algebra skills such as finding and graphing equations of lines, multiplying binomials, solving quadratic equations, graphing linear inequalities, solving systems of equations, performing operations on polynomials, and working with exponents.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

MATH107 - Math for Elementary Education I

General

Subject Code ~
MATH

Course Number ~
107

Course Name (appears on the transcript) ~
Math for Elem Education I

Content

Description
This course is the first of a two-semester sequence in mathematics that satisfies the mathematics requirement for prospective elementary teachers. Topics include an examination of whole numbers, integers, arithmetic operations, and their associated properties. A study of set theory, numeration systems, and basic number theory is also included. Problem-solving techniques and use of models and manipulatives are integrated throughout the course.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Successful performance on the Western New England University placement test

MATH108 - Math for Elementary Education II

General

Subject Code ~
MATH

Course Number ~
108

Course Name (appears on the transcript) ~
Math for El Education II

Content

Description
This course is a continuation of MATH 107. A further study of the real number system, it focuses on exponents, decimals, and irrational numbers. Areas such as algebra, geometry, probability, and statistics are studied within the context of the elementary curriculum. Offered in the spring semester.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MATH 107, or permission of the instructor

MATH109 - Precalculus Mathematics

General

Subject Code ~
MATH

Course Number ~
109

Course Name (appears on the transcript) ~
Precalculus Mathematics

Content

Description
This course is designed to prepare students for Math 123, Math 127, or Math 133. The course begins with a review of essential algebra skills needed for calculus such as properties of exponents, simplifying rational expressions, and solving equations. Thereafter, a study of the properties and graphs of functions, including linear, quadratic, polynomial, exponential, and logarithmic functions.

Credit Hours

Min
3

MATH111 - Analysis for Business & Economics

General

Subject Code ~
MATH

Course Number ~
111

Course Name (appears on the transcript) ~
Analysis Bus & Eco

Content

Description
This course considers optimization and sensitivity analysis to support business decision making. Topics include building models for supply, demand, revenue, cost and profit; future and present value for compound interest (both discrete and continuous) problems and annuities; systems of equations; and linear programming.

Credit Hours

Min
3

Requisites

Free Form Requirements
Successful performance on WNEU placement exam

MATH114 - Trigonometry for Engineering and Science

General

Subject Code ~
MATH

Course Number ~
114

Course Name (appears on the transcript) ~
Trigonometry for Engin & Scie

Content

Description
This course is designed to help students increase their proficiency in trigonometry. Topics include a study of angles and their measures (in degrees and radians), the unit circle, right triangle trigonometry, trigonometric functions and their graphs, trigonometric identities, trigonometric equations, and inverse trigonometric functions.

Offered: Fall and Spring

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 109 or take concurrently or permission of the department

MATH115 - Contemporary Mathematics

General

Subject Code ~
MATH

Course Number ~
115

Course Name (appears on the transcript) ~
Contemporary Mathematics

Content

Description
This course is a survey of some contemporary applications of mathematics as well as quantitative literacy. Topics, which may vary each year, will be chosen from critical thinking, problem solving, logic, uncertainty, the Consumer Price Index, compounding, savings plans, investments, loans, credit cards and mortgages, income taxes, the Federal Budget, proportion and the golden ratio, voting, apportionment, and scheduling problems in the business world.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

MATH117 - Mathematical Reasoning

General

Subject Code ~
MATH

Course Number ~
117

Course Name (appears on the transcript) ~
Mathematical Reasoning

Content

Description
This course is intended to satisfy two objectives. One objective is to learn some of the methods that mathematics uses to solve problems. The areas of mathematics to be considered may include logic, algebra, geometry, number theory, counting (sometimes referred to as combinatorics), graph theory, etc. Also considered will be the role of proof in mathematics. A second objective is to learn how a mathematical approach can assist in the general endeavor of solving problems. The approach includes: stating problems clearly and concisely, determining what is important and what is irrelevant, making conjectures, justifying conclusions using logic, etc. Various problem-solving strategies will be introduced and applied. Offered: in the fall and spring semesters.

Credit Hours

Min
3

MATH120 - Intro Statistics for the A&S

General

Subject Code ~
MATH

Course Number ~
120

Course Name (appears on the transcript) ~
Intro Statistics for the A&S

Content

Description
This course offers an introduction to the basic descriptive and inferential statistics. Techniques for visualizing, analyzing, and interpreting data are explored. Topics include data display, data visualization, frequency distributions, measures of central tendency and dispersion, correlation and regression, nature of probability, confidence intervals, and one- and two-sample hypothesis testing.

Students cannot receive credit for MATH 120 and MATH 121 or QR 112.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Successful performance on Western New England University placement test

MATH121 - Intro to Probability & Statistics I

General

Subject Code ~
MATH

Course Number ~
121

Course Name (appears on the transcript) ~
Intro to Probability & Stats I

Content

Description
In this course, we introduce elementary probability, explore several measures of centrality and dispersion, introduce the estimation concept for both point and interval, and present the hypothesis testing concept. We complement the elementary probability with conditional probability and Bayes rule. In addition, we introduce linear regression and contingency tables as the main data analysis tool. As inferential tools we introduce the confidence interval and hypothesis testing for the mean.

Students cannot receive credit for MATH 121 and MATH 120 or QR 112

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Successful performance on Western New England University placement test

MATH123 - Calculus I Mgt, Life & Soc Sciences

General

Subject Code ~
MATH

Course Number ~
123

Course Name (appears on the transcript) ~
Calc I Mgt, Life & Soc Sci

Content

Description
This course is an introduction to the topics and techniques of calculus and is designed primarily for majors in business and the life and social sciences. It is a study of functions, including exponential and logarithmic functions, limits, continuity, the derivative, and applications of the derivative. Business related applied topics include supply and demand functions, and marginal cost, revenue, and profit. The techniques learned are applied in problems such as population trends, drug absorption rates, velocity, and acceleration. There is an emphasis on rates of change, curve sketching, and maximizing and minimizing functions.

Students cannot receive credit for MATH 123 and MATH 127 or MATH 133.

Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Three years of high school mathematics including two years of algebra

MATH124 - Calculus II Mgt, Life & Soc Sciences

General

Subject Code ~
MATH

Course Number ~
124

Course Name (appears on the transcript) ~
Calc II Mgt, Life & Soc Sci

Content

Description
This is a study of exponential and logarithmic functions, techniques and applications of integration, and multivariable calculus. Among the applied topics are models of growth and decay, continuous interest, payments on loans, consumers' and producers' surplus, and probability distributions. Credit for both this course and MATH 134 is not permissible. TI-83 calculator is required. Offered fall and spring semesters.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MATH 123 or MATH 127 or MATH 133

MATH127 - Calculus I With Pre-Calculus Review

General

Subject Code ~
MATH

Course Number ~
127

Course Name (appears on the transcript) ~
Calculus I With Pre-Calculus

Content

Description
This course is the first half of an introduction to single-variable calculus with an emphasis on trigonometric, exponential, and logarithmic functions, and incorporates a review of precalculus topics. Precalculus topics include domain and range of functions, function operations and transformations, polynomial and rational expressions, properties of exponents, inverse functions, exponential and logarithmic functions, trigonometric and inverse trigonometric functions, and solving equations and inequalities. Calculus topics include limits, continuity, the derivative, differentiation rules, applications of the derivative, antiderivatives, definite integrals, and the fundamental theorem of calculus.

Credit Hours

Min
5

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 109, or placement recommendation

MATH133 - Calculus I

General

Subject Code ~
MATH

Course Number ~
133

Course Name (appears on the transcript) ~
Calculus I

Content

Description
This course is the first half of an introduction to single-variable calculus with an emphasis on trigonometric, exponential, and logarithmic functions. Topics include functions, mathematical models, limits, continuity, the derivative and applications of the derivative, antiderivatives, the integral, and the fundamental theorem of calculus.

Credit for both this course and MATH 123 is not permissible.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete MATH 109 or the equivalent

MATH134 - Calculus II

General

Subject Code ~
MATH

Course Number ~
134

Course Name (appears on the transcript) ~
Calculus II

Content

Description
This course is the second half of an introduction to single variable calculus, with an emphasis on trigonometric, exponential, and logarithmic functions. Topics include antiderivatives, techniques of integration, applications of integration, infinite sequences and series, approximating functions, Taylor series and an introduction to differential equations. Parametric equations and polar coordinates are also introduced. Students cannot receive credit for both MATH 134 and MATH 124

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete MATH 127 or MATH 133

MATH150 - Applied Discrete Mathematics

General

Subject Code ~
MATH

Course Number ~
150

Course Name (appears on the transcript) ~
Applied Discrete Mathematics

Content

Description
Topics include congruence and modular arithmetic, counting techniques, relations and functions, sets, logic, probability, graphs, trees, and graph coloring. Applications include RSA cryptography, SQL, hash tables and register allocation.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

MATH190 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

MATH192 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

MATH194 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
194

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
4

MATH195 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
195

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

MATH221 - Introductory Probability & Statistics II

General

Subject Code ~
MATH

Course Number ~
221

Course Name (appears on the transcript) ~
Intro Probability & Stats II

Content

Description
Students continue their introduction to statistics, by furthering their understanding of the statistical topics and establishing statistical thinking.

Topics include basic probability theories, commonly used discrete and continuous distributions of random variables, estimation and inference for several parameters. Other statistical topics like ANOVA, nonparametric statistics, and Bayesian inference will be discussed as well. Basic calculation and simple simulations in R will be introduced.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH-120, MATH-121, BAIM-221, IE-212 or PSY-207

MATH235 - Calculus III

General

Subject Code ~
MATH

Course Number ~
235

Course Name (appears on the transcript) ~
Calculus III

Content

Description
This is an extension of the basic concepts of calculus to functions of several variables. Topics include vectors and vector-valued functions, partial differentiation and applications, multiple integration and applications, vector fields, and line integrals. A computer algebra system such as Mathematica may be used.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 134 or MATH 124

MATH236 - Differential Equations

General

Subject Code ~
MATH

Course Number ~
236

Course Name (appears on the transcript) ~
Differential Equations

Content

Description
This is a survey of the standard solution methods and applications of ordinary differential equations. The emphasis is on first and second order equations, and the topics include separation of variables, qualitative analysis, linear equations, harmonic motion, and Laplace transforms.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 134

MATH245 - Topics in Linear Algebra & Calculus

General

Subject Code ~
MATH

Course Number ~
245

Course Name (appears on the transcript) ~
Top: Linear Algebra & Cal

Content

Description
This course is a survey of topics from linear algebra and calculus. Topics from linear algebra include matrices and matrix operations, Euclidean n-space, solving systems of equations, linear transformations and orthogonal projections. Topics from calculus include polynomial, rational, exponential and logarithmic functions, limits, continuity, derivatives and optimization problems. Offered in fall semesters.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

MATH251 - Adv Discrete Mathematics

General

Subject Code ~
MATH

Course Number ~
251

Course Name (appears on the transcript) ~
Adv Discrete Mathematics

Content

Description
This is a study of proof techniques and the writing of mathematical arguments in areas such as set theory, number theory, relations, and functions. Emphasis is placed on this theory as it relates to computer science and computer programming. Topics also include mathematical induction, recursive definitions, cardinality, and computability.

Credit for both this course and MATH 281 is not permissible.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 150, or permission

MATH281 - Foundations of Mathematics

General

Subject Code ~
MATH

Course Number ~
281

Course Name (appears on the transcript) ~
Foundations of Mathematics

Content

Description
This course is an introduction to the foundational concepts necessary for the study of advanced mathematics. Topics include sets, logic, method of proof, mathematical induction, well ordering, relations, equivalence relations and functions. Emphasis will be placed on the deductive reasoning process and the writing of mathematical arguments.Students cannot receive credit for both MATH 281 and MATH 251.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 124 or MATH 134

MATH290 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

MATH302 - MTEL Preparation

General

Subject Code ~
MATH

Course Number ~
302

Course Name (appears on the transcript) ~
MTEL Preparation

Content

Description
This course will provide additional resources to help prospective secondary mathematics teachers prepare for and pass the MTEL Mathematics test. The course will examine the content and structure of the test as well as identify topics requiring further focus and study. Both multiple choice and open-response questions similar to the official test will be used. Students and the professor will prepare and present solutions to the class.

Offered on demand.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

MATH306 - Linear Algebra

General

Subject Code ~
MATH

Course Number ~
306

Course Name (appears on the transcript) ~
Linear Algebra

Content

Description
Topics covered in this course include vectors and matrices, systems of linear equations, vector spaces, determinants, eigenvalues and eigenvectors, and transformations. Applications in many fields are discussed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 124 or MATH 134 or MATH 251, or permission

MATH310 - Theory of Interest

General

Subject Code ~
MATH

Course Number ~
310

Course Name (appears on the transcript) ~
Theory of Interest

Content

Description
An introduction to the fundamental theory and concepts of financial mathematics and how they are applied to calculate present and future values of various cash flows. Topics include simple and compound interest, annuities, loan amortization, bonds, rates of investment return, term structure of interest rates, duration, and immunization.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Pre or Corequisite: MATH 134

MATH331 - Computation in Statistics

General

Subject Code ~
MATH

Course Number ~
331

Course Name (appears on the transcript) ~
Computation in Statistics

Content

Description
Students will learn computing skills essential in applied statistics. Topics will be presented using R or Python; LATEX (mathematical document preparation language); reproducible research; simulation methods (Monte Carlo studies, bootstrap, MCMC); statistical computing algorithms.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete MATH 221 and MATH 306, and CS 102/IT 102, CS 171, BAIM 315, or ENGR 105/HONE 105

MATH333 - Independent Study in Mathematics

General

Subject Code ~
MATH

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Mathematics

Content

Description
See "Independent Study".

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

MATH334 - Indep Study in Mathematics

General

Subject Code ~
MATH

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Mathematics

Content

Description
Prerequisite: Senior standing. See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

MATH350 - Vector Calculus and Fourier Series

General

Subject Code ~
MATH

Course Number ~
350

Course Name (appears on the transcript) ~
Vector Calculus & Fourier Ser

Content

Description
This course studies selected topics from vector calculus, line and surface integrals (including Theorems by Green, Gauss, and Stokes), Fourier series, and partial differential equations. The emphasis is on engineering applications.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 235 and MATH 236

MATH363 - Theory of Computation

General

Subject Code ~
MATH

Course Number ~
363

Course Name (appears on the transcript) ~
Theory of Computation

Content

Description
This course is a study of the mathematical models and theory that form a foundation for computer science. Topics include the theory of formal languages and their applications to computation, finite state automata, context-free grammars, Turing machines, and the theory of undecidability.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
MATH-251, and either CS-200 or IT-200, or permission of instructor

MATH371 - Modern Aspects of Geometry

General

Subject Code ~
MATH

Course Number ~
371

Course Name (appears on the transcript) ~
Mod Aspects of Geometry

Content

Description
This is an examination of various topics in geometry. Topics selected depend on the interests of the instructor and the needs of the students involved. Possible topics include finite geometries, Euclid's Elements (Book I), advanced topics in Euclidean geometry, Euclidean constructions and impossible constructions, transformations of the plane, non-Euclidean geometry, and projective geometry. Offered in alternate spring semesters.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH372 - Probability

General

Subject Code ~
MATH

Course Number ~
372

Course Name (appears on the transcript) ~
Probability

Content

Description
This is a calculus-based course in the theory of probability. Topics include sample spaces, combinatorics, axioms and rules of probability, conditional probability and independence, discrete and continuous random variables, mathematical expectation, and the moment generating function. Offered in alternate fall semesters.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MATH 235, or a Corequisite

MATH375 - Creative Problem Solving

General

Subject Code ~
MATH

Course Number ~
375

Course Name (appears on the transcript) ~
Creative Problem Solving

Content

Description
The course will discuss creative problems from all areas of mathematics. Students will learn problem-solving techniques, will combine some of the seemingly disparate parts of their mathematics background, and will gain an appreciation of new areas of mathematics by looking at some of the fundamental questions that illustrate the key ideas. There will be emphasis on student presentation and analysis of solutions, and students will learn how to present mathematical arguments while developing their mathematical creativity.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH377 - Elementary Number Theory

General

Subject Code ~
MATH

Course Number ~
377

Course Name (appears on the transcript) ~
Elementary Number Theory

Content

Description
This is the study of integers and their properties. The course provides an account of classical number theory as well as some of its historical background including divisibility, greatest common divisors, prime factorization, and congruences. Time permitting, further topics may include the theorems of Wilson, Fermat, and Euler; multiplicative functions; primitive roots; and applications of the classical subject area in cryptology. Offered in alternate spring semesters.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH378 - Combinatorics

General

Subject Code ~
MATH

Course Number ~
378

Course Name (appears on the transcript) ~
Combinatorics

Content

Description
Combinatorics concerns the mathematical theory of counting. This course emphasizes enumeration, but existence and construction issues will also be discussed. Topics include basic principles of combinatorics, distributions, inclusion-exclusion, generating functions, Polya theory, combinatorial designs, and error-correcting codes. Further topics can be selected from: Fibonacci numbers, partially ordered sets, Ramsey theory, and applications to graph theory.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH379 - Graph Theory

General

Subject Code ~
MATH

Course Number ~
379

Course Name (appears on the transcript) ~
Graph Theory

Content

Description
This is an introduction to graph theory and its applications through a modeling process. Topics include degrees, isomorphic graphs, trees, connectivity, traversability, matchings, planarity, coloring, digraphs, Ramsey Numbers, networks, and distance.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH383 - Mathematical Statistics

General

Subject Code ~
MATH

Course Number ~
383

Course Name (appears on the transcript) ~
Mathematical Statistics

Content

Description
This is a calculus-based course on the fundamental concepts of statistical theory. Topics include sampling distributions, order statistics, point estimation, interval estimation, hypothesis testing including Neyman-Pearson lemma, power function, goodness of fit tests and nonparametric tests.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete MATH 372

MATH384 - Applied Regression & Time Series

General

Subject Code ~
MATH

Course Number ~
384

Course Name (appears on the transcript) ~
App Regression & Time Series

Content

Description
A course in practical statistical methods with emphasis on data analysis and computation. Regression topics include simple and multiple linear regression, least squares, confidence intervals and hypothesis tests related to regression models, ANOVA, model selection, and diagnostics. Time series topics include time series modeling, estimation, and forecasting using ARMA models and ARIMA models.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete MATH 221 and MATH 306

MATH390 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Prerequisite(s) can vary depending on topic

MATH391 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

MATH401 - Long-Term Actuarial Models

General

Subject Code ~
MATH

Course Number ~
401

Course Name (appears on the transcript) ~
Long-Term Actuarial Models

Content

Description
This course covers models for single life contingencies - this is referred to as long term actuarial modeling. Topics include life random variables, survival distributions, life insurance and annuities, premium calculation, policy value, and benefit reserves.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

MATH402 - Short-Term Actuarial Models

General

Subject Code ~
MATH

Course Number ~
402

Course Name (appears on the transcript) ~
Short-Term Actuarial Models

Content

Description
This course introduces students to concepts involved in ratemaking and reserving for short-term coverages. Topics include frequency/severity models, parametric/non-parametric estimation, credibility, reserving as well as different ratemaking methods.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

MATH405 - Applied Stochastic Processes

General

Subject Code ~
MATH

Course Number ~
405

Course Name (appears on the transcript) ~
Applied Stochastic Processes

Content

Description
This course is an introduction to stochastic processes. Main topics include discrete Markov chains, Poisson processes, renewal processes, continuous-time Markov chains, and Brownian motion. Emphasis is on real-world applications of stochastic processes.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete MATH 372
Corequisite MATH 306

MATH412 - Intro to Topology

General

Subject Code ~
MATH

Course Number ~
412

Course Name (appears on the transcript) ~
Intro to Topology

Content

Description
This course covers introductory topics in the general theory of topological spaces. Included are examinations of plane topology and topological properties of metric spaces. Offered on demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH418 - Intro to Modern Algebra

General

Subject Code ~
MATH

Course Number ~
418

Course Name (appears on the transcript) ~
Intro to Modern Algebra

Content

Description
This course is an introduction to the axiomatic study of the algebraic structures of groups, rings, and fields. Topics include groups, subgroups, permutation groups, cosets, normal subgroups, group homomorphisms, factor groups, rings, subrings, polynomial rings, ideals, ring homomorphisms, factor rings, integral domains, fields, and the Fundamental Theorem of Algebra. There is an emphasis on writing formally correct mathematical proofs.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH420 - Mathematical Modeling

General

Subject Code ~
MATH

Course Number ~
420

Course Name (appears on the transcript) ~
Mathematical Modeling

Content

Description
This is an introduction to the construction and refinement of mathematical models. Techniques vary but typically include continuous modeling using differential equations as well as discrete modeling using linear programming and operations research. Applications may include models from population dynamics, environmental science, disease epidemiology, resource allocation, network flows, and financial planning.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete MATH 134 and MATH 306

MATH421 - Real Analysis

General

Subject Code ~
MATH

Course Number ~
421

Course Name (appears on the transcript) ~
Real Analysis

Content

Description
This is an introduction to the rigorous treatment of analysis. Topics covered include the real number system, sequences, limits of functions, continuity, differentiation, integration, infinite series, sequences, and series of functions. Offered in alternate spring semesters.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, or permission

MATH427 - Complex Analysis

General

Subject Code ~
MATH

Course Number ~
427

Course Name (appears on the transcript) ~
Complex Analysis

Content

Description
This is an introductory course in the theory of functions of a complex variable covering standard topics: the algebra and geometry of complex numbers, differentiation, integration, power series expansions, residues, and poles. Offered on demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 235 or permission

MATH441 - Data Visualization & Techniques

General

Subject Code ~
MATH

Course Number ~
441

Course Name (appears on the transcript) ~
Data Visualization & Technique

Content

Description
Topics include common techniques for visualizing univariate and multivariate data, data summaries, and checking modeling assumptions. Students will learn how to create and interpret visualizations using the ggplot2 R package. Data techniques for obtaining and preparing data for visualization and further analysis will also be discussed. SQL in SAS and/or R will be introduced.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

MATH451 - Senior Project I

General

Subject Code ~
MATH

Course Number ~
451

Course Name (appears on the transcript) ~
Senior Project I

Content

Description
Senior students will work with a faculty member of their choice on a research topic of interest. At the end of the spring term, the student will submit a paper and give an oral presentation to the faculty in the Department of Mathematics and to his/her peers based on the research done over the course of two semesters.

This course satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
1

Requisites

Free Form Requirements
Senior Standing

MATH452 - Senior Project II

General

Subject Code ~
MATH

Course Number ~
452

Course Name (appears on the transcript) ~
Senior Project II

Content

Description
Senior students will work with a faculty member of their choice on a research topic of interest. At the end of the spring term, the student will submit a paper and give an oral presentation to the faculty in the Department of Mathematics and to his/her peers based on the research done over the course of two semesters. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
2

Requisites

Free Form Requirements
Senior Standing

MATH461 - Undergraduate Research I

General

Subject Code ~
MATH

Course Number ~
461

Course Name (appears on the transcript) ~
Undergraduate Research I

Content

Description
This course offers qualified students the opportunity to conduct original research in the mathematical sciences under the supervision of a faculty member. For details on the registration process, see the "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, Junior or Senior Standing and permission of the Chair

MATH462 - Undergraduate Research II

General

Subject Code ~
MATH

Course Number ~
462

Course Name (appears on the transcript) ~
Undergraduate Research II

Content

Description
This course offers qualified students the opportunity to conduct original research in the mathematical sciences under the supervision of a faculty member.

For details on the registration process, see the "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, Junior or Senior Standing and permission of the Chair

MATH463 - Undergraduate Research III

General

Subject Code ~
MATH

Course Number ~
463

Course Name (appears on the transcript) ~
Undergraduate Research III

Content

Description
This course offers qualified students the opportunity to conduct original research in the mathematical sciences under the supervision of a faculty member.

For details on the registration process, see the "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, Junior or Senior Standing and permission of the Chair

MATH464 - Undergraduate Research IV

General

Subject Code ~
MATH

Course Number ~
464

Course Name (appears on the transcript) ~
Undergraduate Research IV

Content

Description
This course offers qualified students the opportunity to conduct original research in the mathematical sciences under the supervision of a faculty member.

For details on the registration process, see the "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete MATH 251 or MATH 281, Junior or Senior Standing and permission of the Chair

MATH480 - Internship in Mathematics

General

Subject Code ~
MATH

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Mathematics

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MATH481 - Internship in Mathematics

General

Subject Code ~
MATH

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Mathematics

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MATH490 - Seminar

General

Subject Code ~
MATH

Course Number ~
490

Course Name (appears on the transcript) ~
Seminar

Content

Description
Topics discussed depend upon the interest of the students. Seniors or unusually well qualified juniors may be admitted to the course only by permission of the department. Offered on demand.

Credit Hours

Min
3

Requisites

Free Form Requirements
Permission of the instructor

MATH491 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing and permission of instructor

MATH550 - Discrete Mathematics

General

Subject Code ~
MATH

Course Number ~
550

Course Name (appears on the transcript) ~
Discrete Mathematics

Content

Description
This is an introduction to mathematical thinking with emphasis on finding patterns, making conjectures, and learning methods to solve problems and prove theorems. The topics include sets, relations, functions, the language of mathematics, exploration and proof, mathematical induction, cardinality, algorithms, and recursion. Cross-listed with MAMT-550.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MATH591 - Special Topics in Mathematics

General

Subject Code ~
MATH

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Mathematics

Content

Description
Topics in mathematics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Graduate Standing

ME202 - Statics

General

Subject Code ~
ME

Course Number ~
202

Course Name (appears on the transcript) ~
Statics

Content

Description
This course is designed both to teach problem-solving techniques and to provide students with the necessary background to take succeeding courses in solid mechanics. Students will become familiar with the analysis of two- and three-dimensional force systems using both scalar and vector techniques. These systems include frames, machines, trusses, and simple structures. Additionally, students will have the ability to draw free body diagrams and apply the principles of static equilibrium to both particles and rigid bodies and to analyze problems involving friction. Students will determine the centroids of lines, areas and volumes and the moments of inertia of areas and masses using calculus and composite section methods. The methods of assessing students include homework assignments, quizzes, examinations, projects, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Co-requisite or Prerequisite: MATH 134

Prerequisite: PHYS 133

ME203 - Dynamics

General

Subject Code ~
ME

Course Number ~
203

Course Name (appears on the transcript) ~
Dynamics

Content

Description
This course is designed to provide students with a clear understanding of the theory and applications of dynamics. The course depicts realistic situations encountered in engineering practice. Students will learn how to apply Newton's Second Law of Motion to study the effects caused by an unbalanced force acting on a particle; use the principle of work and energy to solve problems involving forces, displacements, and velocities; determine the power and efficiency of machines; solve problems involving impact of bodies; and analyze problems involving the planar kinematics and kinetics of rigid bodies. A project of a typical dynamics problem is required. The methods of assessing students include homework assignments, quizzes, examinations, projects, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Prerequisite: Complete ME 202/HONE 202

Co-requisite or Prerequisite: MATH 236

ME205 - Measurement Computing

General

Subject Code ~
ME

Course Number ~
205

Course Name (appears on the transcript) ~
Measurement Computing

Content

Description

This introductory and hands-on experience course is offered to all students who have some knowledge or experience in programming. Concept of event driven programming is introduced during class lectures while its applications to data collection and analysis are demonstrated during laboratory sessions. Students will learn how to use Object Oriented programming capabilities of Microsoft Visual BASIC to develop true 32-bit applications for data acquisition and control, which can run under Microsoft Windows 32-bit platforms. Practical application exercises related to data acquisition and control, database management, and analysis will be selected from the fields of engineering. There will be one 75-minute laboratory exercise every week where students will practice designing user interfaces, debugging codes, and running programs and interfacing transducers to PC. Computer projects will be assigned. The method of assessing student learning will include computer assignments, performance during laboratory sessions, and quizzes. One class hour and 1.5 laboratory hours.

Credit Hours

Min
2

Requisites

Free Form Requirements

Complete ENGR 105/HONE 105, and PHYS 134

ME208 - Mechanics of Materials

General

Subject Code ~
ME

Course Number ~
208

Course Name (appears on the transcript) ~
Mechanics of Materials

Content

Description

This introductory course is offered to both Mechanical Engineering majors and nonmajors and is designed to increase the students' awareness of the static behavior of deformable bodies and to provide them with the necessary background to take advanced courses in solid mechanics. Students will determine pertinent mechanical properties of materials from stress-strain diagrams; analyze statically indeterminate members; analyze the effect of temperature change in members; determine the state of stress and strain at a point resulting from uniaxial, biaxial, and triaxial loading; determine stresses and displacements in axially, flexurally, and torsionally loaded members; determine the stresses in thin-walled pressure vessels; determine the principal stresses, the maximum in-plane shear stresses, and the absolute maximum shear stress in members subjected to combined loadings; and determine the critical stress in ideal columns subjected to various types of supports. A written report or presentation involving design, building, and testing are required. The methods of assessing students include homework assignments, quizzes, examinations, projects, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements

Complete ME 202 or HONE 202
Pre-or Corequisite- MATH 235

ME303 - Thermodynamics I

General

Subject Code ~
ME

Course Number ~
303

Course Name (appears on the transcript) ~
Thermodynamics I

Content

Description
This introductory course is offered to both Mechanical Engineering majors and non-majors and is intended to familiarize students with the fundamental concept of the first and second law of thermodynamics. Students will learn how to determine the thermodynamic properties of real and ideal substances by using thermodynamic property tables and mathematical relationships. The concepts of energy, heat, work, entropy, reversible, and irreversible processes are introduced and applied to real engineering systems and thermodynamic cycles. Students are expected to use software packages to perform the assigned computer projects. Quizzes, homework assignments, a midterm, and a final exam will be used to assess a student's performance.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 105 and MATH 235

ME304 - Thermodynamics II

General

Subject Code ~
ME

Course Number ~
304

Course Name (appears on the transcript) ~
Thermodynamics II

Content

Description
This intermediate course is offered to mechanical engineering majors and non-majors and is designed to teach thermodynamic analysis of various power and refrigeration cycles. The first and second law analyses of the Carnot, Rankine, Otto, Diesel, Brayton, Sterling, and Ericsson cycles will be studied. Reheating and regeneration concepts will be discussed and applied to the Rankine cycle. Maxwell relations are used to establish relationships among thermodynamic properties. Students learn how to analyze non-reactive ideal gases such as the air-water vapor mixture. Each student is expected to work on an independent design project dealing with power or refrigeration systems and submit a final written report. The method of assessing students includes homework assignments, quizzes, exams, computer projects, and a design project.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ME 303

ME309 - Materials Science

General

Subject Code ~
ME

Course Number ~
309

Course Name (appears on the transcript) ~
Materials Science

Content

Description
This course introduces the fundamental concepts of material science and engineering. Students are provided with information concerning the interrelationship between the microstructure of a material, its properties, and its processing. The analysis of mechanical properties, the manufacturing process, the material specifications for a selected application or component, and the advantages and limitations of the selected material are presented. Major topics include: material selection, crystallographic structure, diffusion, solidification, phase diagrams, microstructure, and mechanical properties of different classes of materials. The course is presented in a series of classroom lectures, selected videos, case studies, and independent investigations. A project and a technical poster presentation are required. The methods of assessing students include quizzes, exams, homework assignments, and applications of principles to case studies.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete CHEM 105 and PHYS 134

ME311 - Mechatronics

General

Subject Code ~
ME

Course Number ~
311

Course Name (appears on the transcript) ~
Mechatronics

Content

Description
Mechatronics is the synergistic integration of mechanism, electronics, computer control, and information technology to achieve a functional system. This course centers around the modeling and analysis of the basic hardware and software components of PC-based data acquisition and control, and electro-mechanical systems including sensors, actuators, signal processing, microcontrollers, mechanisms, and PID motion controls. Hands-on experience of the applications and programming of simple mechatronic systems is provided. The method of assessing students includes quizzes, homework assignments, exams, and laboratory reports.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ME 203 or permission of instructor.

ME313 - Mechanical Laboratory I

General

Subject Code ~
ME

Course Number ~
313

Course Name (appears on the transcript) ~
Mechanical Laboratory I

Content

Description
This course is the first in a two-course sequence designed to give students hands-on experience in the use of laboratory instruments and in the collection and interpretation of data. Experimental methodology and communication of experimental results are stressed throughout the course. The course also serves to enhance the technical writing skills of the student. A student works in a team to perform laboratory experiments in dynamics, mechanics of materials, measurement techniques, data acquisition, and manufacturing. A written report or technical memorandum is submitted either by each student or by the group. The assessment is based upon the quality of both the writing and engineering content of the written reports.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ME 203 and ME 208 - Must be completed prior to taking this course.

ME316 - Fluid Mechanics

General

Subject Code ~
ME

Course Number ~
316

Course Name (appears on the transcript) ~
Fluid Mechanics

Content

Description
This introductory course is offered to both mechanical engineering majors and non-majors and is designed to provide students with the background and tools required to develop a physical feel for the phenomenon of fluid motion, to develop practical methodologies for the solution of engineering flow problems encountered in modem technology, and to prepare students to enter professional practice. Students become familiar with pressure measurement; determine hydrostatic forces on submerged surfaces; develop and use the continuity, momentum, and energy equations; understand dimensional analysis and dynamic similitude; analyze flow in closed conduits; calculate the drag force on various two and three-dimensional bodies; and understand boundary layer theory, model testing, and fluid measurement techniques. A team design project involving a typical fluid dynamics team design problem is required. The methods of assessing students include homework assignments, quizzes, examinations, projects, and a final exam.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ME 203, and ME 303 or permission of instructor

ME318 - Design of Solar Energy Systems

General

Subject Code ~
ME

Course Number ~
318

Course Name (appears on the transcript) ~
Design Solar Energy Syst

Content

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ME 303

ME320 - Mechanical Vibrations

General

Subject Code ~
ME

Course Number ~
320

Course Name (appears on the transcript) ~
Mechanical Vibrations

Content

Description
This course is an introductory treatment of vibrating systems. Students learn to analyze both free and forced, undamped and damped, single degree-of-freedom systems using both equilibrium and energy methods. The method of mass and spring equivalence as applied to both translational and rotational systems is also presented. The study of the response of rotating machinery, dynamic transmissibility and vibration isolation systems subject to sinusoidal inputs are included. Students learn mathematical methods of analyzing nonsinusoidal inputs using Fourier series; Fourier transforms and convolution methods are introduced to solve two degree-of-freedom systems using matrix methods and to apply the technique to the design of a vibration absorber. An introduction to continuous systems using Rayleigh's and other approximate numerical methods are made. The means of assessing students include homework assignments, quizzes, in-class exams and a comprehensive final exam.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ME-203 or ME-207; ME-208 and MATH-350

ME322 - Manufacturing Processes

General

Subject Code ~
ME

Course Number ~
322

Course Name (appears on the transcript) ~
Manufacturing Processes

Content

Description
This is an introductory course that introduces the fundamentals of a variety of manufacturing processes. Students will focus on both the theoretical and practical aspects of manufacturing processes and materials selection while receiving an introduction to the language of manufacturing. The student will learn to design, analyze, and control each manufacturing process, and quantify its capabilities, typical applications and its advantages and limitations. The topics highlighted in this course are: material selection, metrology, and quality control, casting, forming, material removal, joining, heat treating, and the integration of these techniques into a manufacturing system. The course is

presented in a series of classroom lectures, selected videos, case studies, and laboratory experiments which provide students with hands on manufacturing experience. Each student will be assessed by their performance on quizzes, exams, homework assignments, and applications of the learned principles to case studies and laboratory experiments.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior or Senior Standing in Engineering

ME324 - Design of Mechatronics Systems

General

Subject Code ~
ME

Course Number ~
324

Course Name (appears on the transcript) ~
Design Mechatronics Syst

Content

Description
Mechatronics is a modern discipline that transcends the boundaries between Mechanical, Electrical, Computer Engineering, and Information Technology. It is defined as the science of intelligent and integrated systems in which engineers integrate mechanical, electrical and computer engineering to design, develop, fabricate and test complex automated systems. The evolution of this area is particularly a consequence of the tremendous growth in the area of computers, intelligent sensors, electronic signal conditioners, PC and PLC-based controllers. Because of the emphasis upon system integration, this course will center on system integration with practical industrial applications. This intermediate, cross-discipline, project-based course which is offered to mechanical engineering juniors provides a real-life experience related to the practice of mechatronics engineering. Students will continue using their knowledge and skill of Visual Basic.NET or LabView in conjunction with an off the shelf A/D board to develop Human Machine Interface (HMI) and collection and analysis routines. Finally, student will be introduced to the design and applications of relational database management systems using MySQL or Microsoft SQL servers.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete ME 311

ME333 - Indep Study in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Mech Engr

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ME390 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME415 - Wind/Water Turbine Fundamentals

General

Subject Code ~
ME

Course Number ~
415

Course Name (appears on the transcript) ~
Wind/Water Turbine Fundam

Content

Description
This course introduces wind and water turbines for power generation, with a focus on current Horizontal Axis Wind Turbines (HAWT). Fluid machinery design concepts are developed which include: lift/drag mechanism, control volume theory, Euler's pump equation and fluid machinery similitude. Application of control volume theory to wind and water turbine design and optimization is formulated, and applied to several case studies. The Betz limit and current HAWT wind turbine aerodynamic limitations are formulated. Key mechanical and electrical components are studied with a focus on overall system performance. New and novel wind/water turbine concepts are discussed and analyzed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 303 and ME 316

ME417 - Heat Transfer

General

Subject Code ~
ME

Course Number ~
417

Course Name (appears on the transcript) ~
Heat Transfer

Content

Description
This senior level course is offered to both Mechanical Engineering majors and nonmajors and is designed to convey the basic principles of heat transfer by incorporating a broad range of engineering applications. Students will use conduction, convection, and radiation equations to determine heat transfer rates over and through plane, cylindrical, and spherical surfaces; determine the optimum thickness of insulation; analyze the effect of heat generation on temperature distribution and heat rate; determine the performance of extended surfaces; calculate the temperature distribution and evaluate the heat rate for two-dimensional steady-state conduction; determine the temperature and heat transfer rate for one-dimensional and multidimensional transient conduction; determine the heat transfer rate over a cylinder, sphere, noncircular cylinders, and on a tube bank in the cross-flow of a gas; and perform engineering calculations that involve energy balance and appropriate convection correlations for internal flows and radiation exchange between surfaces. A team project involving a heat transfer experiment and design of cooling fins for a leaded cylindrical wall is required. The methods of assessing students include homework assignments, quizzes, examinations, projects, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ME 303 and ME 316

ME419 - Experiment/Analytical Stress Analys

General

Subject Code ~
ME

Course Number ~
419

Course Name (appears on the transcript) ~
Experi/Analytical Stress

Content

Description
This senior level course builds on the material presented in ME 208 and develops the students ability to apply the principles of advanced mechanics of materials to problem solving while applying common experimental techniques for solution verification. The analytic studies will involve the study of three-dimensional states of stress and strain, unsymmetric bending of beams; stresses and deflections of curved beams and beams on elastic foundations; deflection and slope in beams using Castigliano's theorem; and stresses in thick walled cylinders. The experimental studies include the basic theory and installation techniques of electric resistance strain gauges, phatoelastic coatings, and applications of load and deflection measuring techniques. Applications of these techniques in the verification of analytical solutions is emphasized throughout the course. Methods of assessing students include homework assignments, laboratory reports, quizzes, a midterm, and a comprehensive final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 208 and MATH 350
Corequisite- ME 435

ME420 - Wind/Water Turbine Aerodynam Design

General

Subject Code ~
ME

Course Number ~
420

Course Name (appears on the transcript) ~
Wind/Water Turbine Aero

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME-415 and ME-316

ME421 - Adv Materials: Mat Selection & Design

General

Subject Code ~
ME

Course Number ~
421

Course Name (appears on the transcript) ~
Adv Materials: Select & Desn

Content

Description
There exists an enormous range of materials available to the engineer. This course is intended to provide the student with an understanding of the rationale for selecting specific materials for use in applications that range from aerospace, energy and the environment to medical and transportation. The basis of the course is to help the student strategically think about matching the material to the design of a successful product. In all good design, the strategy requires that we define the function of the object, the constraints that are not negotiable, define the objectives of the application, and ultimately consider the free variables. The free variable in well-designed products is frequently the material selection. This course considers materials selection on the basis of materials properties as controlled by processing and the resulting structure. Cross-listed with ME 640. Students cannot take ME 421 and ME 640 for credit

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 309

ME423 - Product Development & Innovation

General

Subject Code ~
ME

Course Number ~
423

Course Name (appears on the transcript) ~
Prod Devel & Innovation

Content

Description
This course will cover new product innovation from both an entrepreneurship and intrapreneurship perspective. Students will learn about generating and identifying business opportunities, assessing concept ideas from technical, market, and financial perspectives; designing and developing new products; testing prototypes from technical and market perspectives; and developing a marketing plan including launch, monitoring, and measurement provisions. Interdisciplinary teams of business and engineering students will apply these principles to develop product concepts, prototype products, final designs, and marketing plans for a new consumer or business product. The final designs and plans will be presented to an expert panel of business executives, investors, and faculty.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior Standing in Engineering

ME425 - Design of Machine Elements

General

Subject Code ~
ME

Course Number ~
425

Course Name (appears on the transcript) ~
Design of Mach Elements

Content

Description
This senior level course is designed to introduce students to the methodologies involved in the analysis and design of simple machine parts. The impacts of social, economic, and material constraints on the design process are also considered. Students use failure theories to determine the state of stress in members made of ductile or brittle materials subjected to either steady, alternating, or combined steady and alternating stresses; construct fatigue diagrams and fatigue failure curves; and use Miner's Equation to analyze the state of stress in materials subjected to various loading cycles. Topics include the design of shafts subjected to steady and fluctuating loads, the determination of the characteristics of clutches and brakes to satisfy operating conditions; the specification of springs subjected to either steady or fluctuating loads to satisfy design specifications; the design of simple, compound, and planetary gear trains, and the specification of threaded fasteners. A project involving the design of machine elements is required. The method of assessing students includes homework assignments, quizzes, examinations, and projects.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

ME426 - Gas Dynamics

General

Subject Code ~
ME

Course Number ~
426

Course Name (appears on the transcript) ~
Gas Dynamics

Content

Description
This course introduces students to the analysis and design procedures currently used for solving engineering problems in compressible fluid flow. Students learn how to combine the concepts of dynamics, thermodynamics, and fluid mechanics to generate useful analyses for the design of fluid machinery. Students use control volume theory and several derived compressible flow analyses to develop design procedures for wind tunnels, exhaust pipe tuning, aircraft inlets and nozzles, shock tubes, and gas turbines. Several case studies encompassing contemporary design problems from industry are used in the classroom to enhance the learning process. An individual design project using these methods is assigned. The method of assessing students includes classroom participation, homework assignments, examinations, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 303 and ME 316

ME427 - Kine & Cntrl of Electro-Mech System

General

Subject Code ~
ME

Course Number ~
427

Course Name (appears on the transcript) ~
Kine & Cntl Electro-Mech

Content

Description
This is an introductory level course in electric drive systems. Advances in power electronics has permitted the development of adjustable-speed drives which provide significant performance and efficiency improvements in such areas as pumps and compressors, precision motion control in automated factories, wind-electric systems in generating electricity, and hybrid-electric vehicles, to name a few. To understand what a variable-speed drive is and how it works we will study such things as mechanical models related to rotating machines, review of associated electric circuits' theory, overview of electric converter operation, electro-mechanical energy conversion principles, and what needs to be considered in controlling the various types of electrical machines available to us. Successful completion of this course should provide the student with a strong background at the systems integration level of electric drives. Methods of assessment include homework, quizzes, and tests.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

ME430 - Metrology: Science of Measurement

General

Subject Code ~
ME

Course Number ~
430

Course Name (appears on the transcript) ~
Metrology: Sci of Measure

Content

Description
This course is an introduction to the fundamentals of metrology, the science of measurement. Students will be introduced to real-world applications in topical areas including process certification, conven-tional and advanced inspection tools and techniques, gage repeatabil-ity and reproducibility (Gage R&R), and re-engineering techniques of precision machine components using Faro Arm, White Light, Coordi-nate Measurement Machines (CMM) and Non-Contact Lasers. This course provides students with the ability to make judgments regarding the proper selection and usage of metrology tools and processes for advanced measurement techniques. It also, facilitates the application of metrology skills to advanced project work in the engineering curricula, as well as to the needs and practices of in-dustry. The methods of assessing students include homework, quiz-zes, examinations, classroom discussions, hands-on laboratories, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Senior Standing in Biomedical, Industrial, or Mechanical Engineering

ME437 - Design Projects

General

Subject Code ~
ME

Course Number ~
437

Course Name (appears on the transcript) ~
Design Projects

Content

Description
Selected students work on an independent or integrated design project, typically in the semester prior to enrolling in ME 440. This course is intended to provide students with the opportunity for a two-semester project sequence with ME 440 (see description for ME 440), or may be used to address a special design project topic.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 439

ME439 - Professional Awareness

General

Subject Code ~
ME

Course Number ~
439

Course Name (appears on the transcript) ~
Professional Awareness

Content

Description
This course is designed to make students aware of some of the problems, concerns, and responsibilities of an engineer as a professional. In addition, students are guided in formulating a proposal for a Senior Design Project in preparation for project work in ME 440. Students participate in discussions, led by invited speakers, on topics that enable them to write a professional resume, interview for a job, generate an effective and substantive report, and make an effective technical oral presentation. Students are exposed to ethical issues in engineering environments; made aware of the necessity of protecting their work with either patents, copyrights, trademarks, and trade secrets and of not infringing on the similar rights of others; and apprised of issues of safety in the work place, product liability, and the importance of professional registration. Faculty and representatives from industry present ideas for Senior Design Projects and each student chooses a project and develops and writes a project proposal under the supervision and guidance of a faculty advisor. The assessment in this course is based on students' participation in discussions, the submission of short papers on some of the issues raised in the presentations, and the quality of the project proposal and oral presentation.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior Standing / 90 credits

ME440 - Senior Design Projects

General

Subject Code ~
ME

Course Number ~
440

Course Name (appears on the transcript) ~
Senior Design Projects

Content

Description
This is a capstone design course that prepares students for entry-level positions. In this course, each student works on an independent or integrated engineering project under the supervision of a faculty advisor. Students apply the design process and communicate the results of their project work in both an oral and written form. Oral reports are presented before an assembly of faculty and students. Students apply engineering design principles either by working on a product, improving a product, or designing experiments to investigate causes of either an observed phenomenon or a problem in engineering. Students are required to demonstrate their achievements using appropriate laboratory exhibits. Students who select industry-sponsored projects have the opportunity of working with the industrial advisor in an actual engineering environment. The assessment in this course is based on the students' level of commitment demonstrated throughout the semester, the level of achievement attained in the project, the recording of activities in a log book, and the quality of the written report and oral presentation. Meeting hours by arrangement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 439 and Graduating Senior Standing

or Permission of Dean's Office

ME444 - Computer Appl in Mechanical Engr

General

Subject Code ~
ME

Course Number ~
444

Course Name (appears on the transcript) ~
Comp Appl in Mech Engr

Content

Description
This advanced course is offered to mechanical engineering majors. Students learn to use computational methods and numerical techniques in conjunction with spreadsheet packages to solve practical engineering problems encountered in solid mechanics, fluid mechanics, heat transfer, dynamics, machine design, measurements and vibrations. The development of computer algorithms/macros for either design or analysis is also emphasized. Students use case studies to investigate problems requiring a multidisciplinary approach. A total of 10 computer projects will be assigned. Each student is expected to work on two independent design projects and submit a final written report for each project. The methods of assessing students include computer assignments and the design projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Corequisite- ME 417
Senior Standing

ME445 - Design Alternative Energy Systems

General

Subject Code ~
ME

Course Number ~
445

Course Name (appears on the transcript) ~
Design Altern Energy Syst

Content

Description

This course is an introduction to the theory and application of various alternative energy systems, including solar, wind, fuel cells, geothermal, and ocean waves. Students will become familiar with ca1culatug the thermal performance of various alternative energy systems, and learn the various limitations and practical examples where each is used. A project involving the design of an energy independent home is assigned. The methods of assessing students include homework, quizzes, examinations, classroom discussions, a design project, and a final exam.

Credit Hours

Min

3

Requisites

Free Form Requirements

Complete ME-303 and ME-316
Corequisite- ME 417

ME447 - Fundamentals of Flight

General

Subject Code ~

ME

Course Number ~

447

Course Name (appears on the transcript) ~

Fundamentals of Flight

Content

Description

This course provides a broad overview of airplane design, including fundamentals of lift, drag, aerodynamic and structural wing design, aerodynamic stability and control, and systems engineering. The course connects these fundamentals to practical application by exploring the wide range of aircraft designs currently in the world, and those being developed, to understand why the engineering concepts led to the specific designs. Finally, this course introduces realistic and results-oriented skills in the areas of systems engineering and engineering project execution by requiring the students to design, build, and demonstrate (fly) a scale model airplane that meets specific technical requirements.

Credit Hours

Min

3

ME449 - Computer Aided Engineer

General

Subject Code ~

ME

Course Number ~

449

Course Name (appears on the transcript) ~

Computer Aided Engineer

Content

Description

This course is offered to all engineering majors. Students learn the fundamentals of conceptual design and engineering analysis/simulation. Computer hardware and software required to perform solid modeling and finite element analysis are presented. Commercial software packages such as SDRC Master Series and Fluent are used during the laboratory sessions to provide students with hands-on experience related to the concepts learned during class lectures. Students will use these commercial tools to generate solid models and import the geometry into the simulation module to perform finite element analysis or design optimization. Each student will complete 14 solid modeling and finite element assignments outside of the class and laboratory periods. Additionally, each student will work on an independent design project and submit a final written report. The methods of assessing students include computer assignments, performance during laboratory sessions, and the design project. One class hour and three hours lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
ME 208
Corequisite- ME 417

ME451 - Fluid Machinery Design

General

Subject Code ~
ME

Course Number ~
451

Course Name (appears on the transcript) ~
Fluid Machinery Design

Content

Description
Then intent of this course is to develop in the engineering student the ability to use basic physical laws and principles in the applied practical design of fluid machinery. Topics include, but are not limited to, aerodynamic lift and drag, control volume theory, boundary layers and flow separation, fundamentals of propulsion, rotating turbomachinery design, etc. The method of assessing the students includes class participation, homework assignments, quizzes, examinations, and a final exam.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Prerequisite: ME-304 and ME316

Pre or Corequisite: ME-417

ME455 - Applications of Mechatronics System

General

Subject Code ~
ME

Course Number ~
455

Course Name (appears on the transcript) ~
Applic Mechatronics Syst

Content

Description
This advanced course is intended to equip students with an in-depth knowledge and understanding of key mechatronic concepts and their applications to the robust design of mechatronic products and systems for consumers and industry. Core aspects are combined with practical industrial applications and are presented in an optimal way for understanding. A collection of case studies drawn from a variety of industries (complete with parts, lists, setup, and instructions) are used to support the mechatronics design methodology. This course which builds on the skills introduced in ME 311 and ME 324 will help students to deepen their knowledge of system integration and Mechatronics system design process. It also develops concepts related to robotics applications, plus advanced topics of mechatronic system design like design for testing and fault-tolerant design. The course, like ME 324, also provides a real life experience related to the practice of mechatronics engineering.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ME 311 and ME 324

ME456 - Multiphase Flow

General

Subject Code ~
ME

Course Number ~
456

Course Name (appears on the transcript) ~
Multiphase Flow

Content

Description
Multiphase flow (particularly liquid and gas phase) has many industrial applications such as fuel cells, heat exchangers, condensers, air conditioning, and process plants. The single-phase pressure drop in fluids is well understood and can be predicted over a wide range of operating conditions. The liquid-gas two-phase flow pressure drop, however, is not well identified and has been studied only for a limited range of operating conditions relevant to particular areas of interest. The physics behind this type of transport phenomena is very complicated to be modeled with simplified mathematical expressions. In this course, hydrodynamic and heat transfer correlation for multiphase flow will be discussed.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ME 303 and ME 316

ME466 - Applied Computational Fluid Design

General

Subject Code ~
ME

Course Number ~
466

Course Name (appears on the transcript) ~
Appl Comput Fluid Design

Content

Description
This is a study of fluid machinery design. Topics include boundary layer theory; procedures for analyzing fluid flow losses; compressible flow effects; design concepts and analyses for airfoils, airfoil cascades, compressors, and turbines; model testing and evaluation; and introduction to gas turbine analysis and design. A design project involving the use of analytical and experimental methods is required. The methods of assessing students include homework, quizzes, examinations, classroom discussions, a design project, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 304 and ME 316

ME480 - Internship in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Mechanical Engr

Content

Description
See "Internships".

Credit Hours

Min
3

Requisites

Free Form Requirements
At least Junior Standing and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

ME482 - Mechanical Engineering Research

General

Subject Code ~
ME

Course Number ~
482

Course Name (appears on the transcript) ~
Mechanical Engr Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing

ME490 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME491 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME492 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
492

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME493 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
493

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME526 - Gas Dynamics

General

Subject Code ~
ME

Course Number ~
526

Course Name (appears on the transcript) ~
Gas Dynamics

Content

Description
This course introduces students to the analysis and design procedures currently used for solving engineering problems in compressible fluid flow. Students learn how to combine the concepts of dynamics, thermodynamics, and fluid mechanics to generate useful analyses for the design of fluid machinery. Students use control volume theory and several derived compressible flow analyses to develop design procedures for wind tunnels, exhaust pipe tuning, aircraft inlets and nozzles, shock tubes, and gas turbines. Several case studies encompassing contemporary design problems from industry are used in the classroom to enhance the learning process. An individual design project using these methods is assigned. The method of assessing students includes classroom participation, homework assignments, examinations, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 303 and ME 316;

ME540 - Design of Alternate Energy Systems

General

Subject Code ~
ME

Course Number ~
540

Course Name (appears on the transcript) ~
Dsgn of Alt Energy System

Content

Credit Hours

Min
3

ME542 - Computer Aided Engineer

General

Subject Code ~
ME

Course Number ~
542

Course Name (appears on the transcript) ~
Computer Aided Engineer

Content

Description
This course is offered to all engineering majors. Students learn the fundamentals of conceptual design and engineering analysis/simulation. Computer hardware and software required to perform solid modeling and finite element analysis are presented. Commercial software packages such as SDRC Master Series and Fluent are used during the laboratory sessions to provide students with hands-on experience related to the concepts learned during class lectures. Students will use these commercial tools to generate solid models and import the geometry into the simulation module to perform finite element analysis or design optimization. Each student will complete 14 solid modeling and finite element assignments outside of the class and laboratory periods. Additionally, each student will work on an independent design project and submit a final written report. The methods of assessing students include computer assignments, performance during laboratory sessions, and the design project. One class hour and three hours lab.

Credit Hours

Min
3

Requisites

Free Form Requirements
ME 208 must be completed prior to taking this course.

Corequisite or Prerequisite ME 417 must be taken either prior to or at the same time as this course

ME556 - Multiphase Flow

General

Subject Code ~
ME

Course Number ~
556

Course Name (appears on the transcript) ~
Multiphase Flow

Content

Description
Multiphase flow (particularly liquid and gas phase) have many industrial applications such as fuel cells, heat exchangers, condensers, air conditioning, and process plants. The single-phase pressure drop in fluids is well understood and can be predicted over a wide range of operating conditions. The liquid- gas two-phase flow pressure drop, however, is not well identified and has been studied only for a limited range of operating conditions relevant to particular areas of interest. The physics behind this type of transport phenomena is very complicated to be modeled with simplified mathematical expressions. In this course, hydrodynamic and heat transfer correlation for multiphase flow will be discussed.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete ME 303 and ME 316

ME590 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing/Masters or students in the 5th yr BS/MS program

ME591 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing/Masters, or students in the 5th yr BS/MS program

ME592 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
592

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME593 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
593

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME594 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
594

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME610 - Measurement Systems

General

Subject Code ~
ME

Course Number ~
610

Course Name (appears on the transcript) ~
Measurement Systems

Content

Description
This graduate course is offered to mechanical engineering majors and is designed to familiarize students with electronic instrumentation and mechanical measurement techniques. Students will be able to make accurate and meaningful measurements of mechanical and thermal quantities such as strain, force, displacement, torque, pressure, velocity, acceleration, flow, volume flow rate, and temperature. Signal conditioning and data collection and reduction techniques are presented and the use of PC based data acquisition and control systems for automated data collection are emphasized. Case studies of practical significance or related to innovative sensor design and implementation are discussed and demonstrated. Each student will conduct an independent design project related to an area of mechanical testing or measurement and submit a final written report. The method of assessing students includes examinations, the project report, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 320 or equivalent

ME619 - Experiment/Analytical Stress Analys

General

Subject Code ~
ME

Course Number ~
619

Course Name (appears on the transcript) ~
Exper/Analyt Stress Analy

Content

Description
This advanced course builds on the material presented in ME 208 and develops the student's ability to apply the principles of advanced mechanics of materials to problem solving while applying common experimental techniques for solution verification. The analytic studies will allow students to determine shear centers of composite sections; determine stresses and deflections of curved beams and beans on elastic foundations; determine deflection and slope in beams using Castigliano's theorem; determine stresses in thick walled cylinders; and determine stresses in initially curved and eccentrically loaded columns. The experimental studies include the basic theory and installation techniques of electric resistance strain gauges, photoelastic coatings, and applications of load and deflection measuring techniques. Applications of these techniques in the verification of analytical solutions is emphasized throughout the course. A project involving the use of analytical and experimental verification methods is required. Methods of assessing students include homework assignments, laboratory reports, quizzes, a midterm, and a comprehensive final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME-208 and MATH-350, or equivalent

ME620 - Computal Meth in Vib & Struct Analy

General

Subject Code ~
ME

Course Number ~
620

Course Name (appears on the transcript) ~
Computational Methods

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME-425 or equivalent, or permission of instructor

ME626 - Applic of Adv Fluid Mechanics

General

Subject Code ~
ME

Course Number ~
626

Course Name (appears on the transcript) ~
Applic of Adv Fluid Mech

Content

Description

This course introduces students to the analysis and design procedures currently used for solving engineering problems in compressible fluid flow. Students learn how to combine the concepts of dynamics, thermodynamics, and fluid mechanics to generate useful analyses for the design of fluid machinery. Students use control volume theory and several derived compressible flow analyses to develop design procedures for wind tunnels, exhaust pipe tuning, aircraft inlets and nozzles, shock tubes, and gas turbines. Several case studies encompassing contemporary design problems from industry are used in the classroom to enhance the learning process. An individual design project using these methods is assigned. The method of assessing students includes classroom participation, homework assignments, examinations, projects, and a final exam.

Credit Hours

Min

3

Requisites

Free Form Requirements

Complete ME-303 and ME-316 or equivalent, and Graduate Standing

ME631 - Piezo-Electricity and Transducers

General

Subject Code ~

ME

Course Number ~

631

Course Name (appears on the transcript) ~

Piezo-Electricity & Transduce

Content

Description

This course introduces the complex and multidisciplinary subject of piezoelectric transducers and their applications. The core topics covered in the course are the piezoelectric electric effect, the physical attributes of the effect with the corresponding engineering models, transducer structures that take advantage of certain piezoelectric properties, and methods of using the transducer in such things as ultra-sonic and sensing applications. Upon successful completion of this course, students should have a firm understanding of piezoelectric behavior and the methods that can be used to make use of that behavior.

Methods of assessment include homework, quizzes, and exams.

Credit Hours

Min

3

Requisites

Free Form Requirements

Graduate Standing Introduction to DC and AC electronic circuits; introduction to mechanical statics and dynamics

ME632 - Fundamentals of Flight

General

Subject Code ~

ME

Course Number ~

632

Course Name (appears on the transcript) ~

Fundamentals of Flight

Content

Credit Hours

Min

3

Requisites

Free Form Requirements
Complete ME 426 and ME 447, or permission of instructor

ME635 - Design Alternative Energy Systems

General

Subject Code ~
ME

Course Number ~
635

Course Name (appears on the transcript) ~
Design Altern Energy Sys

Content

Description
This course is an introduction to the theory and design of solar, water, wind, and geothermal power generation systems. Students will become familiar with flat-plate collector performance, practical considerations for flat-plate collectors, estimation of residential heating and cooling loads, and thermal design methods. A project involving the design of an energy independent home is assigned. The methods of assessing students include homework, quizzes, a midterm exam, design project report, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME-417, or both ME-303 and Graduate Standing

ME640 - Adv Materials: Selection & Design

General

Subject Code ~
ME

Course Number ~
640

Course Name (appears on the transcript) ~
Adv Materials: Select & Desn

Content

Description
There exists an enormous range of materials available to the engineer. This course is intended to provide the student with an understanding of the rationale for selecting specific materials for use in applications that range from aerospace, energy and the environment to medical and transportation. The basis of the course is to help the student strategically think about matching the material to the design of a successful product. In all good design, the strategy requires that we define the function of the object, the constraints that are not negotiable, define the objectives of the application, and ultimately consider the free variables. The free variable in well-designed products is frequently the material selection. This course considers materials selection on the basis of materials properties as controlled by processing and the resulting structure. Cross-listed with ME-421. Students cannot take ME 421 and ME 640 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 309 or equivalent, or permission of instructor

ME642 - Numerical Simulation of Acoustics & Flui

General

Subject Code ~
ME

Course Number ~
642

Course Name (appears on the transcript) ~
Numerical Simulation of Acoust

Content

Description
This course introduces the finite element method as a numerical simulation tool for the prediction of acoustic fields. COMSOLTM is used to teach the multi-physics simulations of ultrasound waves generated by piezo-electric transducers. Coupled piezo-electric, pressure acoustics and viscoelastic physics models are coupled to simulate the generation of ultrasonic waves by transducers and the interaction with boundaries. Postprocessing of the linear acoustic field to calculate acoustic radiation forces and acoustic streaming is introduced. A second topic is the teaching of multi-phase computational fluid dynamics simulations to model fluidized beds. Acoustic fluidized beds are important acoustic cell processing tools and its applications and operations are discussed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME646 - Applied Finite Element Analysis

General

Subject Code ~
ME

Course Number ~
646

Course Name (appears on the transcript) ~
Applied Finite Elem Analy

Content

Description
This graduate course is intended to assist engineers in understanding and applying the concept of the finite element modeling and analysis (FEA). Students may use commercially available FEA packages to perform linear and non-linear static, transient and steady thermal analyses but the course will be taught using ANSYS with some NX support. The finite element uses of beam theory, natural frequencies, and heat transfer will be investigated. Practical application of the FEA results are emphasized. Civil Engineering students will be given the opportunity to study structural composites like reinforced concrete or soils in class. Case studies of practical significance and innovative modeling techniques are discussed and demonstrated. Each student will conduct a comprehensive, independent, finite element analyses on a topic related to a mechanical or civil engineering design and submit a final written report. The method of assessing student progress includes in-class examinations, homework, participation, and the final project/exam/report.

Credit Hours

Min
3

Requisites

Free Form Requirements
Baccalaureat Degree in Mechanical, Civil or Aeronautical Engineering, or permission of instructor

ME651 - Computational Fluid Dynamics

General

Subject Code ~
ME

Course Number ~
651

Course Name (appears on the transcript) ~
Computational Fluid Dynamics

Content

Description
This course provides an introduction to the use of commercial Computational Fluid Dynamics (CFD) codes to analyze flow and heat transfer in problems of practical engineering interest. The course includes an introduction to the conservation equations of fluid dynamics and simple finite difference and finite volume models of one and two dimensional flows. These simple equations are used to demonstrate important features of more complex flows and to give the student an appreciation for the parameters that limit the accuracy of CFD solutions. The bulk of the course aims at using FLUENT which is a commercial CFD code, to solve engineering problems. Students learn the steps involved in performing a CFD simulations, i.e., generating a model, creating a grid, applying appropriate boundary conditions, specifying solution parameters, getting a solution, and post-processing the results for visualization. A brief introduction to turbulence modeling is also included. Students will then practice using FLUENT through solving practical flow problems such as pipe flow, jet flow, and flow over wings. The method of assessing students includes homework, quizzes, a midterm exam, design project report, and a final exam.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 304 and ME 316, and Graduate Standing or permission of instructor

ME654 - Computer Control of Manufacturing

General

Subject Code ~
ME

Course Number ~
654

Course Name (appears on the transcript) ~
Computer Control of Mfg

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME655 - Design of Mechatronic Systems

General

Subject Code ~
ME

Course Number ~
655

Course Name (appears on the transcript) ~
Design of Mechatronic Systems

Content

Description
This graduate/undergraduate is intended to provide students with skills needed to design, model, validate, and control complete PC or PLC-based mechatronic systems, constructed with modern intelligent sensors, signal conditioners, pneumatic and hydraulic actuators, servo or stepper motors, PLC or embedded microcontrollers, and intelligent PII) channels. Visual Basic is used for control and analysis of PC-based mechatronic systems.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME656 - Adv Mechatronics

General

Subject Code ~
ME

Course Number ~
656

Course Name (appears on the transcript) ~
Adv Mechatronics

Content

Description
This course studies Mechatronics at an advanced theoretical and practical level. Balance between theory/analysis and hardware implementation is emphasized; physical understanding is stressed through various case-studies. Topics covered include: mechatronics system design, modeling and analysis of dynamic systems, system identification techniques, vision-based measurement and inspection systems, analog and digital sensors and their interface to actuators and controllers, and real-time programming for control. Advanced motion control topics such as master/slave drives, electronic gearing and electronic CAM, adaptive tuning of P1D controllers are discussed and demonstrated. This course studies Mechatronics at an advanced theoretical and practical level. Balance between theory/analysis and hardware implementation is emphasized; physical understanding is stressed through various case-studies. Topics covered include: mechatronics system design, modeling and analysis of dynamic systems, system identification techniques, vision-based measurement and inspection systems, analog and digital sensors and their interface to actuators and controllers, and real-time programming for control. Advanced motion control topics such as master/slave drives, electronic gearing and electronic CAM, adaptive tuning of P1D controllers are discussed and demonstrated. This course studies Mechatronics at an advanced theoretical and practical level. Balance between theory/analysis and hardware implementation is emphasized; physical understanding is stressed through various case-studies. Topics covered include: mechatronics system design, modeling and analysis of dynamic systems, system identification techniques, vision-based measurement and inspection systems, analog and digital sensors and their interface to actuators and controllers, and real-time programming for control. Advanced motion control topics such as master/slave drives, electronic gearing and electronic CAM, adaptive tuning of P1D controllers are discussed and demonstrated. This course studies Mechatronics at an advanced theoretical and practical level. Balance between theory/analysis and hardware implementation is emphasized; physical understanding is stressed through various case-studies. Topics covered include: mechatronics system design, modeling and analysis of dynamic systems, system identification techniques, vision-based measurement and inspection systems, analog and digital sensors and their interface to actuators and controllers, and real-time programming for control. Advanced motion control topics such as master/slave drives, electronic gearing and electronic CAM, adaptive tuning of P1D controllers are discussed and demonstrated.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

ME660 - Acoustics I

General

Subject Code ~
ME

Course Number ~
660

Course Name (appears on the transcript) ~
Acoustics I

Content

Description
This course introduces the concepts and fundamentals of physical acoustics. Acoustics deals with waves at all frequencies in all substances, i.e., solid, liquid, and gas. This course is a first course into acoustics. Topics include: Introduction to waves, Reflection and transmission, Normal incidence: steady state analysis, Transmission: oblique incidence, Normal modes: strings, membranes, rooms, and waveguides, Horns, Stratified media, Dissipative fluids, Acousto-Fluidics.

Students will be evaluated on their performance on homework assignments and exams.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

ME661 - Acoustics II

General

Subject Code ~
ME

Course Number ~
661

Course Name (appears on the transcript) ~
Acoustics II

Content

Description
This course further introduces the fundamental concepts of physical acoustics. Topics include a rigorous development of the wave equation, spherical and cylindrical waves, advanced waveguides, baffled piston radiation, diffraction and arrays. Additional topics related to acoustic radiation forces and acoustic streaming with applications to acoustic cell processing are introduced.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ME 660

ME663 - Bioprocessing

General

Subject Code ~
ME

Course Number ~
663

Course Name (appears on the transcript) ~
Bioprocessing

Content

Description
This course introduces cell and gene therapy manufacturing for non-biologists. The topics will include:

. Fundamentals of Cell biology . Protein bioreactions . Cell isolation and selection methods . Cell expansion and differentiation methods . Cell washing, formulation and cryopreservation . Quality attributes, Process parameters and DOEs . Process modelling . CAR T-cell manufacturing

These topics will be illustrated with practical examples which will include stem cells, T cells and cell lines in the context of biopharmaceutical and cell and gene therapy manufacturing.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

ME670 - AI: Applied Neural Networks and Machine

General

Subject Code ~
ME

Course Number ~
670

Course Name (appears on the transcript) ~
AI: Applied Neural Networks

Content

Description
This course concentrates on application of neural networks in the field of engineering. In this course students will learn vision-based applications of Perceptron algorithm as well as back propagation. Linearly and nonlinearly separable clustering and classification problems will be covered. This course is project based and concentrates on the latest applied Neural Networks and Machine Learning algorithms. All concepts are heavily reinforced using MATLAB, the main computational platform.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME671 - AI: Machine Learning - Concepts

General

Subject Code ~
ME

Course Number ~
671

Course Name (appears on the transcript) ~
AI: Machine Learning - Concep

Content

Description
This course focuses on AI concepts such as Data Exploration, Single and Multivariate Parametric and Non-Parametric methods of regression and classification tasks. Students will learn the theory that underlies these algorithms and implement them using popular machine learning packages such as Python with scikit-learn and MATLAB. During the final project, students will implement multiple algorithms and learn how to select the best algorithm with the optimized hyperparameters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME672 - Ai: Machine Learning - Applications

General

Subject Code ~
ME

Course Number ~
672

Course Name (appears on the transcript) ~
AI: Machine Learning - Applic

Content

Description
This course focuses on Artificial Intelligence application packages such as Data exploration, Natural Language Processing, Support Vector Machine, Reinforcement Learning, Artificial Neural Networks (ANNs) and Computer Vision and Deep Learning. Students will learn the theory and applications of a variety of algorithms. These algorithms will be implemented using Python and MATLAB software. As the final project, students will apply a combination of algorithms to a specific application and develop an end to end solution.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME674 - Acoustics & Bioprocessing Instrumentatio

General

Subject Code ~
ME

Course Number ~
674

Course Name (appears on the transcript) ~
Acoustics & Bioprocessing Inst

Content

Description
This course is designed for graduate students in Mechanical engineering, Electrical engineering, Biomedical engineering, and Physics. The course will focus on biomedical applications of ultrasound and the corresponding measurement techniques. A treatise of basic underwater acoustics and signal processing will be provided in the beginning of the course.

Hands-on laboratory experiments and exercises will supplement the lectures.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

ME676 - AI: Applied Fuzzy Logic AI: Applied Fuzzy Logic

General

Subject Code ~
ME

Course Number ~
676

Course Name (appears on the transcript) ~
AI: Applied Fuzzy Logic

Content

Description
This course covers the fundamentals of fuzzy logic theory and its applications. In this course students will learn to analyze crisp and fuzzy sets, fuzzy propositional calculus, predicate logic, fuzzy logic, fuzzy rule-based expert systems, and will learn to apply fuzzy logic theory to a variety of practical applications. Students will also learn to use MATLAB computational software to understand new concepts and to perform and implement fuzzy logic rules and systems. Machine Controls will be the application.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing or permission

ME685 - Mechanical Engineering Project

General

Subject Code ~
ME

Course Number ~
685

Course Name (appears on the transcript) ~
Mechanical Engineering Project

Content

Description
Students must select a project faculty advisor and obtain topic approval prior to registration for this course. This is an independent engineering project under the supervision of a project faculty advisor. The design process is emphasized. Progress reports and a final written report are required. An oral presentation and defense of the project is made before a faculty committee.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete EMGT-605 or EMGT-648, and 12 credit hour minimum in the program

ME690 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME691 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME692 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME693 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME694 - Special Topics in Mechanical Engineering

General

Subject Code ~
ME

Course Number ~
694

Course Name (appears on the transcript) ~
Special Topics in Mech Engr

Content

Description
This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min
3

ME698 - Thesis Research

General

Subject Code ~
ME

Course Number ~
698

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to mechanical engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

ME699 - Thesis Research

General

Subject Code ~
ME

Course Number ~
699

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This is a research course open to mechanical engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

ME701 - Seminar/Research Methods for Mech Engr

General

Subject Code ~
ME

Course Number ~
701

Course Name (appears on the transcript) ~
Seminar/Research Methods Me

Content

Description
This course provides tools and techniques employed to be used in Mechanical Engineering research. Topics covered include: program/faculty overview, literature review methods and tools, hierarchy of research questions, research ethics, and visual display of quantitative information.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate student in ME, or permission

ME714 - Composite Materials Design & Fabrication

General

Subject Code ~
ME

Course Number ~
714

Course Name (appears on the transcript) ~
Composite Mat Des & Fabrictn

Content

Description
Composite applications have grown exponentially in the last decade due to manufacturing and materials advances. This course will serve as an introduction to composite materials selection and architecture dictating mechanical and thermomechanical behavior. This course is intended to introduce continuous fiber reinforced composites having polymer, ceramic and carbon matrices. The focus will be on applications that include aerospace, energy, automotive, medical, research, manufacturing and marine. As the demand for high-performance materials with superior properties and performance, flexibility and resilience grows, a new design paradigm from the molecular scale upwards has revolutionized our ability to create novel materials. This course covers the science, technology (fabrication technologies) and state-of-the-art in atomistic, molecular and multiscale design on composites material's performance.

Credit Hours

Min
3

ME726 - Design of Heat Exchangers

General

Subject Code ~
ME

Course Number ~
726

Course Name (appears on the transcript) ~
Dsgn of Heat Exchangers

Content

Description

This course will be offered in fall 2019 and in the Department of Mechanical Engineering with an intend to teach principles of heat exchanger design. The course focuses on principles of heat transfer and fluid mechanics (pressure drop) in design of heat exchangers. Different heat exchanger types along with analysis of heat exchangers will be discussed in this course. In particular, the effectiveness of heat exchangers based on the number of transfer units (NTU) method will be discussed. Although the emphasize will be on heat exchangers with separation of hot and cold fluids by a stationary wall, evaporative heat exchangers which involve direct contact between a liquid and a gas will be studied as well. In addition to heat exchanger, heat pipes and vapor chambers will be reviewed.

Credit Hours

Min

3

ME737 - Special Topics in Mechanical Engineering

General

Subject Code ~

ME

Course Number ~

737

Course Name (appears on the transcript) ~

Special Topics in Mech Engr

Content

Description

This is a study of an advanced topic of engineering with special interest to mechanical engineering majors, but not offered on a regular basis.

Credit Hours

Min

3

ME747 - Advanced Manufacturing & Materials Proc

General

Subject Code ~

ME

Course Number ~

747

Course Name (appears on the transcript) ~

Adv Manufact & Materials Proc

Content

Description

This course introduces the fundamental principles and recent developments in the fast-growing field of advanced manufacturing, which includes additive manufacturing, microfabrication, fiber manufacturing, laser materials processing, smart manufacturing and nanomanufacturing. Emphasis will be laid on the underlying physics and limitations of existing technologies leading to methodologies for new process and product innovations. Laboratory experience will complement the lectures with the demonstration of in-house manufacturing of glass coated metal microwires with applications in electronics, energy and biomedical industries. Each student will submit a design project proposal utilizing the microwires and knowledge learned in this course to address an unmet societal need. The methods of assessing students include homework assignments, quizzes, and the final project proposal.

Credit Hours

Min

3

ME752 - Computational Fluid Dynamics

General

Subject Code ~

ME

Course Number ~

752

Course Name (appears on the transcript) ~
Computational Fluid Dynamics

Content

Description
This course teaches the students the basics of developing and applying computational methods for solving problems of fluid flow and heat transfer. It covers both fundamental theory and application of the techniques to develop practical fluid flow software. In addition, you will be also using one of the commercial fluid flow software to solve industrially relevant flow problems. This course adopted a project-based approach. The students will develop and use projects to learn and apply CFD. Each project can take two to three weeks depending on complexity. The objective of the course is to expose students to fundamentals of computational fluid dynamics and heat transfer, to make students confident of developing as well as using software for computational fluid dynamics, to make students familiar with simulation of complex fluid flows with complex boundary shapes and boundary conditions.

Credit Hours

Min
3

ME755 - Machine Vision

General

Subject Code ~
ME

Course Number ~
755

Course Name (appears on the transcript) ~
Machine Vision

Content

Description
Machine Vision deals with the use of image processing and computer vision techniques for industrial applications. Some of the applications of machine vision in industries are liquid level inspection in bottling plant, 2D/3D bar code reading, checking dimensional accuracy and geometrical tolerances of parts, vision guided robotic pick and place application, and part defects detection such as cracks, holes, scratches etc. The objective of the course is to study and present applications of machine vision using the basic algorithms, representations, and methods of image processing and computer vision techniques. Machine vision algorithms automatically extract the information from image and video data. At the low level, techniques such as image enhancement, histogram processing, spatial and frequency-domain filtering, segmentation, edge extraction, and corner operators are applied as the first step. Following this, higher level techniques such as geometric primitive extraction and object recognition can be applied to determine the identity and accurate location of objects in images. Topics include: fundamental of image processing, applications, image acquisition, image enhancement in spatial and frequency domain, segmentation, thresholding, morphological image processing and feature extraction. In addition to the theoretical and mathematical underpinnings of image processing and computer vision techniques, there is a very practical aspect to the course, and many of the concepts covered in the lecture are followed with concrete programming assignments and projects.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

ME756 - Advanced Robotics

General

Subject Code ~
ME

Course Number ~
756

Course Name (appears on the transcript) ~
Advanced Robotics

Content

Description

Industrial automation has become increasingly more prominent in many industries, such as manufacturing, pharmaceuticals, and food. Industrial robots are capable of various tasks like material handling, machining, palletizing, arc welding, or laser cutting. This course focuses on programming and applications of industrial robots into modern day automation industries. Fanuc LR Mate robot is used as an industrial robot for material handling and robot operations programming. The course covers the tasks that an engineer or programmer needs to setup, record and/or troubleshoot programs on a FANUC Robot using Handling Tool Software. Students will be also introduced to ROBOGUIDE, Fanuc's virtual robot programming software. Topics include, power up and jogging the robot, frames, motion instructions, coordinate systems, fault recovery, file management and back up, MACROs, programming for material handling tasks, Monitoring input and output signals.

Credit Hours

Min
3

ME798 - Ph.D. Thesis Research

General

Subject Code ~
ME

Course Number ~
798

Course Name (appears on the transcript) ~
Ph.D. Thesis Research

Content

Description

This is a research course open to mechanical engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

ME799 - Ph.D. Thesis Research

General

Subject Code ~
ME

Course Number ~
799

Course Name (appears on the transcript) ~
Ph.D. Thesis Research

Content

Description

This is a research course open to mechanical engineering graduate students who have completed requirements for admission to candidacy for the master's degree. Prior to registration, written permission to enroll must be obtained from the student's advisor.

Credit Hours

Min
3

METR101 - Intro to Meteorology

General

Subject Code ~
METR

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Meteorology

Content

Description
This is an introductory course in meteorology for the non-technical student. Topics include the earth-sun system, the earth's atmosphere, the earth's heat budget, weather measurements, clouds, horizontal air movement, stability, fronts, short-term weather forecasting, and climate. Two class hours, three-hour lab.

Credit Hours

Min
3

METR151 - Climate Change

General

Subject Code ~
METR

Course Number ~
151

Course Name (appears on the transcript) ~
Climate Change

Content

Description
This course will first address the physical laws and underpinnings of the observed global warming trend. Changes in the atmospheric abundance of greenhouse gases and aerosols and in land surface properties, that alter the energy balance of the climatic system and the preexisting greenhouse effect, will be investigated. Model projections for future climates will be discussed. The investigation of the physical science basis will be followed by an assessment of the observed and projected global and local impacts of the climatic changes and the adaptations and vulnerabilities of natural, social, and economic systems impacted by these changes. Finally the proposed political solutions addressing these threads, (local and global) especially as expressed and outlined in the Assessment Reports of the Intergovernmental Panel on Climate Change (IPCC) a panel under the joint auspices of the United Nations and the World Meteorological Organization will be discussed. (NSP)

Credit Hours

Min
3

Requisites

Free Form Requirements
One of the following: PHYS 101, PHYS 103, PHYS 105, PHYS 123, PHYS 133, CHEM 101, CHEM 103, CHEM 105, BIO 101, METR 101, OCN 101 or GEOL 101

MK190 - Special Topics in Marketing

General

Subject Code ~
MK

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Marketing

Content

Description
This course is a study of topics in marketing of special interest to marketing or marketing communication/advertising majors, but not carried in the catalog on a regular basis.

Credit Hours

Max
3

Min
1

MK200 - Principles of Marketing

General

Subject Code ~
MK

Course Number ~
200

Course Name (appears on the transcript) ~
Princ of Marketing

Content

Description
This course is an exploration of the role of marketing both within the firm and within society. The course examines concepts, functions, and institutions involved in the process of developing and distributing products and services to consumer, industrial, and international markets. Offered: Fall and Spring Students cannot take both MK 200 and HONB 200 for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

MK302 - Market Analysis

General

Subject Code ~
MK

Course Number ~
302

Course Name (appears on the transcript) ~
Market Analysis

Content

Description
In this course students apply marketing concepts to identify and understand gaps in the marketplace, to analyze and understand potential opportunities, to vet those opportunities, and to present their findings to decision makers. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MK 200/HONB 200

MK303 - Customer Solutions

General

Subject Code ~
MK

Course Number ~
303

Course Name (appears on the transcript) ~
Customer Solutions

Content

Description
Building on the market analysis skills learned in MK 302, students will more completely develop customer solutions in this course. This includes development of appropriate customer solutions and realistic revenue models within a marketing strategic framework. Analysis, evaluation, recommendation and rationale for the most promising option require analytic and professional communication skills. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MK 302

MK311 - Multinational Marketing

General

Subject Code ~
MK

Course Number ~
311

Course Name (appears on the transcript) ~
Multinational Marketing

Content

Description
This course is an introduction to the complexities and implications of foreign markets, the contemporary environment, problems, and practices in international and global marketing. Emphasis is on decision-making and policy formulation including demographic, cultural, economic, political, legal, technological, logistical, and competitive aspects of doing business outside the home country. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing and MK 200/HONB 200

MK318 - Marketing Research

General

Subject Code ~
MK

Course Number ~
318

Course Name (appears on the transcript) ~
Marketing Research

Content

Description
This course is a study of the quantitative and qualitative techniques of marketing research and their effective use in marketing management. The course emphasizes the flow of marketing information, the development of sound primary research, and the adaptation of research tools to management planning and decision making.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

MK319 - Marketing Analytics

General

Subject Code ~
MK

Course Number ~
319

Course Name (appears on the transcript) ~
Marketing Analytics

Content

Description
This course will help develop the student's analytical mindset. Students will explore secondary datasets using different analytical approaches to answer important marketing questions related to buyer personas, forecasting, purchase behavior, and segmentation. The focus is the development of the data translator, who plays a critical role in the communication of analytical results throughout the firm. This is one of three courses that can fulfill the marketing research requirement.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

MK320 - Price & Product Strategy

General

Subject Code ~
MK

Course Number ~
320

Course Name (appears on the transcript) ~
Price & Product Strategy

Content

Description
Marketing is about the exchange process of products and services for monetary consideration between buyers and sellers. This course examines the creative and management processes, approaches, and analytical tools and techniques involved in creating products/services and setting the prices for them. The teaching pedagogy employs interdisciplinary student teams that identify customer needs and create product/service design and pricing solutions for them. While the major focus will be on the development and pricing of new products, other product and pricing issues such as product life cycle product development and pricing, product line pricing, branding, and price-quality relationship will be covered. Offered in the spring semester.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete EC 111 or EC 112, MK 200/HONB 200, BIS 221, and MK 301

MK322 - Sales & Sales Management

General

Subject Code ~
MK

Course Number ~
322

Course Name (appears on the transcript) ~
Sales & Sales Management

Content

Description
This course is an examination of the role of personal selling in the marketing mix. Planning, training, organizing, forecasting, and reporting of individual sales personnel and group sales activities are emphasized. Offered in the spring semester.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MK 302

MK323 - Distribution Strategy

General

Subject Code ~
MK

Course Number ~
323

Course Name (appears on the transcript) ~
Distribution Strategy

Content

Description
This course examines channels of distribution as organizational networks that create value for the customer through the generation of possession, time, and place utilities. The approach will be both strategic and managerial strategic in the sense that marketing channels are value adding chains that create competitive advantage, managerial in the sense that channels must be designed, developed, and maintained as the marketing environment changes.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MK 301

MK333 - Indep Study in Marketing

General

Subject Code ~
MK

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Marketing

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
1

MK334 - Indep Study in Marketing

General

Subject Code ~
MK

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Marketing

Content

Credit Hours

Min
3

MK340 - Promotional Design & Application

General

Subject Code ~
MK

Course Number ~
340

Course Name (appears on the transcript) ~
Promotional Design & App

Content

Description
This is a course designed to give students experience applying promotions and graphic design theory to the development of promotional materials such as print advertisements, sales support materials, newsletters, flyers, logo design, business communication materials, and webpages. Students will be introduced to graphic design computer software used for creating marketing and sales materials. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
MK-200 or HONB-200, and Junior Standing

MK372 - Digital Media Marketing Strategies

General

Subject Code ~
MK

Course Number ~
372

Course Name (appears on the transcript) ~
Digital Media Mkting Strategy

Content

Description
This course investigates the dynamic topic of digital media marketing, the technological innovation that has changed the way businesses market themselves in a digital world. An overview of digital media marketing and the development of digital media marketing strategy will be the primary focus of the course. Additional topics include new technologies in digital media marketing, the evaluation of digital media marketing promotional tools, and the implementation of digital media marketing campaigns. This course will help students to gain a better understanding of the value of digital media marketing as a viable and often times necessary marketing resource.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MK 200

MK390 - Special Topics in Marketing

General

Subject Code ~
MK

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Marketing

Content

Description
This course is a study of advanced topics in marketing of special interest to marketing or marketing communication/advertising majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MK 302 or instructor permission.

MK423 - Applied Marketing Capstone

General

Subject Code ~
MK

Course Number ~
423

Course Name (appears on the transcript) ~
Applied Marketing Capstone

Content

Description
Students will apply the marketing value creation process through a client-based practicum.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
MK 303

MK480 - Internship in Marketing

General

Subject Code ~
MK

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Marketing

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MK481 - Internship in Marketing

General

Subject Code ~
MK

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Marketing

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MK485 - Internship in Mkt Comm/Advertising

General

Subject Code ~
MK

Course Number ~
485

Course Name (appears on the transcript) ~
Internship in Mkt Comm/Ad

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MK486 - Internship in Mkt Comm/Advertising

General

Subject Code ~
MK

Course Number ~
486

Course Name (appears on the transcript) ~
Internship in Mkt Comm/Ad

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

MK492 - Special Topics in Marketing

General

Subject Code ~
MK

Course Number ~
492

Course Name (appears on the transcript) ~
Special Topics in Marketing

Content

Description
This course is a study of advanced topics in marketing of special interest to marketing or marketing communication/advertising majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

MK633 - Indep Study in Marketing

General

Subject Code ~
MK

Course Number ~
633

Course Name (appears on the transcript) ~
Indep Study in Marketing

Content

Credit Hours

Min
3

MK640 - Marketing Management

General

Subject Code ~
MK

Course Number ~
640

Course Name (appears on the transcript) ~
Marketing Management

Content

Description
This course explores marketing management issues that challenge managers in today's organizations. The course focuses on the analysis, planning, and decision-making processes required of marketing managers to develop successful marketing plans and strategies. Interactive case studies and/or computer simulations are used to provide a dynamic learning environment. Topics studied include customer and competitor analysis, technological and regulatory issues, marketing plan development, product development, pricing decisions, promotion strategy, and distribution management. The course also integrates current issues facing businesses today including e-commerce, international, and ethics topics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

MK690 - Special Topics in Marketing

General

Subject Code ~
MK

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Marketing

Content

Description
This course is a study of advanced topics in marketing of special interest to marketing or marketing communication/advertising majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

MK691 - Special Topics in Marketing

General

Subject Code ~
MK

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Marketing

Content

Description
This course is a study of advanced topics in marketing of special interest to marketing or marketing communication/advertising majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

MK692 - Special Topics in Marketing

General

Subject Code ~
MK

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Marketing

Content

Description
This course is a study of advanced topics in marketing of special interest to marketing or marketing communication/advertising majors, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

ML100 - Intro to Army Physical Fitness

General

Subject Code ~
ML

Course Number ~
100

Course Name (appears on the transcript) ~
Intro to Army Physical Fitness

Content

Description
This course is based on the Army Physical Fitness Training Program. It is designed to introduce students to the ethos and approach to fitness within the military and to augment their training as future leaders if they choose to pursue a commission in the United States Army. This course is open to all students.

Credit Hours

Min
1

ML101 - Foundations of Leadership

General

Subject Code ~
ML

Course Number ~
101

Course Name (appears on the transcript) ~
Foundations of Leadership

Content

Description
This is an introduction to basic leader and officer competencies to establish a foundation for continued study. Learn basic life skills pertaining to personal fitness, time management, and interpersonal communication. Includes introduction of Army values and expected ethical behavior. Presents the unique duties and responsibilities of officers and the expectation of selfless service.

Credit Hours

Min
1

ML102 - Basic Leadership

General

Subject Code ~
ML

Course Number ~
102

Course Name (appears on the transcript) ~
Basic Leadership

Content

Description
This is an introduction of a generic model of problem solving; instruction in basic skills that underlie effective problem solving; relate the problem solving model and basic skills to the resolution of military problems. Fundamental leadership concepts are introduced including factors that influence leader and group effectiveness.

Credit Hours

Min
1

ML201 - Individual Leadership Studies

General

Subject Code ~
ML

Course Number ~
201

Course Name (appears on the transcript) ~
Individual Leadership Studies

Content

Description
This course emphasizes development of problem-solving and critical thinking skills through experiential learning activities. Application of effective written and oral communication, feedback, and conflict resolution skills.

Credit Hours

Min
2

ML202 - Leadership & Teamwork

General

Subject Code ~
ML

Course Number ~
202

Course Name (appears on the transcript) ~
Leadership & Teamwork

Content

Description
This course focuses on self-development guided by knowledge of self and group processes. Experiential learning activities are designed to challenge current beliefs, knowledge, and skills.

Credit Hours

Min
2

ML301 - Military Leadership I

General

Subject Code ~
ML

Course Number ~
301

Course Name (appears on the transcript) ~
Military Leadership I

Content

Description
Overview of military leadership at a hands-on tactical level and theoretical level. Tactical leadership phase: focus on the small unit leader and skills required for successful leadership of unit from a fire team through platoon level. Theoretical leadership phase: focus on basic leadership principles, communication concepts, and motivation theory.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ML 202 or permission of the instructor or ROTC program coordinator

ML302 - Military Leadership II

General

Subject Code ~
ML

Course Number ~
302

Course Name (appears on the transcript) ~
Military Leadership II

Content

Description
This is an introduction to military leadership and management. Development of practical managerial/leadership skills in planning, organizing, delegation, and control and development of instructor skills through instruction training, performance-orientated training, and individual classroom presentations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ML 301

ML333 - Indep Study in Military Leadership

General

Subject Code ~
ML

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Military Lead

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ML334 - Indep Study in Military Leadership

General

Subject Code ~
ML

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Military Lead

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

ML401 - Leadership & Management

General

Subject Code ~
ML

Course Number ~
401

Course Name (appears on the transcript) ~
Leadership & Management

Content

Description
This course provides an introduction of Army staff organization, functions, and processes. Personnel and training management; includes counseling techniques and Army career management perspectives. Refines leadership skills to lead people and manage resources.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ML 302

ML402 - Military Law & Officership

General

Subject Code ~
ML

Course Number ~
402

Course Name (appears on the transcript) ~
Military Law-Officership

Content

Description
This course focuses on military law and ethics, constitutional basis of powers, basic principles of criminal law and ethics; rules of evidence; military judicial structuring within the Army and issues dealing with problems faced by the newly commissioned officer.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ML 401

MUS101 - Introduction to Music

General

Subject Code ~
MUS

Course Number ~
101

Course Name (appears on the transcript) ~
Introduction to Music

Content

Description
A nontechnical course guides students in approaching classical music of the 16th - 20th centuries. Topics include the diversity of musical forms, historical backgrounds, composer biographies, and selected musical examples.

Credit Hours

Min
3

MUS102 - The Art of Singing

General

Subject Code ~
MUS

Course Number ~
102

Course Name (appears on the transcript) ~
The Art of Singing

Content

Description
Through singing exercises, students will work to improve their breathing, pitch, posture, expression, and knowledge or musical theory. Students will practice a variety of songs, culminating in a final recital.

Credit Hours

Min
3

MUS110 - Beginning Guitar

General

Subject Code ~
MUS

Course Number ~
110

Course Name (appears on the transcript) ~
Beginning Guitar

Content

Description
This course is designed as an introduction to guitar for those with little or no experience on the instrument. Skills to be developed include reading basic notes on a staff in first position, learning basic first position chords, using standard notation, reading Tablature, playing melodies with a pick, learning basic strumming styles, and playing in a group. All techniques and music theory will be taught in the context of songs. An acoustic guitar is preferred for classroom use.

Students who have at least a year experience playing guitar should sign up for MUS 210 Intermediate Guitar.

Credit Hours

Min
3

MUS120 - American Popular Music

General

Subject Code ~
MUS

Course Number ~
120

Course Name (appears on the transcript) ~
American Popular Music

Content

Description
This course is designed to be an introduction to the art of song as found in a wide range of American forms such as folk, musical theater, jazz, pop and rock. Attention will be paid to the origins of music and the contexts in which it has been performed. The course aims to help students identify not only various genres but well-known singers and songs as well, and, for musical theater, some of the shows the songs are from. Poetic content and artistry of lyrics will be examined. Basic concepts of musicianship will also be covered (rhythm, meter, pitch, style, harmony, voice parts, instrumentation, etc.), as they pertain to the recordings.

Credit Hours

Min
3

MUS151 - Campus Chorus

General

Subject Code ~
MUS

Course Number ~
151

Course Name (appears on the transcript) ~
Campus Chorus

Content

Description
Students participate in the performance of the campus chorus. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Permission of Instructor

MUS152 - Campus Chorus

General

Subject Code ~
MUS

Course Number ~
152

Course Name (appears on the transcript) ~
Campus Chorus

Content

Description
Students participate in the performance of the campus chorus. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Permission of Instructor

MUS153 - Campus Chorus

General

Subject Code ~
MUS

Course Number ~
153

Course Name (appears on the transcript) ~
Campus Chorus

Content

Description
Students participate in the performance of the campus chorus. May be taken more than once.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of Instructor

MUS154 - Campus Chorus

General

Subject Code ~
MUS

Course Number ~
154

Course Name (appears on the transcript) ~
Campus Chorus

Content

Description
Students participate in the performance of the campus chorus. May be taken more than once.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of Instructor

MUS155 - Campus Chorus

General

Subject Code ~
MUS

Course Number ~
155

Course Name (appears on the transcript) ~
Campus Chorus

Content

Description
Permission of instructor required. Students participate in the performance of the campus chorus.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of Instructor

MUS161 - Pep Band

General

Subject Code ~
MUS

Course Number ~
161

Course Name (appears on the transcript) ~
Pep Band

Content

Description
Students participate in the performances of the college's pep band. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Permission of Instructor

MUS162 - Pep Band

General

Subject Code ~
MUS

Course Number ~
162

Course Name (appears on the transcript) ~
Pep Band

Content

Description
Students participate in the performances of the college's pep band. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Permission of Instructor

MUS163 - Pep Band

General

Subject Code ~
MUS

Course Number ~
163

Course Name (appears on the transcript) ~
Pep Band

Content

Description
Students participate in the performances of the college's pep band. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Permission of Instructor

MUS164 - Pep Band

General

Subject Code ~
MUS

Course Number ~
164

Course Name (appears on the transcript) ~
Pep Band

Content

Description
Students participate in the performances of the college's pep band. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Permission of Instructor

MUS165 - Pep Band

General

Subject Code ~
MUS

Course Number ~
165

Course Name (appears on the transcript) ~
Pep Band

Content

Description
Students participate in the performances of the college's pep band. May be taken more than once.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Permission of Instructor

MUS181 - Concert Band

General

Subject Code ~
MUS

Course Number ~
181

Course Name (appears on the transcript) ~
Concert Band

Content

Description
Students participate in the practice and performance of the college's concert band.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Permission of Instructor

MUS182 - Concert Band

General

Subject Code ~
MUS

Course Number ~
182

Course Name (appears on the transcript) ~
Concert Band

Content

Description
Students participate in the practice and performance of the college's concert band.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Permission of Instructor

MUS183 - Concert Band

General

Subject Code ~
MUS

Course Number ~
183

Course Name (appears on the transcript) ~
Concert Band

Content

Description
Students participate in the practice and performance of the college's concert band.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of Instructor

MUS184 - Concert Band

General

Subject Code ~
MUS

Course Number ~
184

Course Name (appears on the transcript) ~
Concert Band

Content

Description
Students participate in the practice and performance of the college's concert band.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of Instructor

MUS190 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

MUS191 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

MUS192 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

MUS193 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
193

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

MUS194 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
194

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

MUS195 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
195

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

MUS201 - Basic Music Theory & Comp

General

Subject Code ~
MUS

Course Number ~
201

Course Name (appears on the transcript) ~
Basic Music Theory & Comp

Content

Description
An introduction to the art and science of music theory covering musical notation, rhythm, and harmony. These techniques are then put to practical use through the art of composing. The students will be able to write their own music and hear them performed in class.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

MUS210 - Intermediate Guitar

General

Subject Code ~
MUS

Course Number ~
210

Course Name (appears on the transcript) ~
Intermediate Guitar

Content

Description
This course is aimed at those who already have some experience playing guitar. It will introduce students to notes and chords beyond first position. The first unit is on power chords and barre chords. The second unit introduces students to basic finger style guitar and finger picking, with a special focus on acoustic blues and Travis-picking. All techniques and music theory will be taught in the context of songs. Skills to be developed include reading Tablature and chord charts, learning basic chord theory, and playing in a guitar ensemble.

An acoustic guitar is preferred for classroom use.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete MUS 110, or permission of instructor

MUS250 - CMSS Indiv Musical Instrum Instruct

General

Subject Code ~
MUS

Course Number ~
250

Course Name (appears on the transcript) ~
CMSS Indiv Music Instruct

Content

Description
Fee: $300. Private instruction at the Community Music School of Springfield (CMSS) in such instruments as bass (electric and string), cello, clarinet, drums, flute, guitar (acoustic and electric), piano, saxophone, trombone, trumpet, and violin. Twelve 50 minute sessions. (If a student withdraws prior to the second lesson, $254 of the fee shall be reimbursed. If a student withdraws after the second lesson but prior to the third, the student shall be reimbursed $200 of the fee. If a student withdraws after the third lesson, the student shall not receive a reimbursement of any of the fee.) Students solely responsible for selecting the day/time of the lesson by dealing directly with the CMSS. Students are responsible for their own transportation to and from the CMSS. MUS 250 is offered in the fall, MUS 251 in the spring term. May be taken more than once for credit.

Credit Hours

Min
3

Requisites

Free Form Requirements
Permission of the Coordinator of Music

MUS290 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

MUS291 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

MUS292 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

MUS293 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
293

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

MUS294 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
294

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
1

MUS333 - Independent Study in Music

General

Subject Code ~
MUS

Course Number ~
333

Course Name (appears on the transcript) ~
Independent Study Music

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

MUS334 - Independent Study in Music

General

Subject Code ~
MUS

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Music

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

MUS390 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

MUS391 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

MUS392 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

MUS393 - Special Topics in Music

General

Subject Code ~
MUS

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Music

Content

Description
Topics in music that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

NSCI212 - Introduc to Behavioral Neuroscience

General

Subject Code ~
NSCI

Course Number ~
212

Course Name (appears on the transcript) ~
Intro Behavi Neuroscience

Content

Description
This is a systematic study of the physiological basis of behavior with an emphasis on the role of the central nervous system. The course serves as an introduction to cellular and behavioral neuroscience for psychology and neuroscience majors. Topics include structure and function of the central nervous system (brain, neurons and synapses), sensation and perception, psychopharmacology, neuroanatomy and neurochemistry of learning and memory, emotions, and psychological disorders.

Credit Hours

Min
3

Requisites

No Requirements

NSCI224 - Sensation & Perception

General

Subject Code ~
NSCI

Course Number ~
224

Course Name (appears on the transcript) ~
Sensation & Perception

Content

Description
This Natural Science Perspective (NSP) course examines the physiological basis of sensation and uses a comparison of multiple approaches to measure the internalization of sensory stimuli into a private, meaningful experience (perception). All that we feel, think and do depends on sensations and perceptions. The physiological and psychological aspects underlying sensory experiences are combined in a thought-provoking manner that engages students. Students will learn how sensory systems filter information to the brain where it is further processed into a perception of the environment. The content is discussed in light of contemporary applications, human experience, and the problems that occur when sensation is diminished or lacking.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete one Lab Science course

NSCI232 - Research Methods in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
232

Course Name (appears on the transcript) ~
Research Methods in NSCI

Content

Description
This course presents an overview of research methods in neuroscience. Students will learn the process of selecting a research topic, designing an experiment, analyzing the results, and presenting their findings in a research paper. Additionally students will be introduced to basic research methods and design principles using relevant examples from neuroscience such as the principles of design of fMRI studies, the use of transgenic mice, and conditional gene knockouts. Important topics such as professional ethics, fundamental statistics and data analysis tools, the range of possible experimental designs (from simple descriptive studies to multifactorial designs), and ways to control unwanted variables and avoid common pitfalls will be discussed.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 207 or MATH 120

NSCI247 - Scientific Communication

General

Subject Code ~
NSCI

Course Number ~
247

Course Name (appears on the transcript) ~
Scientific Communication

Content

Description
This course is designed to develop communication skills in the sci-ences. Many forms of scientific communication will be examined including traditional manuscripts, poster presentations, digital presentations and federal grant composition. This course satisfies the writing intensive course requirement for Arts and Sciences stu-dents. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete ENGL 132 and NSCI 212, or permission of the chair

NSCI248 - Reproductive Endocrinology & Physio

General

Subject Code ~
NSCI

Course Number ~
248

Course Name (appears on the transcript) ~
Reprod Endocrin & Physiol

Content

Description
This course addresses reproductive strategies of non-humans, human reproductive anatomy and physiology, human reproductive endocrinology and human reproductive medicine. This latter topic will occupy a large portion of the term. We will broadly introduce physiological systems of hormone regulation and modulation as well as reproduction. Students will learn the science behind contemporary issues in reproductive medicine and make comparisons of infertility statistics from the World Health Organization with those from the American Society for Reproductive Medicine (via CDC).

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete BIO-101; or BIO-107 and BIO-117

NSCI250 - Neuroscience Lab Rotation I

General

Subject Code ~
NSCI

Course Number ~
250

Course Name (appears on the transcript) ~
Neuroscience Lab Rotat I

Content

Description
In this course the students have the opportunity to rotate into a faculty's neuroscience lab and acquire basic technological skills and knowledge of the research in progress.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete NSCI 212

NSCI251 - Neuroscience Lab Rotation II

General

Subject Code ~
NSCI

Course Number ~
251

Course Name (appears on the transcript) ~
Neuroscience Lab Rotation II

Content

Description
In this course the students have the opportunity to rotate into a faculty's neuroscience lab and acquire basic technological skills and knowledge of the research in progress. The student will begin to take the lead on some experiments and show proficiency in animal handling and care.

Credit Hours

Min
2

Requisites

Free Form Requirements
Complete NSCI 250

NSCI267 - Neurobiology

General

Subject Code ~
NSCI

Course Number ~
267

Course Name (appears on the transcript) ~
Neurobiology

Content

Description
This course is an introduction to molecular and cellular principles of neurobiology and the organization of neural networks. Topics include developmental and synaptic plasticity. The course will include laboratory experience electrically recording nerve cells, computer simulations and modeling, and examining the use of molecular techniques in neurobiology.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete NSCI 212 or BIO 108/BIO 118

NSCI290 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Neuroscien

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI 212

NSCI291 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Neuroscien

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

NSCI312 - Cognitive Neuroscience

General

Subject Code ~
NSCI

Course Number ~
312

Course Name (appears on the transcript) ~
Cognitive Neuroscience

Content

Description
This course will provide a comprehensive study of the neural systems that underlie human perception, emotions, memory, and language; and of the clinical disorders that result from damage to these systems. Following a review of neural cell physiology and neuroanatomy, the course will focus on the manner in which basic cognitive functions are disrupted subsequent to brain injury. Current diagnostic methods will be studied, including an examination of how to interpret research/clinical findings and detect inherent limitations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI 212, or permission of chair

NSCI324 - Animal Learning Lab

General

Subject Code ~
NSCI

Course Number ~
324

Course Name (appears on the transcript) ~
Animal Learning Lab

Content

Description
The basic principles of operant conditioning are demonstrated in two non-invasive behavioral experiments using standard operant conditioning equipment for rodents. Course content will cover operant and respondent conditioning, extinction, shaping, schedules of reinforcement, discrimination training, and inhibitory learning. Students will be required to prepare IMRAD formatted papers (Introduction, Methods, Results, And Discussion) based on their experimental results. Students will be responsible for conducting their own experiments (recording and analyzing data) and presenting relevant research articles in the student journal club.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete NSCI 212 or PSY 313; or permission of the chair

NSCI333 - Independent Study in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
333

Course Name (appears on the transcript) ~
Independent Study in NSCI

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

NSCI334 - Independent Study in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
334

Course Name (appears on the transcript) ~
Independent Study in NSCI

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

NSCI348 - Sport-Induced Concussions

General

Subject Code ~
NSCI

Course Number ~
348

Course Name (appears on the transcript) ~
Sport-Induced Concussions

Content

Description
This course is designed to provide a comprehensive examination of sport-induced concussions, combining the basic medical science of closed head injury with the policy and practice of assessing and managing concussions on and off the playing field. The course content includes an introduction to brain anatomy and the neurological effects that occur in response to physical trauma to the brain; a description of the immediate and long term symptoms associated with concussions and a review of the cognitive and neurological diagnostic tools used for evaluation; an examination of the effects of repeated concussions, Post-concussion Syndrome, and rehabilitation options for concussed patients; an investigation of the management of concussions and return-to-play protocols.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

NSCI350 - Neuroscience Lab Placement I

General

Subject Code ~
NSCI

Course Number ~
350

Course Name (appears on the transcript) ~
Neuroscience Lab Placement I

Content

Description
In this course the students will further increase their knowledge and skill level in a faculty's neuroscience lab. The student will conduct research more independently; assist in the training and supervision of other students; and read, comprehend, and lead journal club discussions of relevant research articles.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI 250/NSCI 251

NSCI351 - Neuroscience Lab Placement II

General

Subject Code ~
NSCI

Course Number ~
351

Course Name (appears on the transcript) ~
Neuroscience Lab Placement II

Content

Description
In this course the students will further increase their knowledge and skill level in a faculty's neuroscience lab. The student will conduct research more independently; assist in the training and supervision of other students; and read, comprehend, and lead journal club discussions of relevant research articles.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI 250/NSCI 251

NSCI380 - Neural Systems and Behavior

General

Subject Code ~
NSCI

Course Number ~
380

Course Name (appears on the transcript) ~
Neural Systems & Behavior

Content

Description
In this course students will examine the link between systems level neuroscience and behavior. The course will focus on models used in research, and especially non-human models (e.g. dolphins, lobsters, etc). The course will address the basic circuits, electrophysiological phenomena, and modulators of neural systems as they pertain to animal behavior. Students will consider matters of neuroethology through discussion of recent advances in the literature / scientific publications.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI 212 and BIO 108; or permission of the chair

NSCI381 - Evolution of Nervous Systems

General

Subject Code ~
NSCI

Course Number ~
381

Course Name (appears on the transcript) ~
Evolution of Nervous Systems

Content

Description
As one of just four categories of tissue persistent across the great phylogeny of animals, nervous tissue likely offered our kingdom notable fitness to adapt to ecological changes throughout the nearly billion years of animal evolution. This course will survey theories on the origins of electrical tissue and follow tissue specialization from its departure from a putative ancestral and contractile tissue through the arrangement of electrical cells into progressively more complex systems. We will examine the efficacy of several of these nervous system designs (e.g. distributed networks, flanking longitudinal connectives, and centralized nervous systems). We will engage the challenging problem of appreciating elegance in solving ecological problems ('selective pressures') with simple neural systems, and why more complex systems may have provided some benefit ('fitness'). Lastly, the contributions of several investigators of neural evolution including DuJardin, Cajal, and Gould will be considered.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI-212
Corequisite- NSCI 267

NSCI385 - Neurodevelopment

General

Subject Code ~
NSCI

Course Number ~
385

Course Name (appears on the transcript) ~
Neurodevelopment

Content

Description
Across species, formation of the nervous system shares some common mechanisms. This conservation enables the study of a variety of species. This course will describe the key concepts that contribute to nervous system development in several model organisms, covering concepts such as neurogenesis, neural migration and axon growth/ guidance, synaptic activity and apoptosis. Research techniques as they apply to development in genetics and molecular biology are briefly explained.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete NSCI 212
BIO 316 recommended or permission from the Department Chair

NSCI387 - Stem Cells and Adult Neurogenesis

General

Subject Code ~
NSCI

Course Number ~
387

Course Name (appears on the transcript) ~
Stem Cells and Adult Neur

Content

Description
Stem cells are in the media all the time, but students are learning very little about them. In this course, embryonic and adult stem cells will be examined in terms of their molecular, cellular and potential therapeutic properties. Students will learn about the different types of stem cells (embryonic, adult-generated and induced pluripotent cells) and the clinical applications.

Adult neurogenesis refers to the areas of the mature brain that continue to produce neurons throughout life. Students will learn about adult neurogenesis in the context of behavior and disease such as depression and degeneration.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI 212
NSCI 385 recommended or permission from the Department Chair

NSCI390 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics Neurosci

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

NSCI391 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Neuroscience

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

NSCI392 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Neuroscience

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

NSCI401 - Genetic & Molecular Tech in NSCI

General

Subject Code ~
NSCI

Course Number ~
401

Course Name (appears on the transcript) ~
Genetic & Molecular NSCI

Content

Description
This practice-based, laboratory course introduces students to a selection of advanced techniques and methods used in contemporary genetic and molecular neuroscience. The common fruit fly, Drosophila melanogaster, will be examined and utilized as our model organism because it offers unparalleled genetic tools, rapid lifespan turn-over, and relatively simple anatomy and physiology. Some of the techniques that students will practice include: immunohistochemistry and immuno-fluorescence (fixation, primary and second antibody conjugation), fluorescence microscopy (excitation, emission, and filter cube physics), inverted microscopy (physiologic microscopy, activation of synapses and calcium indicator dyes), both end-point and quantitative Polymerase Chain Reaction (PCR), ?fly pushing? (produce mutant strains), and evaluation of custom cassette inserts to the fruit fly genome (e.g. GAL4/UAS, GAL80 / temperature sensitive control, and geneswitch lines).

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete NSCI 212 and NSCI 267; or instructor's approval

NSCI405 - Seminar in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
405

Course Name (appears on the transcript) ~
Seminar in Neuroscience

Content

Description
This capstone seminar will cover current approaches and techniques in the field of neuroscience. Guest speakers and Western New England faculty in neuroscience and related areas will present their research. In this course, students critically review the relevant literature, develop skills in oral presentation of scientific data and analysis of experimental results, and interact with faculty members working in fields associated with the topics discussed. The role of the instructor is to provide perspectives or guide the discussions, but the emphasis is on efforts by the students. The students are expected to critically read the designated papers and sufficient other references to place the paper in context, then clearly and critically present its results and conclusions and lead a round-table discussion with the other students.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete NSCI 267 and NSCI 232; or PSY 309 or permission of chair

NSCI424 - Neurobiology of Addiction

General

Subject Code ~
NSCI

Course Number ~
424

Course Name (appears on the transcript) ~
Neurobiology of Addiction

Content

Description
This course will engage in the latest discussion on the neural theory of addiction. Most of the course will examine current theories and research in drug addiction, emphasizing our current understanding of the neurobiological mechanisms of addiction for psychostimulants, opioids, alcohol, nicotine, and cannabinoids. In addition to lecture, students will have the opportunity to conduct behavioral pharmacology experiments and learn to report their findings in an IMRAD-formatted research paper.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete NSCI-212; or permission of the chair

NSCI450 - Senior Neuroscience Thesis I

General

Subject Code ~
NSCI

Course Number ~
450

Course Name (appears on the transcript) ~
Senior Neuroscience Thesis I

Content

Description
In the first semester of this course the student will prepare and present a research proposal, and begin data collection for their senior research project. In the second semester the student will complete the data collection, analyze their results, and write a complete APA thesis of their senior research project. The student will assist the sponsoring faculty in preparing the paper for a conference presentation and for publication, if required.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete NSCI 350/NSCI 351

NSCI451 - Senior Neuroscience Thesis II

General

Subject Code ~
NSCI

Course Number ~
451

Course Name (appears on the transcript) ~
Senior Neuroscience Thesis II

Content

Description
In the first semester of this course the student will prepare and present a research proposal, and begin data collection for their senior research project. In the second semester the student will complete the data collection, analyze their results, and write a complete APA thesis of their senior research project. The student will assist the sponsoring faculty in preparing the paper for a conference presentation and for publication, if required.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete NSCI 350/NSCI 351

NSCI480 - Internship in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Neuroscience

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

NSCI481 - Internship in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Neuroscience

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

NSCI490 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
490

Course Name (appears on the transcript) ~
Special Topics in Neurosci

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

NSCI491 - Special Topics in Neuroscience

General

Subject Code ~
NSCI

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Neurosc

Content

Description
This is a study of an advanced topic of neuroscience, but not offered on a regular basis.

Credit Hours

Min
3

OTD500 - Occupational Therapy/Occupational Scienc

General

Subject Code ~
OTD

Course Number ~
500

Course Name (appears on the transcript) ~
Occupational Therapy/Occupatio

Content

Description
This course introduces key concepts related to occupational therapy and occupational science, including the study of the role of occupation in the profession and the innate desire for humans to engage in meaningful and purposeful occupations throughout life. In addition, the history and guiding philosophy of occupational therapy, the principles and theories guiding practice, and the roles and responsibilities of the occupational therapy practitioner will be introduced. Key legislation, and professional documents, including the OT Practice Framework, Code of Ethics, Standards of Practice, etc., will be introduced and established as frameworks for practice. Requirements for licensure and certification will also be introduced.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD504 - Foundations Occupational Therapy Pract

General

Subject Code ~
OTD

Course Number ~
504

Course Name (appears on the transcript) ~
Foundations Occupational Ther

Content

Description
This course covers the fundamentals of occupational therapy practice, including universal precautions, body mechanics, vital sign monitoring, patient/client handling and transfer techniques, functional mobility, and use of assistive devices including wheelchairs. Throughout the course, there is a focus on maintaining safety within all contexts and with all patient/client care.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD506 - Group Interven & Therapeutic Use of Self

General

Subject Code ~
OTD

Course Number ~
506

Course Name (appears on the transcript) ~
Group Interventions & Therapeu

Content

Description
This course focuses on group and individual treatment methodologies in mental health and psychosocial settings. Using the OTPF as a guide, students will learn a variety of psychosocial treatment methods, including those addressing the areas of social skills, relaxation, cognition, sensory integration, and other areas. These methodologies and intervention techniques are considered in a variety of settings, including inpatient, outpatient, and community-based. The course also focuses on the group process and the relationship of the self to the group. Group dynamics/group development is also emphasized, including group stages, leadership roles, conflict resolution, and problem solving. Therapeutic use of self is woven throughout the course as a therapeutic tool in occupational therapy.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD509 - Functional Anatomy & Kinesiology

General

Subject Code ~
OTD

Course Number ~
509

Course Name (appears on the transcript) ~
Function Anatomy & Kinesiolog

Content

Description
This course will review the basics of skeletal and musculoskeletal anatomy as they relate to the biomechanics of human movement. The anatomical, physiological, and mechanical principles of movement will be analyzed and evaluated relative to occupational performance. Students will conduct physical and occupational analyses of human movement using biomechanical assessment methods including goniometry, manual muscle testing, and grip and pinch measurements. Students will examine major joint movements and consider the physical forces that influence human movement and functional performance. The course material will be presented via lecture and will be supplemented with hands-on laboratory experiences that include the use of: anatomical models; online videos; live demonstration and hands-on practice sessions with peers.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD512 - Eval: Occ Profile & Analysis Occupat

General

Subject Code ~
OTD

Course Number ~
512

Course Name (appears on the transcript) ~
Eval: Occ Profile & Analysis

Content

Description
This course focuses on using a top down approach to evaluation by assessing clients' abilities to engage in desired roles and activities in their primary environments (home, school, work, and the community). Students will learn methods of developing client occupational profiles using specific measures (COPM, KELS, etc.) designed to understand the meaning of occupation in maintaining occupational identity, the value of occupation, and the components of occupational performance related to functional participation. Students will learn to identify meaningful occupations, as well as the barriers to participation in these occupations through activity analysis. Throughout this course, students will learn to grade/adapt activities to meet client-centered goals and abilities. Finally, students will learn how to incorporate this information into formally documented occupational therapy evaluations.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD517 - Occupational Performance: Mental Health

General

Subject Code ~
OTD

Course Number ~
517

Course Name (appears on the transcript) ~
Occupational Performance: Ment

Content

Description
This course is focused on evaluation and interventions appropriate for inpatient and community mental health settings for clients of all ages with mental health diagnoses and conditions. Theories and models of practice appropriate to the diagnosis, practice settings, and age groups guide the selection and use of specific assessment tools and evidence-based intervention methods, as well as social or community support needed to meet client occupational needs. These approaches include trauma-informed care, cognitive behavioral therapy (CBT), motivational interviewing techniques, sensory activities, Wellness Recovery Action Plans, traditional occupation approaches, harm reduction techniques, mindfulness, and diagnosis focused assessment measures. These approaches are advocated as appropriate to meet client occupational needs and reduce stigma and social/institutional barriers to performance and participation. The course also stresses the effects of medication on occupational performance, and ethical practice related to intervention planning, implementation, documentation, and discharge appropriate to the setting and client needs. Content relevant to legislative, legal, political, economic, and management/billing/documentation considerations for these service delivery areas is also covered.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD518 - Level IA Fieldwork

General

Subject Code ~
OTD

Course Number ~
518

Course Name (appears on the transcript) ~
Level IA Fieldwork

Content

Description
Students experience occupational therapy practice in settings that provide mental/behavioral health services (e.g. inpatient/outpatient psychiatric units; community-based behavioral health), and/or in settings that espouse mental health practices at their foundation (e.g. alternative educational facilities; memory units). Opportunities to observe and interact with clients who utilize these services are provided. Through this experience, students will understand that mental health is at the core of the occupational therapy profession and is relevant across all populations.

This course is graded pass/fail.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Admission to the OTD program

OTD523 - Assessment: Theory and Measures

General

Subject Code ~
OTD

Course Number ~
523

Course Name (appears on the transcript) ~
Assessment: Theory & Measures

Content

Description
In this course, students will be introduced to general concepts related to the theory and development of assessment tools/measures used for occupational therapy evaluation. Students will learn about various types of assessment tools and methods (standardized, non-standardized, ethnographic, interview, observation, survey/questionnaire, etc.), as well as the psychometric properties of and methodological research for assessment tools. Through the use of case studies, students will understand the use of clinical reasoning in the choice of assessment strategies and tools. The course will cover principles of administration and scoring and challenges in the use of specific measures, including cultural bias. Students will practice interpreting test results and writing sections of an evaluation.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 500, OTD 512, and OTD 517

OTD525 - Research/Evidence-Based Practice 1

General

Subject Code ~
OTD

Course Number ~
525

Course Name (appears on the transcript) ~
Research/Evidence-Based Prac 1

Content

Description
This is the first of two courses on research process and evidence-based practice (EBP). As the introductory course, students will explore the principles of human subject research, the necessity for research in knowledge development, and breadth of research methodologies. Students will first learn the impact and importance of theories, frames of reference, and models of practice on research. Then students will apply, analyze, and evaluate scientific evidence to guide evidence-based decision making in occupational therapy practice. The course has three principal foci: 1) assessing/establishing evidence bases for practice with literature searches, annotated bibliographies, and literature reviews. This includes locating, selecting, critiquing, and synthesizing current and past literature to inform the current study; 2) understanding and designing the research process for qualitative and/or quantitative research, including defining the research question, performing literature reviews, selecting methodologies, measurements, submitting an exempt IRB and presenting this proposal to their peers; and 3) understanding ethical policies and procedures in preparation for securing and conducting human subjects research.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 500, OTD 512, and OTD 517

OTD527 - Occupational Perf: Acute & Chronic Car

General

Subject Code ~
OTD

Course Number ~
527

Course Name (appears on the transcript) ~
Occupational Performance: Acut

Content

Description
This course is focused on evaluation and intervention in medical, acute, and rehabilitation, settings for clients with medical and neurological diagnoses and conditions. Theories and models of practice appropriate to diagnosis and practice setting guides the selection and use of evidence-based assessment tools, intervention methods, and assistive technology. The course also stresses ethical practice and the use of precautions with this population/in these settings, as well as intervention planning, implementation, documentation, and discharge appropriate to setting and client's occupational needs. Content relevant to legislative, legal, political, economic, and management/billing/documentation considerations for these service delivery areas is also covered.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 500, OTD 504, OTD 509, OTD 512, OTD 517, and OTD 518

OTD528 - Level IB Fieldwork

General

Subject Code ~
OTD

Course Number ~
528

Course Name (appears on the transcript) ~
Level IB Fieldwork

Content

Description
Level I fieldwork is an integral part of the curriculum design woven in with the didactic components of the program. Level I fieldwork provides students with the opportunity to work with individuals across the lifespan in a variety of settings. OTD 528 will include clinical observations of adults and adolescents in, but not limited to, alternative high school, dementia care facilities, independent and assisted living facilities, and acute mental health, specifically focusing on the psychosocial components of their care. During faculty-led, on- and off-site fieldwork experiences, students will complete learning activities in order to assess their understanding and comprehension of the OTD didactic coursework. Activities and assignments will coincide with OTD 520, OTD 522, and OTD 524.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD-518

OTD531 - Occupational Perf: Neurorehabilitation

General

Subject Code ~
OTD

Course Number ~
531

Course Name (appears on the transcript) ~
Occ Perf: Neurorehabilitation

Content

Description
This course covers the anatomy and physiology of the nervous system as a foundation for the evaluation, interpretation, and treatment of clients through the lifespan with disorders of the nervous system. The course will focus on the manner in which basic cognitive behavioral processes are disrupted due to neurodevelopmental, or neurodegenerative disorders, or subsequent to neurological injury. Theories and models of practice appropriate to diagnosis and practice setting guides the selection and use of evidence-based assessment tools, intervention methods, and assistive technology. The course also stresses ethical practice and the use of precautions with this population/in these settings, as well as intervention planning, implementation, documentation, and discharge appropriate to setting and client's occupational needs. Content relevant to legislative, legal, political, economic, and management/billing/documentation considerations for these service delivery areas is also covered.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 504, OTD 509, OTD 512 and OTD 517

OTD537 - Occupational Per: Post-Acute & Outpat

General

Subject Code ~
OTD

Course Number ~
537

Course Name (appears on the transcript) ~
Occupational Per: Post-Acute

Content

Description
This course focuses on evaluation and intervention appropriate for post-acute and outpatient rehabilitation settings for patients/clients with motor and orthopedic diagnoses and conditions. Students are instructed on the theories and models of practice appropriate to each diagnosis and practice setting which guide the selection and use of specific assessment tools and evidence-based intervention methods including but not limited to modalities, orthotics, and prosthetics. The course also stresses ethical practice and the use of precautions in these settings, as well as intervention planning, implementation, documentation, and discharge appropriate to the setting and client's occupational needs. Content relevant to legislative, legal, political, economic, and management/billing considerations for these service delivery areas is also covered.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 500, OTD 504, OTD 509, OTD 512, OTD 517, and OTD 518

OTD539 - Level IB Fieldwork Experience

General

Subject Code ~
OTD

Course Number ~
539

Course Name (appears on the transcript) ~
Level IB Fieldwork Experience

Content

Description
Students experience occupational therapy practice in acute care hospitals/medical centers, inpatient/outpatient rehabilitation centers, and/or post-acute facilities. Opportunities to observe acute care and outpatient practice and interact with standardized patients and/or real clients experiencing medically complex conditions, neuro-motor diagnoses, or orthopedic conditions are provided.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 500, OTD 504, OTD 509, OTD 512, OTD 518, OTD 506, and OTD 517
Concurrent with OTD 527 and OTD 537

OTD541 - Doctoral Experiential 1: Needs Assessmen

General

Subject Code ~
OTD

Course Number ~
541

Course Name (appears on the transcript) ~
Doctoral Experiential 1: Needs

Content

Description
This is the first course in the Doctoral Experiential sequence and focuses on the sequence of actions necessary to conduct a comprehensive needs assessment in order to develop an evidence-based program to address the identified needs. Students will examine theoretical models of community-based practice and health promotion; investigate a community to develop a profile; identify a program, interview program managers and conduct a critical analysis of program strengths, weaknesses, opportunities, and threats; research and identify available grant funding options for program development; and learn strategies for grant writing. Students will work simultaneously with their assigned faculty mentor and the Doctoral Capstone Coordinator to identify and procure a facility/site at which they will ultimately complete the Doctoral Experiential Capstone Component of the OTD program. Students will identify a site mentor, who will work with the student throughout the Doctoral Experiential process. Students will conduct a needs assessment, analyze the information, and disseminate the results through a scholarly report. This course supports the OTD 544: Doctoral Experiential 1: Mentorship Seminar.

Credit Hours

Min
2

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Year 1 Spring Semester courses

OTD544 - Doctoral Experiential 1: Mentorship Semi

General

Subject Code ~
OTD

Course Number ~
544

Course Name (appears on the transcript) ~
Doctoral Experiential 1: Mento

Content

Description
This course is taken in conjunction with OTD 541: Doctoral Experiential 1: Needs Assessment & Program Development and provides the student with faculty mentorship for initiating a needs assessment relevant to a particular topic. The course addresses the following: review of the literature; development of a community profile; identification of possible sites; identification of measurement tools to conduct a needs assessment; analysis of the data collected; and writing and disseminating a scholarly report on the results of the preliminary needs assessment. Students will be assigned a faculty mentor who will work with them throughout the Doctoral Experiential sequence of courses.

Billing Hours

Min
1

Credit Hours

Min
1

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Complete Year 1 Spring Semester courses
Corequisiste OTD 541

OTD547 - Occupational Performance: Infants & Youn

General

Subject Code ~
OTD

Course Number ~
547

Course Name (appears on the transcript) ~
Occupational Performance: Infa

Content

Description
This course is focused on evaluation and intervention appropriate for primary care medicine, acute care medicine (e.g., NICU), community practice (e.g., early intervention), and preschool for children, ages 0-5, with medical and educational diagnoses/conditions. Theories and models of practice appropriate to the diagnosis and practice setting guides the selection and safe use of evidence-based assessment tools, intervention methodology and assistive technology, and the choice of supports needed to facilitate client occupational needs and reduce social, community, and institutional barriers to performance and participation. The course also stresses childhood development, family and cultural influences, and ethical practice related to intervention planning/implementation, documentation of services, and discharge practices appropriate to the setting and the client's needs Content relevant to legislative, legal, political, economic, and management/billing/documentation considerations for these service delivery areas is also covered.

Credit Hours

Min
4

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Complete OTD 523, OTD 525, and OTD 531

OTD549 - Level 1C Fieldwork Experience

General

Subject Code ~
OTD

Course Number ~
549

Course Name (appears on the transcript) ~
Level 1C Fieldwork Experience

Content

Description
Students experience occupational therapy pediatric practice with infants and children ages birth to five (5). Opportunities to interact with children and adolescent clients experiencing cerebral palsy, muscular dystrophy, congenital limb disorders, PDD or other motor or neurological diagnoses are provided.

Credit Hours

Min
1

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Complete OTD 523, OTD 525, OTD 527, OTD 531, OTD 537, and OTD 539
Complete OTD 547

OTD631 - Doctoral Experiential 2: Proposal Develo

General

Subject Code ~
OTD

Course Number ~
631

Course Name (appears on the transcript) ~
Doctoral Experiential 2: Propo

Content

Description
This is the second course in the Doctoral Experiential sequence. During this course, students will report the findings of the needs assessment to the facility/site representative and work with the faculty and site mentors to identify a researchable question, complete a literature review; and author the first two components of a scholarly report. This course emphasizes completion of the Introduction, Problem Statement, Project Rationale, and Literature Review sections. This course is taken concurrently with OTD 634: Doctoral Experiential 2: Mentorship Seminar.

Course is graded pass/fail

Billing Hours

Min
3

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete OTD 541 and OTD 544

OTD634 - Doctoral Experiential 2: Mentorship Semi

General

Subject Code ~
OTD

Course Number ~
634

Course Name (appears on the transcript) ~
Doctoral Experiential 2: Mento

Content

Description
This course is taken in conjunction with OTD 631: Doctoral Experiential 2: Proposal Development and provides the student with faculty mentorship for completion of and presentation of the needs assessment findings, development of a doctoral project focus and a proposal plan for implementation; identification of a researchable question; and completion of the Introduction, Problem Statement, Rationale, and Literature Review sections of the doctoral project. Students identify a facility and cultivate a relationship with potential mentor(s) at the identified site, with support and faculty mentorship.

This course is graded pass/fail.

Billing Hours

Min
2

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete OTD 541 and OTD 544
Corequisite- OTD 631

OTD635 - Research/Evidence-Based Practice 2

General

Subject Code ~
OTD

Course Number ~
635

Course Name (appears on the transcript) ~
Research/Evidence-Based Prac 2

Content

Description
This is the second of two courses on research process and evidence-based practice (EBP). As the advanced course, students will further explore the breadth of research methodologies, implementation of research designs, and dissemination of research to the community. Students will move beyond being knowledgeable consumers of research to becoming interprofessional team members who 1) participate in the implementation of IRB approved qualitative and/or quantitative research that was designed and submitted in OTD 525; 2) select data analysis tools for qualitative and/or quantitative research and apply to their study; 3) develop skills in scholarly writing culminating in a research report that describes their study; and 4) become adept at displaying and communicating findings from research to the community.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete OTD 541, OTD 544, OTD 545, and OTD 547

OTD637 - Occupational Performance: Childhood & Ad

General

Subject Code ~
OTD

Course Number ~
637

Course Name (appears on the transcript) ~
Occ Perf: Childhood & Adol

Content

Description
This course is focused on evaluation and intervention appropriate for school system, community, and residential practice for children and youth, ages 5-21, with mental health diagnoses and substance abuse conditions, learning and emotional disabilities, sensory integration issues, and developmental disabilities. Theories and models of practice appropriate to the diagnosis and practice setting guides the selection and use of specific assessment tools and evidence-based intervention methods and assistive technology, and the choice of social, educational, or community supports needed to facilitate client transitions and reduce barriers to performance and participation. The

course also stresses ethical practice related to intervention planning/implementation, documentation of services, and discharge practices appropriate to the setting and the client's needs. Content relevant to legislative, legal, political, economic, and management/billing/documentation considerations for these service delivery areas is also covered.

Billing Hours

Min
4

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

OTD639 - Level ID Fieldwork Experience

General

Subject Code ~
OTD

Course Number ~
639

Course Name (appears on the transcript) ~
Level ID Fieldwork Experience

Content

Description
Students experience occupational therapy practice in school based, community based, and/or residential settings. Opportunities to observe children, youth, and adolescent practice and interact with standardized and/or real clients experiencing developmental, learning, psychosocial, and other related conditions are provided.

This course is graded pass/fail.

Billing Hours

Min
1

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete OTD 545, OTD 547, and OTD 549
Corequisite- OTD 637

OTD645 - Pop Health & Interprofessional Practice

General

Subject Code ~
OTD

Course Number ~
645

Course Name (appears on the transcript) ~
Pop Health & Interprof Pract

Content

Description
This course is designed to explore the population health ecosystem, including program initiatives to improve health promotion, cultural humility, access and outcomes, wellness initiatives, and the education and advocacy tools needed to inform, engage with, and empower adult and aging populations. Students will explore how life-changing acute and chronic physical and mental health conditions in adults are negatively impacted by the culture of existing medical practices, and how client-centered care and a culture of wellness can maximize health and performance. Students will utilize the core principles of interprofessionalism to envision collaborative practice teams who work

together as a catalyst for transformative change in diverse practice settings. Students will have the opportunity to assess local population health initiatives including current programming, marketing, funding, accessibility, social determinants of health, and overall culture of wellness to determine gaps in care. The student will develop and present strategies and programming to improve the overall culture of wellness and health initiatives for the population served.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 545, OTD 627, and OTD 628
Corequisite- OTD 657

OTD649 - Level 1E Fieldwork Experience

General

Subject Code ~
OTD

Course Number ~
649

Course Name (appears on the transcript) ~
Level 1E Fieldwork Experience

Content

Description
Students experience occupational therapy practice in community-based settings. Opportunities to observe and interact with standardized and/or real clients through the lifespan are provided. Students will be given opportunities to provide education/training/consultation to clients, within the contexts of the setting.

Billing Hours

Min
1

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 637 and OTD 639
Corequisite- OTD 657

OTD651 - Doctoral Experiential 3: Pre-Implementat

General

Subject Code ~
OTD

Course Number ~
651

Course Name (appears on the transcript) ~
Doctoral Experiential 3: Pre-I

Content

Description
This is the third course in the Doctoral Experiential sequence. During this course, students will identify the methodology of the project and collaborate with the site and faculty mentors to establish a plan for implementation. For this component, students will write the Methodology, Population, and Data Collection and Analysis sections of the scholarly report for the proposed program/project. This course is taken concurrently with OTD 654: Doctoral Experiential 3: Mentorship Seminar.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 631, OTD 634, and OTD 635
Corequisite- OTD 654

OTD653 - Professionalism in OT Practice

General

Subject Code ~
OTD

Course Number ~
653

Course Name (appears on the transcript) ~
Professionalism in OT Practic

Content

Description
This course focuses on facilitating the evolution from classroom learner, to fieldwork student, and ultimately to future practitioner. Topics addressed include clinical supervision, feedback dynamics, communication, ethics, certification and licensure, workforce entry skills, professional organizations and affiliations, professional behaviors, the student's role as a future fieldwork educator, interviewing skills, emotional intelligence, customer service in healthcare and lifelong learning. The overall learning objective at the completion of this course is that the student will possess the skills necessary to succeed both in fieldwork and employment.

Billing Hours

Min
2

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete Year 2 Fall courses - OTD 627, OTD 628, OTD 631, OTD 634, OTD 635, OTD 637, OTD 639

OTD654 - Doctoral Experiential 3: Mentorship Sem

General

Subject Code ~
OTD

Course Number ~
654

Course Name (appears on the transcript) ~
Doctoral Experiential 3: Mento

Content

Description
This course is taken in conjunction with OTD 651: Doctoral Experiential 3: Pre-Implementation Planning and provides the student with faculty mentorship for completing the Methodology, Population, and Data Collection/Data Analysis sections of the scholarly report.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 631, OTD 634, and OTD 635

OTD657 - Occupational Performance: Community-Base

General

Subject Code ~
OTD

Course Number ~
657

Course Name (appears on the transcript) ~
Occupational Performance: Comm

Content

Description
This course is focused on evaluation and intervention appropriate for primary care medicine, community health and home settings, transition planning and long-term disability for individuals to promote healthy living. Theories and models of practice appropriate to the diagnosis and practice setting guides the selection and use of specific assessment tools, evidence-based intervention methods and assistive technology, and the choice of social or community supports that embrace sociocultural sensitivity aimed at reducing social and institutional barriers to performance and participation. The course also stresses ethical practice related to intervention planning/ implementation, documentation of services, and discharge practices appropriate to the setting and the client's needs. Content relevant to legislative, legal, political, economic, and management/billing/documentation considerations for these service delivery areas is also covered.

Billing Hours

Min
4

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD 637 and OTD 639

OTD675 - Level II Fieldwork II

General

Subject Code ~
OTD

Course Number ~
675

Course Name (appears on the transcript) ~
Level II Fieldwork I

Content

Description
The Level II fieldwork section of the WNE OTD program is an integral part of the overall curriculum. The core objective of Level II fieldwork is for the OTD student to evolve into an entry level practitioner in the assigned practice area through application of theory and techniques learned throughout the didactic portion of the curriculum. Level II fieldwork consists of two separate experiences, OTD 675 and OTD 775. Each fieldwork is 12 weeks, full time in duration, for approximately 480 hours, or part time on a case by case basis. WNE OTD students are assigned to Level II fieldwork, a supervised clinical internship experience, in a traditional or role emerging practice setting. These supervised fieldwork experiences provide the OTD student with an opportunity to apply didactic and prior clinical knowledge, experience the evaluation and intervention process across the lifespan and across a range of abilities in a variety of practice settings. Students will demonstrate the ability to engage in ethical practice, applying clinical thinking and reasoning, and demonstrating professionalism to actively integrate into the OT process.

This course is graded pass/fail.

Credit Hours

Min
9

OTD775 - Level II Fieldwork II

General

Subject Code ~
OTD

Course Number ~
775

Course Name (appears on the transcript) ~
Level II Fieldwork II

Content

Description
The Level II fieldwork section of the WNE OTD program is an integral part of the overall curriculum. The core objective of Level II fieldwork is for the OTD student to evolve into an entry level practitioner in the assigned practice area through application of theory and techniques learned throughout the didactic portion of the curriculum. Level II fieldwork consists of two separate experiences, OTD 675 and OTD 775. Each fieldwork is 12 weeks, full time in duration, for approximately 480 hours, or part time on a case by case basis. WNE OTD students are assigned to Level II fieldwork, a supervised clinical internship experience, in a traditional or role emerging practice setting. These supervised fieldwork experiences provide the OTD student with an opportunity to apply didactic and prior clinical knowledge, experience the evaluation and intervention process across the lifespan and across a range of abilities in a variety of practice settings. Students will demonstrate the ability to engage in ethical practice, applying clinical thinking and reasoning, and demonstrating professionalism to actively integrate into the OT process.

This course is graded pass/fail.

Billing Hours

Min
9

Credit Hours

Min
9

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete OTD-675

OTD781 - Doctoral Experiential 4: Implem/Capstone

General

Subject Code ~
OTD

Course Number ~
781

Course Name (appears on the transcript) ~
Doctoral Experiential 4: Imple

Content

Description
This is the fourth and final course in the Doctoral Experiential sequence. It represents advanced professional skills. It is a 14-week/640-hour experience that focuses on the implementation of the evidence-based, community-based, interprofessional doctoral project/study on-site at the community agency/facility. During the course, students will complete any necessary updates or edits to the project proposal and complete the final component (Discussion, Implications, Limitations, Conclusions). In addition, students will present their findings to participants, peers, faculty, and community practitioners as appropriate. Working with the faculty and site mentors, the student will prepare the finished report for professional publication/dissemination. This course is taken concurrently with OTD 784, Doctoral Experiential 4: Mentorship.

Billing Hours

Min
10

Credit Hours

Min
10

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Successful completion of all previous coursework
Corequisite- OTD 784

OTD784 - Doctoral Experiential 4: Mentorship Semi

General

Subject Code ~
OTD

Course Number ~
784

Course Name (appears on the transcript) ~
Doctoral Experiential 4: Mento

Content

Description
This course is taken in conjunction with OTD 781: Doctoral Experiential 4: Implementation/Capstone and provides the student with faculty mentorship for completion of the Doctoral Experiential, including implementation of the doctoral project/study, completion of all sections of the scholarly paper, presentation of the project/study, and preparation for publication and/or dissemination.

Billing Hours

Min
2

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Successful completion of all previous coursework
Corequisite- OTD 781

PEHR151 - Personal Health & Wellness

General

Subject Code ~
PEHR

Course Number ~
151

Course Name (appears on the transcript) ~
Personal Health & Wellness

Content

Description
This is an exploration of current health issues and self-responsibility in achieving optimal health particularly as it pertains to college students. The foundation of the course is the development of a Personal Wellness Plan. Students will evaluate the outcomes of this program. Key topics include exercise, nutrition, weight management, dietary supplements, eating disorders, substance abuse, alcohol, sexual health, stress, tobacco, and consumer health. All students are required to take this course during their freshman year.

Credit Hours

Min
1

PEHR153 - Racquetball

General

Subject Code ~
PEHR

Course Number ~
153

Course Name (appears on the transcript) ~
Racquetball

Content

Description
This course is designed to teach the lifetime activity of racquetball. The student will learn all aspects of the game including: safety and etiquette, basic equipment and clothing, grips, how to control the ball, strokes, strategies, and rules of the game. Grading is weighted more on effort than ability, so as not to deter the beginner from trying this course. A written exam is included in the course.

Credit Hours

Min
1

PEHR154 - Walking & Jogging

General

Subject Code ~
PEHR

Course Number ~
154

Course Name (appears on the transcript) ~
Walking/Jogging

Content

Description
This course is designed to emphasize the importance of walking and jogging, which are both lifetime activities. The student will learn stretching techniques, how to choose the correct shoe and appropriate clothing, proper nutrition for a runner, and many other important aspects of walking and jogging. The course is designed to start with walking and then gradually increase to walking and jogging intervals. It culminates with a required 30-minute jog. A written exam is included in the course.

Credit Hours

Min
1

PEHR156 - Swimming for Fitness

General

Subject Code ~
PEHR

Course Number ~
156

Course Name (appears on the transcript) ~
Swimming for Fitness

Content

Description
This course is designed for students who enjoy swimming as a form of cardiovascular exercise. There will be a basic stroke review; a swimming test and students will learn how to design a program to help them develop their aerobic fitness level in the pool. Grading will be based upon participation, program development, and a written test.

Credit Hours

Min
1

Requisites

Free Form Requirements
Must have the ability to swim

PEHR158 - Lifeguarding

General

Subject Code ~
PEHR

Course Number ~
158

Course Name (appears on the transcript) ~
Lifeguarding

Content

Description
This course is designed to give students an opportunity to gain American Red Cross certification in Life guarding, First Aid, CPR-Professional Rescuer, and Automated External Defibrillation. There will be a fee for materials and certification of approximately $60.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Must have the ability to swim 300 yards using the front crawl, continuously

PEHR159 - Fundamentals of Martial Arts

General

Subject Code ~
PEHR

Course Number ~
159

Course Name (appears on the transcript) ~
Fundamentals Martial Arts

Content

Description
This course is designed to teach students about the traditional lineage of this famous art. It provides students with the knowledge and basic skills of Martial Arts (self-defense) i.e. breath control; pressure point control; and how to read, write, and speak some Cantonese. It also provides students with an understanding of the five elements of life (fire, wood, earth, metal, and water) and how these elements are incorporated into their life. They will also be taught tolerance, patience, and forbearance. They will also learn the importance of trust, respect, integrity, collaboration, and communication. Grading will be based upon attendance, participation, and a written examination.

Credit Hours

Min
1

PEHR160 - Basketball

General

Subject Code ~
PEHR

Course Number ~
160

Course Name (appears on the transcript) ~
Basketball

Content

Description
This course is designed for students at all skill levels that desire to learn more about the game, have a chance to play, and further develop their skills. Grading is based upon regular participation; and knowledge of the basic rules, strategies, and history of the game. A written exam is included in the course.

Credit Hours

Min
1

PEHR161 - Pers Fitness/Strength Training/Well

General

Subject Code ~
PEHR

Course Number ~
161

Course Name (appears on the transcript) ~
Per Fit/Strength Training

Content

Description
This course is designed to give students an opportunity to develop a basic cardiovascular and strength-training program to achieve personal fitness goals. The program focuses on the health related components of personal fitness. Students will be introduced to a variety of fitness equipment and free weights. Each student will develop a basic fitness program. Class time will include both group and individual routines. Grading will be based upon participation, a fitness assessment, and a final test or project.

Credit Hours

Min
1

PEHR162 - CPR/AED-Adult, Child & Infant

General

Subject Code ~
PEHR

Course Number ~
162

Course Name (appears on the transcript) ~
CPR/AED-Adult, Child & Infant

Content

Description

This course is based upon the American Red Cross curriculum for CPR and AED certification. Students will earn how to assess an emergency medical situation, conduct a primary situation survey, and learn how to give CPR, use an AED, and give care for conscious and unconscious choking adults, children and infants. Upon successful completion of this course, the participants would receive CPR/AED: Adult, Child and Infant certification from the American Red Cross.

This certification is often a mandatory requirement for those working in education, coaching, recreation and public service positions. $19 certification fee.

Credit Hours

Min
1

PEHR163 - Games Children Play

General

Subject Code ~
PEHR

Course Number ~
163

Course Name (appears on the transcript) ~
Games Children Play

Content

Description

This course is designed for but not limited to elementary education majors. Any student interested in working with children in a play setting may wish to enroll in this course. The course includes learning the dynamics of play and the "affective, cognitive, and motor" skill development of children. Students will also learn how to supervise children at play and integrate academic skills into a play environment. Students will also be introduced to the Massachusetts Comprehensive Health Education Frameworks. All students will be expected to teach a game to their fellow students. This course will include a written exam and students will be graded on participation, their teaching lesson, and a final exam. Elementary Education majors are required to take this course.

Credit Hours

Min
1

PEHR165 - RAD Rape Aggression Defense

General

Subject Code ~
PEHR

Course Number ~
165

Course Name (appears on the transcript) ~
RAD Rape Aggression Defense

Content

Description

This is a comprehensive course that begins with awareness, prevention, risk reduction, and avoidance. It progresses to the basics of hands-on defense training. The Rape Aggression Defense System is dedicated to teaching women defensive concepts and techniques against various types of assault. It utilizes easy, effective, and proven self-defense tactics. Women will be equipped to make an educated decision regarding their personal safety. Participation, an exam, and a Dynamic Simulation with a final paper will determine grades.

Credit Hours

Min
1

PEHR166 - TRX Strength Training

General

Subject Code ~
PEHR

Course Number ~
166

Course Name (appears on the transcript) ~
TRX Strength Training

Content

Description
With the versatility of TRX Suspension Training, one has a portable fitness solution in any setting. Learn how to properly perform foundational Suspension Training exercises as well as the benefits and target muscles of the exercises. Learn modifications and progressions to adapt the exercises to every fitness level.

Credit Hours

Min
1

PEHR167 - Tennis

General

Subject Code ~
PEHR

Course Number ~
167

Course Name (appears on the transcript) ~
Tennis

Content

Description
This course is designed for students with skills ranging from beginner to advanced that wish to develop their skills and play both singles and doubles. Rules and strategies will be emphasized as well. Grading is based upon participation, and knowledge of the basic rules and strategies of the game. A written exam is included in the course.

Credit Hours

Min
1

PEHR168 - Soccer

General

Subject Code ~
PEHR

Course Number ~
168

Course Name (appears on the transcript) ~
Soccer

Content

Description
This course is designed to instruct participants in the basic skills (techniques and tactics) of soccer as well as develop their appreciation and understanding of the "world's game." Students will be evaluated on class participation, one exam, and a presentation on a past FIFA World Cup.

Credit Hours

Min
1

PEHR171 - Volleyball

General

Subject Code ~
PEHR

Course Number ~
171

Course Name (appears on the transcript) ~
Volleyball

Content

Description
This course is designed to instruct participants in the basic skills (techniques and tactics) of volleyball as well as develop their appreciation and understanding of this popular indoor and outdoor game with local roots. Students will be evaluated on class participation, and two brief exams on playing rules, court dimensions, and history of the game.

Credit Hours

Min
1

PEHR181 - Performance Strength Train/Adv Cond

General

Subject Code ~
PEHR

Course Number ~
181

Course Name (appears on the transcript) ~
Perf Strength Train/Adv

Content

Description
This course is designed for students interested in increased performance in athletics and advanced weight training techniques. Students must have at minimum a basic weight training background and a desire to perform exercises and routines at high intensity levels for a skill component. This course concentrates on skill related components of personal fitness. The student becomes familiar with calculating body composition, developing a cardiovascular program, and sport specific exercise routines. Basic anatomy (muscle structure and function) and a program design and implementation will be included. Grading will be based upon attendance, developing and implementing the training program for someone at an advanced fitness level.

Credit Hours

Min
1

PEHR185 - Softball

General

Subject Code ~
PEHR

Course Number ~
185

Course Name (appears on the transcript) ~
Softball

Content

Description
This course is designed for students with a basic skill level in softball that desire to play the game recreationally in a coeducational setting. Students will be expected to enhance their skill, learn the Slow Pitch game and understand the basic rules and strategies of the game. A written exam will be included and attendance, participation, and knowledge of the rules and strategies of the game will determine grades.

Credit Hours

Min
1

PEHR190 - Special Topics in PEHR

General

Subject Code ~
PEHR

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in PEHR

Content

Description
This is a study of an advanced topic of physical education health and recreation, but not offered on a regular basis.

Credit Hours

Min
3

PEHR201 - Principles & Practices of Coaching

General

Subject Code ~
PEHR

Course Number ~
201

Course Name (appears on the transcript) ~
Prin & Pract of Coaching

Content

Description
Upon completion of this course, students will have a knowledge and understanding of the principles essential in coaching at the middle school, high school, or club level. Students will acquire the skills in five basic components necessary to be a successful coach. They are: the principles of coaching, the principles of behavior, the principles of teaching, the principles of physical training, and the principles of management. The course will include two exams, and observational and experiencing research paper on current issues in sports, and the development of a philosophy statement.

Credit Hours

Min
3

PEHR202 - Care & Prevention Athletic Injuries

General

Subject Code ~
PEHR

Course Number ~
202

Course Name (appears on the transcript) ~
Care & Prevention Injury

Content

Description
Upon completion of this course, students will have a knowledge and understanding of the principles of care and prevention of athletic injury essential for coaching at the youth, middle, high school, or college level. Students will acquire skills in the following areas of learning: role of a coach in healthcare, basic first aid and CPR skills, and sport first aid for specific injuries. The course will include 10 hours of field experience with the Western New England training staff. It will be taught by one of our certified athletic trainers.

Credit Hours

Min
3

PEHR290 - Special Topics in PEHR

General

Subject Code ~
PEHR

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in PEHR

Content

Description
This is a study of an advanced topic of physical education health and recreation, but not offered on a regular basis.

Credit Hours

Min
3

PEHR291 - Special Topics in PEHR

General

Subject Code ~
PEHR

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in PEHR

Content

Description
This is a study of an advanced topic of physical education health and recreation, but not offered on a regular basis.

Credit Hours

Min
1

PEHR292 - Special Topics in PEHR

General

Subject Code ~
PEHR

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in PEHR

Content

Description
This is a study of an advanced topic of physical education health and recreation, but not offered on a regular basis.

Credit Hours

Min
3

PEHR333 - Independent Study in PEHR

General

Subject Code ~
PEHR

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in PEHR

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PEHR480 - Internship in Athletic Coaching

General

Subject Code ~
PEHR

Course Number ~
480

Course Name (appears on the transcript) ~
Internship Athletic Coaching

Content

Description
This course will provide the student with the opportunity to gain hands-on experience through a coaching experience. The student is placed in an amateur sport environment and their coaching experience is communicated to the faculty sponsor via faculty-student meetings, on-site visits, and a final paper. The internship in athletic coaching is an academic course with the primary goal of joining theory from the classroom with practice from the work ex-perience. Students are encouraged to select an internship site that reflects the level of coaching that most interests them

Credit Hours

Min
3

Requisites

Free Form Requirements
12 crs completed in Athletic Coaching Minor PEHR 201 At least 60 cr hrs & a min GPA of 2.5 overall & in major, except where internship is required in major or obtain special permission of their dean to undertake an internship

PEHR481 - Internship in Athletic Coaching

General

Subject Code ~
PEHR

Course Number ~
481

Course Name (appears on the transcript) ~
Internship Athletic Coaching

Content

Description
This course will provide the student with the opportunity to gain hands-on experience through a coaching experience. The student is placed in an amateur sport environment and their coaching experience is communicated to the faculty sponsor via faculty-student meetings, on-site visits, and a final paper. The internship in athletic coaching is an academic course with the primary goal of joining theory from the classroom with practice from the work ex-perience. Students are encouraged to select an internship site that reflects the level of coaching that most interests them

Credit Hours

Min
3

Requisites

Free Form Requirements
12 credits completed in Athletic Coaching Minor PEHR 201 At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PH103 - Intro to Philosophy

General

Subject Code ~
PH

Course Number ~
103

Course Name (appears on the transcript) ~
Intro to Philosophy

Content

Description
This course examines basic assumptions about reality, knowledge, and values. Students learn how to explain, analyze and evaluate arguments. Topics discussed and analyzed may include long-standing questions in philosophy and modern applications such as: Does God exist? Are we a combination of body and soul? Do we have free will? What do we know and how do we know it? Can moral beliefs be objectively true or false? What is the best form of government? Are non-human animals moral subjects?

Credit Hours

Min
3

PH190 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PH191 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

PH204 - Symbolic Logic

General

Subject Code ~
PH

Course Number ~
204

Course Name (appears on the transcript) ~
Symbolic Logic

Content

Description
This is an examination of formal methods for determining the validity of arguments and inferences. Topics include truth tables, truth trees, and natural deduction in both sentence logic and predicate logic.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

PH207 - Introduction to Political Theory

General

Subject Code ~
PH

Course Number ~
207

Course Name (appears on the transcript) ~
Introduction Political Theory

Content

Description
Survey course designed to introduce students to major political thinkers and schools of thought with an emphasis on classical liberalism and the social contract tradition.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 101, or INST 101, POSC 102, three credit hours of European history, or sophomore Standing

PH208 - Ethics

General

Subject Code ~
PH

Course Number ~
208

Course Name (appears on the transcript) ~
Ethics

Content

Description
This is an introduction to the basic concepts and principles of ethics as developed from ancient to modern times. The course covers theories of the good life such as hedonism, stoicism, and self-realization; the challenge of relativism; and theories of right and wrong, such as utilitarianism. Concepts to be discussed may include virtue and vice, moral duty, moral rights, and moral responsibility.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH211 - Business Ethics

General

Subject Code ~
PH

Course Number ~
211

Course Name (appears on the transcript) ~
Business Ethics

Content

Description
This is an examination of ethical problems confronting people in business and the professions. Issues include employee rights and duties, professional and corporate responsibility, affirmative action, environmental pollution, worker health and safety, advertising, government regulation, competing conceptions of justice, and alternative economic systems.

Students cannot receive credit for both PH 211 and MAN 240/HONB 240.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH214 - World Ethics

General

Subject Code ~
PH

Course Number ~
214

Course Name (appears on the transcript) ~
World Ethics

Content

Description
This course explores the ethical traditions not only of the United States and Europe, but also of Asia, Africa, and South and Central America, both secular and religious. The course will compare the main U.S. & Western European ethical perspectives of ethical naturalism, utilitarianism, and Kantian ethics with the main Asian traditions of Buddhism, Hinduism, and Confucianism, as well as those of indigenous African cultures.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Sophomore Standing

PH218 - Contemporary Moral Problems

General

Subject Code ~
PH

Course Number ~
218

Course Name (appears on the transcript) ~
Contemporary Moral Problems

Content

Description
This is a critical examination of moral issues such as abortion, capital punishment, euthanasia, poverty and economic justice, pornography and censorship, racism and affirmative action, sexism and sexual equality, the just war, animal rights, and environmental protection. The course covers the social dimensions of these issues and the ethical principles that apply in reaching sound conclusions regarding them.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH225 - Ethics of Digital Technologies

General

Subject Code ~
PH

Course Number ~
225

Course Name (appears on the transcript) ~
Ethics Digital Technologies

Content

Description
This course will address social and ethical issues that arise in the computing and information technologies. We will begin with an introduction to moral reasoning and an overview of the main ethical theories and their normative frameworks. We will then address some of the standard topics in computer ethics, including concerns about the internet and its regulation, the ethics of search engines, privacy and surveillance, intellectual digital property, cybersecurity, and professional codes of ethics. Finally, we will explore the broader topics in the ethics of information technologies, including the ethics of big data science's methods, assumptions, and applications, the ethics of algorithms and artificial intelligence, and robot ethics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH230 - Social & Political Philosophy

General

Subject Code ~
PH

Course Number ~
230

Course Name (appears on the transcript) ~
Social & Political Philosophy

Content

Description
This is an examination of basic questions of social and political philosophy focusing on issues of justice, equality, liberty, and rights. Combining the work of classical and modern political thinkers, the course addresses such questions as the following: Should all people be treated equally?; What makes a society just?; How much liberty should people have?; What rights do people have?; What is the best form of government?; Is capitalism preferable to socialism? Offered in alternate years.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
OY - Odd Years

Requisites

No Requirements

PH231 - Biomedical Ethics

General

Subject Code ~
PH

Course Number ~
231

Course Name (appears on the transcript) ~
Biomedical Ethics

Content

Description
A critical examination of basic concepts, such as autonomy and privacy, and ethical issues in biomedical ethics, such as informed consent, euthanasia, assisted suicide, cloning, stem cell research, research and experimentation on animals, rights to healthcare, and the just allocation of medical care. Attention will also be paid to the application of major moral theories.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH241 - Philosophy & the Environment

General

Subject Code ~
PH

Course Number ~
241

Course Name (appears on the transcript) ~
Philosophy & Environment

Content

Description
This course introduces students to the philosophical and ethical analysis of environmental issues, such as pollution, use of scarce natural resources, environmental justice, and climate change. In addition to focusing on environmental threats to human well-being, it explores the issue of humanity's duties to future generations, as well as to other species and their ecosystems. Other issues include corporate responsibility for the environment and appropriate forms of activism in defense of the environment.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH290 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

PH291 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PH292 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
292

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Billing Hours

Min
3

Credit Hours

Min
3

PH316 - Philosophy & Climate Change

General

Subject Code ~
PH

Course Number ~
316

Course Name (appears on the transcript) ~
Philosophy & Climate Change

Content

Description
This course first investigates the scientific evidence for the claim that greenhouse gas emissions are heating up the planet. Then we will examine the LIKELY effects of increased average global temperature, proposed solutions involving mitigation and adaptation, and the economic and political issues associated with climate change. The remainder of the course will focus on the ethical issues that arise given the risks of significant climate change. This course will satisfy the ethical perspectives requirement of the GCR.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Junior Standing

PH330 - Contemporary Political Theory

General

Subject Code ~
PH

Course Number ~
330

Course Name (appears on the transcript) ~
Contemporary Political Theory

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

PH333 - Independent Study in Philosophy

General

Subject Code ~
PH

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Philosophy

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PH334 - Independent Study in Philosophy

General

Subject Code ~
PH

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Philosophy

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PH390 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

PH391 - Special Topics in Philosophy

General

Subject Code ~
PH

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Philosophy

Content

Description
Topics in philosophy that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PH480 - Internship in Philosophy

General

Subject Code ~
PH

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Philosophy

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PH481 - Internship in Philosophy

General

Subject Code ~
PH

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Philosophy

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PHAR100 - First Year Seminar for COPH

General

Subject Code ~
PHAR

Course Number ~
100

Course Name (appears on the transcript) ~
First Year Seminar

Content

Description
This course is designed to foster skills that promote academic and interpersonal satisfaction and success as the student transitions from high school to university. The course promotes student engagement in social and academic activities campus-wide and within the College of Pharmacy and Health Sciences.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

No Requirements

PHAR290 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
In this course, learners will review and demonstrate the importance of advancing the profession of pharmacy through community involvement. One of the best methods of reaching our surrounding communities is through health literacy events. Learners will explore the different levels of content that can be presented based on the audience and location. At the end of the course, learners are required to attend/engage in a service event that is approved by the course instructors of record. Additionally, learners will engage in discussions on mental health, transgendered health, social determinants of health and health equity with local speakers.

Credit Hours

Max
3

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

No Requirements

PHAR380 - Externship in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
380

Course Name (appears on the transcript) ~
Externship in Pharmacy

Content

Description
Students will gain knowledge of various pharmacy practice settings through shadowing.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

PHAR480 - Externship in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
480

Course Name (appears on the transcript) ~
Externship in Pharmacy

Content

Description
Students will gain knowledge of various pharmacy practice settings through shadowing.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

PHAR491 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
491

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
COPHS student (Pharmacy or OT); CCGS student with instructor permission

PHAR510 - Intro to Pharmacy & Health Profession I

General

Subject Code ~
PHAR

Course Number ~
510

Course Name (appears on the transcript) ~
Intro Pharmacy & Health Prof I

Content

Description
The student pharmacist will explore the profession of pharmacy in the first semester of this two-course series. Students will become acquainted with pharmacy career opportunities and pathways, and learn the importance of leadership, professionalism, and involvement in pharmacy organizations. Students will examine the historical evolution of the pharmacist's role from one focused on drug compounding and distribution to a patient-centered practice model. Students will familiarize themselves with the basics (names, classes, formulations) of the most commonly prescribed medications. Cross-listed with PHAR 210

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR511 - Drug Information & Informatics

General

Subject Code ~
PHAR

Course Number ~
511

Course Name (appears on the transcript) ~
Drug Information & Informatics

Content

Description
Learners will be introduced to the broad scientific field of pharmacy informatics and the benefits and barriers to their usage in this first course of a two course sequence. They will learn where medication errors may occur in the delivery of drugs and the new and future safety systems that may help prevent or correct them. They will become acquainted with the fundamentals of drug information and drug information resources. Learners will also gain insight into the development of clinical practice guidelines and the concepts of evidence-based practice through an exploration of the fundamentals of research design and methodology.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR512 - Immunology

General

Subject Code ~
PHAR

Course Number ~
512

Course Name (appears on the transcript) ~
Immunology

Content

Description
Learners will be introduced to the basic elements of the immune system. They will gain knowledge of the mechanisms of immunity which act in a wide range of clinical conditions, including: protection against infectious agents; rejection of tumors; transplantation of tissues and organs; autoimmune and other immunopathologic conditions; and allergy.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR513 - Biochemistry

General

Subject Code ~
PHAR

Course Number ~
513

Course Name (appears on the transcript) ~
Biochemistry

Content

Description
Learners will explore the fundamental biochemical principles underlying cellular physiology and biological processes. They will gain knowledge of biomacromolecules mainly from a structural point of view. Learners will gain insight into molecular metabolic and synthetic pathways in order to provide a foundation for understanding disease states, mechanisms of drug action and drug metabolism.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy or by approval

PHAR514 - Pharmaceutics I

General

Subject Code ~
PHAR

Course Number ~
514

Course Name (appears on the transcript) ~
Pharmaceutics I

Content

Description
Learners will study the measurement units, and mathematical functions and applications that are essential to the safe, accurate practice of pharmacy in this course. They will gain familiarity and be able to relate pharmaceutical nomenclature, numerical expressions, measurement equivalents, calculation formulas, problem analysis, and reasoning.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR516 - Pharmacy Ethics

General

Subject Code ~
PHAR

Course Number ~
516

Course Name (appears on the transcript) ~
Pharmacy Ethics

Content

Description
Learners will be introduced to the major ethical theories and principles of bioethics. They will also be introduced to the legal concepts that encompass the rights and responsibilities of the pharmacist and their practical application. Learners will begin to appreciate the relationship of ethics and ethical decision making, within legal constructs, of a health care provider in a culturally diverse population.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR517 - Healthcare Policy & Delivery

General

Subject Code ~
PHAR

Course Number ~
517

Course Name (appears on the transcript) ~
Healthcare Policy & Delivery

Content

Description
Learners will become familiar with aspects of public health, health services, healthcare law and policy, including health services administration, environmental health, and health promotion. They will be exposed to and gain understanding of the roles of public and private insurers, managed care, the pharmaceutical industry, and indigent care programs in health care delivery at a local, national and international level. Learners will be introduced to the incidence and problems associated with misuse and abuse in the health care system.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR518 - Pharmaceutical Calculations

General

Subject Code ~
PHAR

Course Number ~
518

Course Name (appears on the transcript) ~
Pharmaceutical Calculations

Content

Description
Learners will explore the study of measurement units, numerical conversion or equivalency factors, and mathematical solving methods that are common and vital to the safe and accurate practice of pharmacy. Learners will focus on pharmaceutical nomenclature, measurement constants or equivalents, calculation formulas and methods, and problem analysis and solving. They will be introduced to prescription interpretation, prescription notation and abbreviations, basic pharmaceutical calculations, statistics, and the mathematics of chemical kinetics, pharmaceutics, and pharmacokinetics.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR520 - Healthcare Communications

General

Subject Code ~
PHAR

Course Number ~
520

Course Name (appears on the transcript) ~
Healthcare Communications

Content

Description
Learners will explore effective communication methods for creating positive, therapeutic relationships. They will learn to apply written and verbal communication skills and behavioral interventions with diverse populations, including patients, families, and other healthcare providers. Learners will develop the ability to effectively interact with low literacy and non-English speaking patients. Cultural competence will be introduced to aid interactions and communications with patients possessing diverse values, beliefs, and behaviors. Skills in interviewing, active listening and empathy, assertiveness, and problem-solving will be emphasized.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR522 - Pathophysiology

General

Subject Code ~
PHAR

Course Number ~
522

Course Name (appears on the transcript) ~
Pathophysiology

Content

Description
Learners will gain understanding of the basic principles and mechanisms of disease, including inflammation and repair, degeneration, disturbances on hemodynamics, developmental defects, and neoplasia. They will focus on select disease states of organ systems with the goal of providing a rationale for drug therapy.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR523 - Medical Genetics & Pharmacogenomics

General

Subject Code ~
PHAR

Course Number ~
523

Course Name (appears on the transcript) ~
Med Genetics &Pharmacogenomics

Content

Description
Learners will explore how DNA variations are important in understanding the genetic basis for disease and individual responses to environmental factors, and the normal variations in biological processes, as development and a drug response. They will also focus on the psychosocial response to the disease process and physiologic markers of that process.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR524 - Pharmaceutics II

General

Subject Code ~
PHAR

Course Number ~
524

Course Name (appears on the transcript) ~
Pharmaceutics II

Content

Description
Learners will gain knowledge of medicinal formulations and physical/chemical properties of drugs. They will investigate the stability of compounded products, quality control, sterilization, biotechnology preparations, and pharmaceutical compounding using the foundational principles of pharmaceutical calculations. Learners will explore the process by which dosage form affects drug absorption, distribution, metabolism and elimination.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR525 - Pharmaceutics II Lab

General

Subject Code ~
PHAR

Course Number ~
525

Course Name (appears on the transcript) ~
Pharmaceutics II Lab

Content

Description
Learners will examine the legal, practical and scientific bases of drug products and pharmaceutical delivery systems. They will apply their knowledge of physicochemical theories, terminology, and pharmaceutical skills in the preparation of oral and topical formulations.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR526 - Pharmacy Outcomes

General

Subject Code ~
PHAR

Course Number ~
526

Course Name (appears on the transcript) ~
Pharmacy Outcomes

Content

Description
Learners will gain an understanding of how pharmacoeconomic, clinical, and humanistic outcomes relate to the provision of pharmacy care in various health care areas. They will review trends in innovative service provision, examine systems for patient care improvement, describe key concepts in outcomes management, and discuss successful cases from the professional literature.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR527 - Self Care Therapeutics

General

Subject Code ~
PHAR

Course Number ~
527

Course Name (appears on the transcript) ~
Self Care Therapeutics

Content

Description
In this early exposure, learners will acquire a knowledge base of community pharmacy practice. Learners will begin to gain insight and develop a sense of community involvement in pharmacy practice by shadowing and applying basic pharmacy care. Through observation and participation, learners will explore the various facets of community pharmacy practice by integrating communication skills and relating didactic instruction to civic involvement, humanistic care of patients, and social awareness of unmet medical needs. This may include, but is not limited to: companionship; patient care; medication-related services; screening for medical problems; dispensing pharmaceuticals; medication counseling; purchasing; inventory control; and varying management styles. Learners will gain insight into self and professional goals through reflection and continued development of professional portfolios. An on-campus orientation will be required for all learners prior to starting their IPPEs. Learners will give presentations at the end of the semester.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR528 - Intro to Pharmacy & Health Prof II

General

Subject Code ~
PHAR

Course Number ~
528

Course Name (appears on the transcript) ~
Intro to Phar & Health Prof II

Content

Description
The pharmacy student will continue to be introduced to various pharmacy career paths and opportunities and explore more healthcare professions in this second course of the two course series. Students will become acquainted with pharmacy career opportunities and pathways, and learn the importance of leadership, professionalism, and involvement in pharmacy organizations. Students will review similarities and differences in communication techniques among various healthcare professionals. They will explore the need for sensitivity, tolerance, and cultural competence when working with others. Students will gain insight into self and professional goals through reflection. Finally, students will familiarize themselves with the basics (names, classes, formulations) of the most commonly prescribed medications.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR533 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
533

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

PHAR534 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
534

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PHAR540 - IPPE Health Services

General

Subject Code ~
PHAR

Course Number ~
540

Course Name (appears on the transcript) ~
IPPE Health Services

Content

Description
This course is based on the College of Pharmacy's outcome statements and accreditation standards for introductory pharmacy practice experience. In this rotation, learners will build a knowledge base of institutional pharmacy practice. Learners will gain insight and develop a sense of involvement in institutional pharmacy practice by applying basic pharmacy care within various aspects of the health system. Through observation and participation, learners will explore the various facets of health system pharmacy practice by integrating communication skills and relating didactic instruction to clinical involvement, humanistic care of patients, and social awareness of unmet medical needs. This may include, but is not limited to: patient care; medication-related services; screening for medical problems using a collaborative approach; and working within organizational structures with varying management styles. Learners will also develop an appreciation of various practice modalities, inclusive of, but not limited to: prescriber order entry systems, electronic medical records, prescription automation and informatics, purchasing, formulary control, medical teams, research, and committees. Learners will continue to gain insight into self and professional goals through reflection and on-going development of professional portfolios.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR541 - IPPE Community

General

Subject Code ~
PHAR

Course Number ~
541

Course Name (appears on the transcript) ~
IPPE Community

Content

Description
In this early exposure, learners will acquire a knowledge base of community pharmacy practice. Learners will begin to gain insight and develop a sense of community involvement in pharmacy practice by applying basic pharmacy care. Through observation and participation, learners will explore the various facets of community pharmacy practice by integrating communication skills and relating didactic instruction to civic involvement, humanistic care of patients, and social awareness of unmet medical needs. This may include, but is not limited to: patient care; medication-related services; screening; for medical problems; dispensing pharmaceuticals; medication counseling; purchasing; inventory control; and varying management styles. Learners will gain insight into self and professional goals through reflection and continued development of professional portfolios. Learners will give presentations at the end of the semester.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st or 2nd Year Pharmacy

PHAR580 - Professional Development I

General

Subject Code ~
PHAR

Course Number ~
580

Course Name (appears on the transcript) ~
Professional Develop I

Content

Description
In addition to curricular requirements, learners are required to satisfy professional development requirements. These program requirements have been selected by the College of Pharmacy to foster personal and professional growth and development. Learners will be required to develop and utilize electronic portfolios to document professional experiences (e.g., meetings, activities, assignments), track community service, and reflect upon and assess learning activities and experiences. The learners' academic advisors will review and assess the portfolios and provide the learner feedback. The portfolio requirements for each academic year must be satisfied in order for learners to progress into the next academic year. As directed by the Associate/Assistant Dean for Academic Affairs, learners will meet on campus for portfolio development, assessment activities, and Dean's Seminar. Dean's Seminar provides learners with insight into current pharmacy and health care-related issues through guest presentations.

Credit Hours

Min
0

Requisites

Free Form Requirements
1st Year Pharmacy Student

PHAR590 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

PHAR591 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
591

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PHAR610 - Principles of Pharmacokinetics

General

Subject Code ~
PHAR

Course Number ~
610

Course Name (appears on the transcript) ~
Princ of Pharmacokinetics

Content

Description
Learners will study the theoretical, mathematical, and functionally dependent physiologic relationships that comprise the quantitative basis for determining population and patient-specific drug dosage regimens. Learners will focus on the rate, time course, and extent of drug absorption, distribution, and elimination. They will utilize data of drug plasma concentrations in order to calculate and monitor safe and effective drug dosing regimens. Learners will practice fundamental pharmacokinetics concepts by calculating population and patient-specific dosage regimen of selected drugs used in various disease states.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR611 - Principles of Pharmacology

General

Subject Code ~
PHAR

Course Number ~
611

Course Name (appears on the transcript) ~
Princ of Pharmacology

Content

Description
Learners will explore the basic physiological, pathophysiological and biochemical foundations for the interaction of drugs with biological systems. Topics will include pharmacological principles such as mechanism of action, pharmacodynamics, drug-drug interactions, adverse reactions, and factors that can alter expected pharmacologic results. Autonomic drugs are used to illustrate pharmacological principles associated with pharmacotherapy that will be required for learners to build upon in future courses.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR612 - Principles of Medicinal Chemistry

General

Subject Code ~
PHAR

Course Number ~
612

Course Name (appears on the transcript) ~
Princ of Medicinal Chemistry

Content

Description
Learners will be introduced to the general principles of drug action at the molecular-level. They will focus on the physical, chemical, and biochemical properties of drug substances; the relationships between chemical structure and pharmacological activity; the molecular basis for drug-receptor interactions; and drug metabolism.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR614 - Patient Assessment Skills Lab

General

Subject Code ~
PHAR

Course Number ~
614

Course Name (appears on the transcript) ~
Patient Assess Skills Lab

Content

Description
Learners will be introduced to basic patient assessment skills, including patient interview, physical assessment, and laboratory parameter evaluation. Learners will receive hands-on training with health assessment devices, and explanation of the practical operation and function of self-care diagnostic products. They will refine and apply verbal and written communication skills in a standardized patient care encounter setting and its associated documentation in the SOAP format.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR615 - Professional Pharmacy Practice Lab

General

Subject Code ~
PHAR

Course Number ~
615

Course Name (appears on the transcript) ~
Prof Pharmacy Practice Lab

Content

Description
Learners will acquire the necessary skills for dispensing drugs, in this competency-based course, as they relate to community, hospital, home healthcare, and long-term care settings. Learners will gain knowledge of the technical aspects of dispensing drug products, medication errors and safety controls, controlled substances, third party reimbursement, pharmacy ethics, and supervisory skills. They will become familiar with informatics and automation commonly found in practice settings.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR616 - Practice Management I

General

Subject Code ~
PHAR

Course Number ~
616

Course Name (appears on the transcript) ~
Practice Management I

Content

Description
Learners will be introduced to the principles of management applicable to professional pharmacy practice. This course, the first of a two-course sequence, will provide foundational managerial, leadership and marketing skills that are crucial to practicing and leading effectively in an increasingly cost conscious health care marketplace.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR621 - Integrated Pharmacy Care- Renal

General

Subject Code ~
PHAR

Course Number ~
621

Course Name (appears on the transcript) ~
Integrated Pharm Care-Renal

Content

Description
Learners will review the physiologic/pathophysiologic alterations in the aged and pediatric populations. They will examine the medicinal chemistry; pharmacology; kinetics; social and administrative issues; and the specific therapeutic management in these populations. Common issues in special populations and special environments will also be explored.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR622 - Integrated Pharmacy Care- Respiratory

General

Subject Code ~
PHAR

Course Number ~
622

Course Name (appears on the transcript) ~
Integrated Pharm Care-Resp

Content

Description
Learners will gain knowledge of pathophysiology and clinical presentation of common diseases of the renal system. They will integrate medicinal chemistry; pharmacology; kinetics; and social and administrative sciences of common therapeutic agents used to treat renal diseases in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR623 - Integrated Pharmacy Care - CVS I

General

Subject Code ~
PHAR

Course Number ~
623

Course Name (appears on the transcript) ~
Integrated Pharm Care-CVS I

Content

Description
Learners will gain knowledge of pathophysiology and clinical presentation of common diseases of the cardiovascular system and associated risk factors. They will integrate medicinal chemistry; pharmacology; kinetics; and social and administrative sciences of common therapeutic agents used to treat cardiovascular disease and risk factors in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR624 - Integrated Pharmacy Care - CVS II

General

Subject Code ~
PHAR

Course Number ~
624

Course Name (appears on the transcript) ~
Integrated Pharm Care-CVS II

Content

Description
Learners will gain knowledge of pathophysiology and clinical presentation of common diseases of the cardiovascular system. They will integrate medicinal chemistry; pharmacology; kinetics; and social and administrative sciences of common therapeutic agents used to treat complicated cardiovascular disease states in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
AN - Do Not Use

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR625 - Applied Pharmacy Care I

General

Subject Code ~
PHAR

Course Number ~
625

Course Name (appears on the transcript) ~
Applied Phar Care I

Content

Description
Learners will apply the processes of problem solving, critical thinking, abstract thinking, and differential diagnosis to optimize and manage pharmacy care with common disease states. They will apply information learned in the didactic integrated course sequences to patient care scenarios using problem-based learning methods. Learners will transition from dependence to independence in the learning process through this three course sequence which is built on the premise of see one, do one, teach one. Faculty will present and discuss health care problems (cases) and facilitate group activities in the process of problem resolution.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR626 - Practice Management II

General

Subject Code ~
PHAR

Course Number ~
626

Course Name (appears on the transcript) ~
Practice Management II

Content

Description
Learners will continue the two-course management sequence by examining the applied functions of management (planning, organizing, leading, and controlling) with emphasis on the human interactions involved in operating a community pharmacy practice. Learners will acquire an understanding of organizational decision-making processes, methods of navigating change, and the leader's role in change.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR627 - Sterile Products Lab

General

Subject Code ~
PHAR

Course Number ~
627

Course Name (appears on the transcript) ~
Sterile Products Lab

Content

Description
Learners will gain skills in aseptic technique, administration, and quality assurance procedures for sterile drug products. They will gain knowledge and experience compounding sterile preparations, utilizing infusion devices and catheters, and applying clean room and USP 797 requirements.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR628 - Drug Lit Eval & Evidence-Based Practice

General

Subject Code ~
PHAR

Course Number ~
628

Course Name (appears on the transcript) ~
Drug Lit Eval & Evid-Base Prac

Content

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR631 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
631

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Max
3

Min
1

PHAR632 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
632

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Max
3

Min
1

PHAR633 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
633

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR634 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
634

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Max
3

Min
1

Session Cycle ~
SPO - Spring Only

PHAR635 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
635

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Min
3

PHAR642 - IPPE Community

General

Subject Code ~
PHAR

Course Number ~
642

Course Name (appears on the transcript) ~
IPPE Community

Content

Description
Learners will develop a deeper sense of community involvement in pharmacy practice through extended exposure to and application of community pharmacy practice. Learners will continue to expand their understanding of various practice modalities covered in PHAR 541. Learners will continue their exploration of the various facets of community pharmacy practice by integrating communication skills and relating didactic instruction to civic involvement, humanistic care of patients, and social awareness of unmet medical needs. This may include, but is not limited to: patient care; medication-related services; screening for medical problems; dispensing pharmaceuticals; medication counseling; purchasing; inventory control; and varying management styles. Learners will continue to gain insight into self and professional goals through reflection and continued development of professional portfolios. Learners will give presentations at the end of the semester.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR643 - IPPE Health System

General

Subject Code ~
PHAR

Course Number ~
643

Course Name (appears on the transcript) ~
IPPE Health System

Content

Description
In this early exposure, learners will begin to build a knowledge base of institutional pharmacy practice. Learners will gain insight and develop a sense of involvement in institutional pharmacy practice by applying basic pharmacy care within various aspects of the health system. Through observation and participation, learners will explore the various facets of health system pharmacy practice grating communication skills and relating didactic instruction to clinical involvement, humanistic patients, and social awareness of unmet medical needs. This may include, but is not limited to: care; medication-related services; screening for medical problems using a collaborative approach; and working within organizational structures with varying management styles. Learners will also develop an appreciation of various practice modalities, inclusive of, but not limited to: prescriber order entry systems, electronic medical records, prescription automation and informatics, purchasing, formulary control, medical teams, research, and committees. Learners will continue to gain insight into self and professional goals through reflection and on-going development of professional portfolios: Learners will give presentations at the end of the semester.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHAR650 - The Evolution of Pharmacy

General

Subject Code ~
PHAR

Course Number ~
650

Course Name (appears on the transcript) ~
Evolution of Pharmacy

Content

Description
Learners will study the history and culture of the pharmacy profession from prehistoric times to the present day, starting with the ancient civilizations and progressing to modern U.S. practice. In the modern era, learners will review current pharmacy institutions and practices, performing a thorough look at the history, purpose and function of the institutions and practices within the profession. The historical context, status, and roles of those who practice pharmacy will also be covered.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
2nd/3rd Year Pharmacy

PHAR656 - Drug Discovery & Development

General

Subject Code ~
PHAR

Course Number ~
656

Course Name (appears on the transcript) ~
Drug Discovery & Develop

Content

Description
Learners will explore the steps involved in identifying and developing a novel therapeutic agent from bench to bedside. They will begin with exposure to the various processes that identify lead compounds. The optimization of lead compounds into potential therapeutic agents through preclinical cellular and animal modeling will be examined. Learners will then be guided through the FDA approval process of new compounds and the continued monitoring of approved pharmaceuticals.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd Year Pharmacy Student

PHAR657 - Mgmt Acute Overdoses & Poisonings

General

Subject Code ~
PHAR

Course Number ~
657

Course Name (appears on the transcript) ~
Mgmt Acute Overdose

Content

Description
Learners will become familiarized with the presentation, assessment, and management of acute toxicity from common medications, natural toxins and envenomation, occupational and environmental toxins, chemicals and household products. Learners will engage in case-based activities relative to acute overdose and poisoning. The course will emphasize the role of pharmacists in prevention and management of poisoning.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd/3rd Year Pharmacy

PHAR659 - Drugs of Abuse

General

Subject Code ~
PHAR

Course Number ~
659

Course Name (appears on the transcript) ~
Drugs of Abuse

Content

Description
A fundamental aspect of the course will be to expose the learners to the impacts that drug abuse have on today?s society. Learners will become familiar with the basic history, pharmacology/medicinal chemistry, and withdrawal of the most commonly abused drugs. Learners are expected to present a topic of their choice that integrates the subject matter from two or more of the lectures presented throughout the course.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd/3rd Year Pharmacy

PHAR664 - Cosmeceuticals

General

Subject Code ~
PHAR

Course Number ~
664

Course Name (appears on the transcript) ~
Cosmeceuticals

Content

Description
Learners will examine the fundamentals of cosmetics and cosmeceuticals intended for skin, hair, nail, and oral care. In the lecture portion of the course, learners will be introduced to the basic anatomy and physiology of the skin, hair, and nail. Various types of skin, ailments of the skin, skin/hair/nail care products, commonly used ingredients in cosmeceutical products, classifications of cosmetics, current regulatory and labeling issues, terminology, and methodologies involved in compounding or manufacturing of the skin/hair/nail care products will be discussed. Learners will also have hands-on exposure related to the formulation, preparation, and effectiveness of skin/hair/nail care products in the compounding lab. Additionally, this course will help learners to relate their knowledge of medicated products in the dermatology class to non-medicated formulations as adjunct treatment options for various skin related issues.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd/3rd Year Pharmacy

PHAR680 - Professional Development II

General

Subject Code ~
PHAR

Course Number ~
680

Course Name (appears on the transcript) ~
Professional Develop II

Content

Description
In addition to curricular requirements, learners are required to satisfy professional development requirements. These program requirements have been selected by the College of Pharmacy to foster personal and professional growth and development. Learners will be required to develop and utilize electronic portfolios to document professional experiences (e.g., meetings, activities, assignments), track community service, and reflect upon and assess learning activities and experiences. The learners'

academic advisors will review and assess the portfolios and provide the learner feedback. The portfolio requirements for each academic year must be satisfied in order for learners to progress into the next academic year. As directed by the Associate/Assistant Dean for Academic Affairs, learners will meet on campus for portfolio development, assessment activities, and Dean's Seminar. Dean's Seminar provides learners with insight into current pharmacy and health care-related issues through guest presentations.

Credit Hours

Min
0

Requisites

Free Form Requirements
Acceptance into 2nd Year Pharmacy

PHAR690 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd year pharmacy

PHAR691 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd Year Pharmacy Student

PHAR692 - Special Topics Pharmacy

General

Subject Code ~
PHAR

Course Number ~
692

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

PHAR693 - Special Topics Pharmacy

General

Subject Code ~
PHAR

Course Number ~
693

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

PHAR694 - Special Topics Pharmacy

General

Subject Code ~
PHAR

Course Number ~
694

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

PHAR699 - Bridge Courses: PharmD to BS

General

Subject Code ~
PHAR

Course Number ~
699

Course Name (appears on the transcript) ~
Bridge Courses: PharmD to BS

Content

Credit Hours

Min
55

PHAR710 - Integrated Pharmacy Care-GI/Nutr/Hep

General

Subject Code ~
PHAR

Course Number ~
710

Course Name (appears on the transcript) ~
Integrated Pharm Care-GI/Nutr

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common gastrointestinal, nutritional and hepatic disorders. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common gastrointestinal, nutritional and hepatic disorders in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR711 - Integrated Pharmacy Care-Endo/Repro/Gu

General

Subject Code ~
PHAR

Course Number ~
711

Course Name (appears on the transcript) ~
Integrated Pharm Care-Endo

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common disorders of the endocrine, reproductive and genitourinary system. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common endocrine, reproductive, and genitourinary disorders in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR712 - Integrated Pharmacy Care-Infect Dis I

General

Subject Code ~
PHAR

Course Number ~
712

Course Name (appears on the transcript) ~
Integrated Pharm Care-ID I

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common infectious diseases. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common infectious diseases in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR713 - Integrated Pharmacy Care-Infect Dis II

General

Subject Code ~
PHAR

Course Number ~
713

Course Name (appears on the transcript) ~
Integrated Pharm Care-ID II

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of complicated infectious diseases. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat complicated infectious diseases in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR715 - Applied Pharmacy Care II

General

Subject Code ~
PHAR

Course Number ~
715

Course Name (appears on the transcript) ~
Applied Phar Care II

Content

Description
Learners will continue to apply the processes of problem solving, critical thinking, abstract thinking, and differential diagnosis in order optimize and manage pharmacy care with common disease states. They will apply information learned in the didactic integrated course sequences to patient care scenarios using problem-based learning methods. Learners will transition from dependence to independence in the learning process through this three course sequence which is built on the premise of "see one, do one, teach one". Learners will present and discuss health care problems (cases) within faculty facilitated groups to help in the process of patient problem resolution.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR718 - Pharmacy Law I

General

Subject Code ~
PHAR

Course Number ~
718

Course Name (appears on the transcript) ~
Pharmacy Law I

Content

Description
This is the first semester of the two-semester Pharmacy Law course. Throughout the two semesters of this course, both introductory legal concepts and pharmacy law models will be presented to exemplify and encompass the rights and responsibilities of a practicing pharmacist. Learners will explore the federal and state laws, regulations, executive orders, policies, and advisories/guidelines that impact upon the practice of pharmacy, as well as the development and preparation of pharmaceuticals. In addition, learners will have the opportunity to develop their skills at researching, reading, and understanding applicable pharmacy law. As such, learners should gain the ability to develop and expand their knowledge of pharmacy and practice law; thus, maintaining their proficiency at interpreting and understanding applicable law to pass the applicable MPJE and maintain their competency throughout their careers.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR720 - Integrated Pharmacy Care-Derm/Musc

General

Subject Code ~
PHAR

Course Number ~
720

Course Name (appears on the transcript) ~
Integrated Pharm Care-Derm/Mus

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common disorders of the musculoskeletal and dermatological systems. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common disorders of the musculoskeletal and dermatological systems in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR721 - Integrated Pharmacy Care-Neuro/CNS

General

Subject Code ~
PHAR

Course Number ~
721

Course Name (appears on the transcript) ~
Integrated Phar Care-Neur/CNS

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common disorders of the neurological system and sensory organs. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common neurological and sensory organ disorders in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR722 - Integrated Pharmacy Care-Psych

General

Subject Code ~
PHAR

Course Number ~
722

Course Name (appears on the transcript) ~
Integrated Pharm Care-Psych

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common behavioral and cognitive disorders. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common behavioral and cognitive disorders in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR723 - Integrated Pharmacy Care-Heme/Onc

General

Subject Code ~
PHAR

Course Number ~
723

Course Name (appears on the transcript) ~
Integrated Pharm Care-Heme/Onc

Content

Description
Learners will gain knowledge of the pathophysiological and clinical presentation of common cancers, disorders of the blood and lymphatic systems, and the related symptomatology of these disorders and their treatments. They will integrate their knowledge of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences of therapeutic agents used to treat common cancers; blood and lymphatic disorders; and related complications in order to provide and recommend optimal pharmacotherapeutic management.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR724 - Integrated Pharmacy Care-Spec Population

General

Subject Code ~
PHAR

Course Number ~
724

Course Name (appears on the transcript) ~
Integrated Pharm Care-Spec Pop

Content

Description
Learners will review the physiologic/pathophysiologic alterations in the aged and pediatric populations. They will examine pharmacy care through consideration of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical science principles specific to these populations. Common disorders and conditions in special populations and special environments will also be explored.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR725 - Applied Pharmacy Care III

General

Subject Code ~
PHAR

Course Number ~
725

Course Name (appears on the transcript) ~
Applied Pharmacy Care III

Content

Description
Learners will apply, in an advanced independent manner, the processes of problem-solving, critical thinking, abstract thinking and differential diagnosis to optimize and manage pharmacy care with common disease states. They will apply information learned in the didactic integrated course sequences to patient care scenarios using problem-based learning methods. Learners will transition from dependence to independence in the learning process through this three course sequence which is built on the premise of "see one, do one, teach one". Learners will lead discussions and teach one another to resolve health care problems using patient cases, within faculty facilitated groups.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR727 - Patient Care Management

General

Subject Code ~
PHAR

Course Number ~
727

Course Name (appears on the transcript) ~
Patient Care Management

Content

Description
Learners will explore the design and implementation of medication therapy management services; their relation to improvement in patient care and medication safety; and interpretation of relative current healthcare legislation. In this capstone course, they will utilize skills learned in previous coursework (e.g. leadership, communication, patient assessment, integrated pharmacy care, informatics, root cause analysis) to apply in interactive lectures, active learning, critical thinking exercises.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR728 - Pharmacy Law II

General

Subject Code ~
PHAR

Course Number ~
728

Course Name (appears on the transcript) ~
Pharmacy Law II

Content

Description
This is the second semester of the two-semester Pharmacy Law course. Throughout the two semesters of this course, both introductory legal concepts and pharmacy law models will be presented to exemplify and encompass the rights and responsibilities of a practicing pharmacist. Learners will explore the federal and state laws, regulations, executive orders, policies, and advisories/guidelines that impact upon the practice of pharmacy, as well as the development and preparation of pharmaceuticals. In addition, learners will have the opportunity to develop their skills at researching, reading, and understanding applicable pharmacy law. As such, learners should gain the ability to develop and expand their knowledge of pharmacy and practice law; thus, maintaining their proficiency at interpreting and understanding applicable law to pass the applicable MPJE and maintain their competency throughout their careers.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
3rd Year Pharmacy Student

PHAR733 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
733

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

PHAR734 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
734

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PHAR744 - IPPE Health System

General

Subject Code ~
PHAR

Course Number ~
744

Course Name (appears on the transcript) ~
IPPE Health System

Content

Description
Learners will develop a deeper sense of involvement in institutional pharmacy practice. Learners will be exposed to and apply pharmacy care within various aspects of the health system. Learners will continue to expand their understanding of various practice modalities covered in PHAR 643. They will explore the various facets of health system pharmacy practice by integrating communication skills and relating didactic instruction to clinical involvement, humanistic care of patients, and social awareness of unmet medical needs. This may include, but is not limited to: patient care; medication therapy-related services; medication reconciliation; clinic management; provider interactions; screening for medical problems using a collaborative practice approach; committee meetings; and working within organizational structures with varying management styles. Learners will increase their ins0t into self and professional goals through reflection and on-going development of professional portfolios. Learners will give presentations at the end of the semester.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 3rd Year Pharmacy

PHAR745 - IPPE Community

General

Subject Code ~
PHAR

Course Number ~
745

Course Name (appears on the transcript) ~
IPPE Community

Content

Description
This course is based on the College of Pharmacy?s outcome statements and accreditation standards for introductory pharmacy practice experience. In this rotation, learners will acquire a knowledge base of community pharmacy practice. Learners will gain insight and develop a sense of community involvement in pharmacy practice by applying basic pharmacy care. Through observation and participation, learners will explore the various facets of community pharmacy practice by integrating communication skills and relating didactic instruction to clinical involvement, humanistic care of patients, and social awareness of unmet medical needs. This may include, but is not limited to: patient care; medication-related services; screening for medical problems; dispensing pharmaceuticals; medication counseling; purchasing; inventory control; and varying management styles. Learners will gain insight into self and professional goals through reflection and continued development of professional portfolios.

Credit Hours

Min
2

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 3rd Year Pharmacy

PHAR756 - Cardiovasc Electrophysiol Bench-Bed

General

Subject Code ~
PHAR

Course Number ~
756

Course Name (appears on the transcript) ~
CVS Electrophys: Bench-Bed

Content

Description
Learners will explore the biophysics of cardiac ion channels, impulse conduction and control, molecular genetics, and pharmacogenomics of ion channel dysfunctions. Learners will also gain significant insight into mechanisms causing arrhythmias, interpretation of ECG recordings, and management of arrhythmias. This course will use combination of classroom based presentations and simulated patient experiences using the high fidelity suite.

Credit Hours

Min
3

PHAR757 - Ambulatory Care Pharmacy

General

Subject Code ~
PHAR

Course Number ~
757

Course Name (appears on the transcript) ~
Ambulatory Care Pharmacy

Content

Description
In this case-based elective, learners will enhance their therapeutic knowledge of general ambulatory care conditions in order to effectively manage and educate patients in the ambulatory care setting. Throughout the course, learners will develop patient-specific recommendations and monitoring plans utilizing evidence-based medicine. Learners will also have an opportunity to evaluate the impact of common ambulatory care conditions on patient quality of life through simulated experiences.

Credit Hours

Min
3

Requisites

Free Form Requirements
enrolled in Pharmacy Program

PHAR780 - Professional Development III

General

Subject Code ~
PHAR

Course Number ~
780

Course Name (appears on the transcript) ~
Professional Develop III

Content

Description
In addition to curricular requirements, learners are required to satisfy professional development requirements. These program requirements have been selected by the College of Pharmacy to foster personal and professional growth and development. Learners will be required to develop and utilize electronic portfolios to document professional experiences (e.g., meetings, activities, assignments), track community service, and reflect upon and assess learning activities and experiences. The learners' academic advisors will review and assess the portfolios and provide the learner feedback. The portfolio requirements for each academic year must be satisfied in order for learners to progress into the next academic year. As directed by the Associate/Assistant Dean for Academic Affairs, learners will meet on campus for portfolio development, assessment activities, and Dean's Seminar. Dean's Seminar provides learners with insight into current pharmacy and health care-related issues through guest presentations.

Credit Hours

Min
0

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance to 3rd Year Pharmacy Student

PHAR790 - Special Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
790

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd/3rd Year Pharmacy

PHAR791 - Specialt Topics in Pharmacy

General

Subject Code ~
PHAR

Course Number ~
791

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

Requisites

Free Form Requirements
2nd/3rd Year Pharmacy

PHAR792 - Special Topics Pharmacy

General

Subject Code ~
PHAR

Course Number ~
792

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

PHAR793 - Special Topics Pharmacy

General

Subject Code ~
PHAR

Course Number ~
793

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

PHAR794 - Special Topics Pharmacy

General

Subject Code ~
PHAR

Course Number ~
794

Course Name (appears on the transcript) ~
Special Topics in Pharmacy

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Min
3

PHAR800 - APPE Ambulatory Care

General

Subject Code ~
PHAR

Course Number ~
800

Course Name (appears on the transcript) ~
APPE Ambulatory Care

Content

Description
Within the Advanced Pharmacy Practice Experience in Ambulatory Care Practice, learners are assigned to ambulatory care pharmacy settings where they will participate in clinical pharmacy services and patient care activities such as: taking medication histories; monitoring drug therapy; recommending changes in medications; reconciling medication; writing progress notes; performing physical assessments; providing patient education; conducting research; reviewing drug utilization; reporting adverse drug reaction; attending committee meetings; and interacting with other members of the health care team. Learners are expected to apply prior knowledge and apply new knowledge, as necessary, to demonstrate the ability to render guided patient care along with sound clinical judgment under the supervision of a preceptor.

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR801 - APPE Acute Care

General

Subject Code ~
PHAR

Course Number ~
801

Course Name (appears on the transcript) ~
APPE Acute Care

Content

Description
Within the Advanced Pharmacy Practice Experience in Acute Care Practice, learners are assigned to acute care settings where they will participate in clinical pharmacy services and patient care activities, such as: attending clinical rounds; managing medication safety; taking medication histories; monitoring drug therapy; monitoring laboratory data; providing patient education; and researching patient-specific drug information questions. Learners will interact with a number of different health care providers and participate in a variety of patient care activities with the pharmacy preceptor and medical team. Learners are expected to apply prior knowledge and apply new knowledge, as necessary, to demonstrate the ability to render guided patient care and sound clinical judgment under the supervision of a preceptor.

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR802 - APPE Community Care

General

Subject Code ~
PHAR

Course Number ~
802

Course Name (appears on the transcript) ~
APPE Community Care

Content

Description
Within the Advanced Pharmacy Practice Experience in Community Care Practice, learners are assigned to community pharmacies where they will integrate the principles of pharmacy care and pharmaceutical sciences with practice situations. Activities include: processing prescriptions; medication counseling; interacting with medical personnel via telephone or in person; pharmacy administration (management, ordering, and inventory control); advising on nonprescription medications; and applying pharmacy law. Learners are expected to apply prior knowledge and apply new knowledge, as necessary, to demonstrate the ability to render guided patient care and sound clinical judgment under the supervision of a preceptor.

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR803 - APPE Institutional

General

Subject Code ~
PHAR

Course Number ~
803

Course Name (appears on the transcript) ~
APPE Institutional

Content

Description
Within the Advanced Pharmacy Practice Experience in Institutional Practice, learners are assigned to hospital pharmacies where they will participate in hospital practice activities such as: prescriber order entry systems; electronic medical records; prescription automation and informatics; purchasing; formulary and inventory control; interacting with interprofessional teams; attending committee meetings; pharmacy administration; distributing medications; preparing IV admixtures; conducting research; and completing chart reviews. Learners are expected to apply prior knowledge and apply new knowledge, as necessary, to demonstrate the ability to render guided patient care and sound clinical judgment under the supervision of a preceptor.

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR804 - APPE Elective I

General

Subject Code ~
PHAR

Course Number ~
804

Course Name (appears on the transcript) ~
APPE Elective I

Content

Description
Within the Advanced Pharmacy Practice Elective Experiences, learners will be able to choose from a variety of advanced pharmacy practice experiences in areas such as: administration, specialized pharmacy care (cardiology, pediatrics, geriatrics, oncology/hematology, psychiatry, etc), research, home health care, industry, and long term care. Learners must complete two elective experiences. Some elective experiences will be in non-traditional pharmacy practice settings. However, one elective must be a direct patient care rotation. Learners are expected to apply prior knowledge and apply new knowledge, as necessary, to demonstrate the ability to render guided patient care and sound clinical judgment under the supervision of a preceptor.

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR805 - APPE Elective II

General

Subject Code ~
PHAR

Course Number ~
805

Course Name (appears on the transcript) ~
APPE Elective II

Content

Description
Within the Advanced Pharmacy Practice Elective Experiences, learners will be able to choose from a variety of advanced pharmacy practice experiences in areas such as: administration, specialized pharmacy care (cardiology, pediatrics, geriatrics, oncology/hematology, psychiatry, etc), research, home health care, industry, and long term care. Learners must complete two elective experiences. Some elective experiences will be in non-traditional pharmacy practice settings. However, one elective must be a direct patient care rotation. Learners are expected to apply prior knowledge and apply new knowledge, as necessary, to demonstrate the ability to render guided patient care and sound clinical judgment under the supervision of a preceptor.

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR806 - Research Project

General

Subject Code ~
PHAR

Course Number ~
806

Course Name (appears on the transcript) ~
Research Project

Content

Description
This is an applied research project conducted with a faculty advisor, with the end result being a poster or podium presentation. Learners will identify a research project; develop a methodology to conduct the research; gather and analyze data; identify conclusions and implications, and present a poster or podium presentation, on campus.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PHAR807 - APPE Non-Patient Care Elective

General

Subject Code ~
PHAR

Course Number ~
807

Course Name (appears on the transcript) ~
APPE Non-Patient Care Electiv

Content

Description
Learners are assigned to a variety of advanced pharmacy practice settings in management, academia, informatics, and research. Each rotation will have specific objectives, in addition to the general ones below, which will be determined in writing by the preceptor with input by the learner at the beginning of the rotation. This rotation will optimize the learners? opportunities for professional growth and skills. Learners are expected to apply prior knowledge and apply new knowledge to demonstrate the ability to render guided patient care and sound clinical judgment under the supervision of a preceptor.

Learner involvement within the rotation will require active participation and the demonstration of semi- independent practice under the guidance of a preceptor for the course content topics identified.

Billing Hours

Min
6

Credit Hours

Min
6

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHAR833 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
833

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Min
2

PHAR834 - Indep Study in Phar

General

Subject Code ~
PHAR

Course Number ~
834

Course Name (appears on the transcript) ~
Indep Study in Phar

Content

Credit Hours

Min
2

PHAR880 - Professional Development IV

General

Subject Code ~
PHAR

Course Number ~
880

Course Name (appears on the transcript) ~
Professional Develop IV

Content

Description
In addition to curricular requirements, learners are required to satisfy professional development requirements. These program requirements have been selected by the College of Pharmacy to foster personal and professional growth and development. Learners will be required to develop and utilize electronic portfolios to document professional experiences (e.g., meetings, activities, assignments), track community service, and reflect upon and assess learning activities and experiences. The learners' academic advisors will review and assess the portfolios and provide the learner feedback. The portfolio requirements for each academic year must be satisfied in order for learners to progress into the next academic year. As directed by the Associate/Assistant Dean for Academic Affairs, learners will meet on campus for portfolio development, assessment activities, and Dean's Seminar. Dean's Seminar provides learners with insight into current pharmacy and health care-related issues through guest presentations.

Credit Hours

Min
0

Requisites

Free Form Requirements
Acceptance into 4th Year Pharmacy

PHARAPPE - Pharmacy APPE Placeholder

General

Subject Code ~
PHAR

Course Number ~
APPE

Course Name (appears on the transcript) ~
Pharmacy APPE Placeholder

Content

Description
=Pharmacy APPE Placeholder

Credit Hours

Min
3

PHARB200 - Introduction to Healthcare Industries

General

Subject Code ~
PHARB

Course Number ~
200

Course Name (appears on the transcript) ~
Introduction to Healthcare Ind

Content

Description
This course introduces students to the breadth of industries that exist under the broad label of healthcare. The focus of study is understanding the business perspective in the delivery of healthcare-related products and services.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Sophomore Standing

PHARB320 - Pharma & Healthcare Marketing

General

Subject Code ~
PHARB

Course Number ~
320

Course Name (appears on the transcript) ~
Pharma & Healthcare Marketing

Content

Description
This course explores the application of marketing concepts to the healthcare and pharmaceutical industries. Given in the increasing importance of healthcare industries to the U.S. economy and increased focused on patient-centered approaches to delivery, an understanding of marketing and how firm value is created and maintained is essential.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
MK 200/HONB 200

PHARB333 - Indep Study in Pharm Business

General

Subject Code ~
PHARB

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Pharm Business

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PHARB334 - Indep Study in Pharm Business

General

Subject Code ~
PHARB

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Pharm Business

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PHARB345 - Fundamentals of Pharmacy

General

Subject Code ~
PHARB

Course Number ~
345

Course Name (appears on the transcript) ~
Fundamentals of Pharmacy

Content

Description
This survey course is intended to develop an appreciation for the three fundamental areas of pharmacy. Areas covered include: pharmaceutical aspects, which focuses on the drug discovery and development process; clinical aspects, which focuses on drug utilization, evaluation and therapeutic patient/population management; and administrative/socio-behavioral aspects, which focuses on health care delivery-communication, outcomes, regulatory affairs and general business principles.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Junior Standing, and BIO 101 and CHEM 101

PHARB400 - Introduction to Pharmaceutical Analytics

General

Subject Code ~
PHARB

Course Number ~
400

Course Name (appears on the transcript) ~
Intro to Pharmaceutical Analy

Content

Description
This course introduces students to the application of analytics in the pharmaceutical and healthcare industries. Working closely with industry standard analytical tools, students investigate the healthcare patient journey from both clinical and business perspectives.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
BIS 221 or MATH 120, or Instructor's Permission

PHARB480 - Internship in Pharma & Healthcare Busine

General

Subject Code ~
PHARB

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Pharma & Healthc

Content

Description
See "Internships" in the Catalog.

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PHARB481 - Internship in Pharma & Healthcare Busine

General

Subject Code ~
PHARB

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Pharma & Healthc

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PHARIPPE1 - Pharmacy IPPE Placeholder

General

Subject Code ~
PHAR

Course Number ~
IPPE1

Course Name (appears on the transcript) ~
Pharmacy IPPE Placeholder

Content

Description
Pharmacy IPPE Placeholder

Credit Hours

Min
3

PHARIPPE2 - Pharmacy IPPE Placeholder

General

Subject Code ~
PHAR

Course Number ~
IPPE2

Course Name (appears on the transcript) ~
Pharmacy IPPE Placeholder

Content

Description
Pharmacy IPPE Placeholder

Credit Hours

Min
3

PHRSC510 - Seminar & Journal Club 1

General

Subject Code ~
PHRSC

Course Number ~
510

Course Name (appears on the transcript) ~
Seminar & Journal Club 1

Content

Description
This is the first course in a series of courses whose purpose is to train the student in the skills of critically reviewing published reports and presented reports. All students are required to participate by critically evaluating and presenting at least one current published paper, asking relevant and informed questions of presenters, and writing critiques on student presentations. The goals are to train students to critically evaluate the scientific literature and provide students with the experience of making oral presentations on diverse topics.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHRSC515 - Principles of Pharmacology

General

Subject Code ~
PHRSC

Course Number ~
515

Course Name (appears on the transcript) ~
Princ of Pharmacology

Content

Description
Learners will explore the basic physiological, pathophysiological and biochemical foundations for the interaction of drugs with biological systems. Topics will include pharmacological principles such as mechanism of action, pharmacodynamics, drug-drug interactions, adverse reactions, and factors that can alter expected pharmacologic results. Autonomic drugs are used to illustrate pharmacological principles associated with pharmacotherapy that will be required for learners to build upon in future courses. PHRSC 515 equates to PHAR 611, Principles of Pharmacology.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

PHRSC520 - Seminar & Journal Club 2

General

Subject Code ~
PHRSC

Course Number ~
520

Course Name (appears on the transcript) ~
Seminar & Journal Club 2

Content

Description
This is the second course in a series of courses whose purpose is to train the student in the skills of critically reviewing published reports and presented reports. All students are required to participate by critically evaluating and presenting at least one current published paper, asking relevant and informed questions of presenters, and writing critiques on student presentations. The goals are to train students to critically evaluate the scientific literature and provide students with the experience of making oral presentations on diverse topics.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHRSC526 - Analytical Techniques Lab

General

Subject Code ~
PHRSC

Course Number ~
526

Course Name (appears on the transcript) ~
Analytical Techniques Lab

Content

Description
This course familiarizes student with the principles of instrumental techniques for quantification and identification of pharmaceuticals preparation, analysis of biological samples and statistical treatment of the data. Students will focus on sample preparation, statistical methods, and the application of different analytical techniques for research in different areas of pharmaceutical sciences.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHRSC527 - Data Analysis & Biostatistics

General

Subject Code ~
PHRSC

Course Number ~
527

Course Name (appears on the transcript) ~
Data Analysis & Biostatistics

Content

Description
Students will learn the principles of research methodology and applied statistical analysis. Students will be able to interpret results of statistical analyses in the pharmacy literature, and perform appropriate statistical analysis of data based on the measurement scale of the study variables, research design, and study objectives. Students will learn to perform basic statistical analyses using SPSS software. Students will be able to present data analyses results both in oral and written forms. Students will familiarize with modern approaches to data analyses (e.g., machine learning).

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrolled in PharmD or MS Pharm Science

PHRSC528 - Thesis Research 1

General

Subject Code ~
PHRSC

Course Number ~
528

Course Name (appears on the transcript) ~
Thesis Research 1

Content

Description
This is the first course in a series of 3 whose purpose is to train the student to conduct pharmaceutical research and make progress towards a thesis, which will need to be completed by the end of the 3 course sequence. This will include all aspects of the research process, proposing a project, developing a research plan and experimental procedures, conducting experiments, analyzing and interpreting data and recording in a scientific notebook. The class is conducted through meeting with your advisor and in the laboratories.

Credit Hours

Min
2

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Enrollment in PharmD, MS in Pharmaceutical Sciences, or MS in Pharmacogenomics programs

PHRSC529 - Responsible Conduct of Research

General

Subject Code ~
PHRSC

Course Number ~
529

Course Name (appears on the transcript) ~
Responsible Conduct Research

Content

Description
Scientists require an understanding of the fundamental principles guiding the ethical and responsible conduct of research (RCR). Through didactic lectures, reviews of various regulations, case studies and group discussions, students will gain a greater understanding of the ethical and regulatory considerations in research design, conduct, and reporting as well as the regulatory landscape governing scientific misconduct, research involving vulnerable populations, tissue banking, genetics/genomics, intellectual property, privacy, and data security. The importance of the inclusion of individuals from underrepresented groups, those with disabilities, and individuals from economically disadvantaged backgrounds in both the biomedical work force and study populations is also discussed. The diverse backgrounds, experiences and interests of participating students and faculty provide a platform to develop an appreciation for the diversity of thought that leads to ethical dilemmas. If not already completed, each student will complete on-line training required for their specific research, such as those required for the use of laboratory animals, human subject research and HIPPA, biological and chemical safety, or occupational health and safety.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

PHRSC551 - Intro to Genetics & Genetic Counseling

General

Subject Code ~
PHRSC

Course Number ~
551

Course Name (appears on the transcript) ~
Intro Genetics & Gene Counsel

Content

Description
Students will learn about a myriad of topics, including the basis of genetics, cytogenetics, biochemical genetics, the relationships between DNA, RNA and proteins, as well as current topics in genetic testing and screening, and structure of a genetic counseling session. Students will be introduced to concepts such as Hardy-Weinberg equilibrium, population genetics, risk assessment, newborn and carrier screening programs, as well as reviewing the current state for management and treatment for genetic disorders. In addition, students will participate in role-play to understand the beginning skills needed to practice as a genetic counselor. Additional topics will include disability, cultural competency, insurance, billing and reimbursement, professionalism, and genetic discrimination and related legislation.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrolled in PharmD or MS Pharm Science

PHRSC552 - Advanced Genetics and Genomics

General

Subject Code ~
PHRSC

Course Number ~
552

Course Name (appears on the transcript) ~
Advanced Genetics and Genomics

Content

Description
This course is meant to expand upon the two-credit-hour course, PHAR 523, Principles of Genetics and Genomics, that is required in the Pharm.D. program. In that course students learn the basic principles and processes involved in genetic inheritance and gene expression. In addition, students explore how genetic variation arises and is the basis for a number of diseases and individual responses to environmental factors, including medication therapy. Students are introduced to basic pharmacological concepts, such as pharmacokinetic and pharmacodynamic processes. Variation in therapeutic response in patients are linked to genetic variation of the proteins involved in these pharmacological processes. Students build skills to utilize resources that guide the use of genetic patient information for developing therapeutic recommendations. The ethical, legal, and social implications of utilizing genetic information clinically, are also discussed. Each week, students taking this advanced course will expand upon the basic concepts covered during corresponding weeks of the required course.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PHRSC553 - Genetic Data Analysis - Bioinformatics

General

Subject Code ~
PHRSC

Course Number ~
553

Course Name (appears on the transcript) ~
Genetic Data Analysis - Bioinf

Content

Description
Students will be introduced to bioinformatics tools and analysis methods. Students will develop skills to analyze the vast amounts of biomedical and genomic data and to utilize online tools that will be relevant to their work in the future.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Enrolled in PharmD or MS Pharm Science

PHRSC554 - Applied Pharmacogenomics Experience

General

Subject Code ~
PHRSC

Course Number ~
554

Course Name (appears on the transcript) ~
Applied Pharmacogenomics Exper

Content

Description
Students will work with graduate faculty on several projects related to Pharmacogenomics, including getting their own genetic testing completed and analyzing the results, evaluating direct to consumer genetic testing options, designing a research approach to test a pharmacogenomic related hypothesis, and optimizing and implementing a genetic test in the laboratory.

Credit Hours

Min
6

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Enrolled in PharmD or MS Pharm Science

PHRSC555 - Clinical Pharmacogenomics Experience

General

Subject Code ~
PHRSC

Course Number ~
555

Course Name (appears on the transcript) ~
Clinical Pharmacogenomics Expe

Content

Description
Students will have the opportunity to work with clinical pharmacy faculty on projects related to Pharmacogenomics, including implementation of Pharmacogenomics testing at a clinical site. Students will also review cases in clinic, as well as case studies from the literature that utilize genetic testing to inform medication therapy.

Credit Hours

Min
6

Session Cycle ~
SUO - Summer Only

Requisites

Free Form Requirements
Enrolled in PharmD or MS Pharm Science

PHRSC557 - Advanced Pharmacology & Drug Action

General

Subject Code ~
PHRSC

Course Number ~
557

Course Name (appears on the transcript) ~
Adv Pharmacology & Drug Action

Content

Description
Learners will explore the physiological, pathophysiological and biochemical foundations for the interaction of drugs with biological systems at the molecular level. Learners will examine medicinal chemical and pharmacological principles such as physical, chemical, and biochemical properties of drug substances, mechanisms of action, pharmacodynamics, drug metabolism, drug-drug interactions, adverse reactions, and factors that can alter expected pharmacologic results. Major drug classes will be surveyed to allow learners to illustrate pharmacological and chemical principles associated with pharmacotherapy.

Credit Hours

Min
3

PHRSC590 - Special Topics in PHRSC

General

Subject Code ~
PHRSC

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in PHRSC

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrolled in 1st year of MSPS or other Pharmacy Master's programs

PHRSC599 - Special Topics in PHRSC

General

Subject Code ~
PHRSC

Course Number ~
599

Course Name (appears on the transcript) ~
Special Topics in PHRSC

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrolled in 1st year of MSPS or other Pharmacy Master's programs

PHRSC610 - Seminar & Journal Club 3

General

Subject Code ~
PHRSC

Course Number ~
610

Course Name (appears on the transcript) ~
Seminar & Journal Club 3

Content

Description
This is the third course in a series of courses whose purpose is to train the student in the skills of critically reviewing published reports and presented reports. All students are required to participate by critically evaluating and presenting at least one current published paper, asking relevant and informed questions of presenters, and writing critiques on student presentations. The goals are to train students to critically evaluate the scientific literature and provide students with the experience of making oral presentations on diverse topics. Students enrolled in the second year of the MSPS program may present their own research in lieu of the scientific paper.

Credit Hours

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHRSC618 - Thesis Research 2

General

Subject Code ~
PHRSC

Course Number ~
618

Course Name (appears on the transcript) ~
Thesis Research 2

Content

Description
This is the second course in a series of three whose purpose is to train the student to conduct pharmaceutical research and make progress towards a thesis, which will need to be completed by the end of the 3 course sequence. This will include all aspects of the research process, proposing a project, developing a research plan and experimental procedures, conducting experiments, analyzing and interpreting data and recording in a scientific notebook. The class is conducted through meeting with your advisor and in the laboratories.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

PHRSC620 - Seminar & Journal Club 4

General

Subject Code ~
PHRSC

Course Number ~
620

Course Name (appears on the transcript) ~
Seminar & Journal Club 4

Content

Description
This is the final course in a series of courses whose purpose is to train the student in the skills of critically reviewing published reports and presented reports. Students will defend their final research thesis. Further all students are required to participate by critically evaluating and presenting at least one current published paper, asking relevant and informed questions of presenters, and writing critiques on student presentations. The goals are to train students to critically evaluate the scientific literature and provide students with the experience of making oral presentations on diverse topics.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Acceptance into 1st Year Pharmacy

PHRSC628 - Thesis Research 3

General

Subject Code ~
PHRSC

Course Number ~
628

Course Name (appears on the transcript) ~
Thesis Research 3

Content

Description
This is the third course in a series of three whose purpose is to train the student to conduct pharmaceutical research and make progress towards a thesis, which will need to be completed by the end of the 3 course sequence. This will include all aspects of the research process, proposing a project, developing a research plan and experimental procedures, conducting experiments, analyzing and interpreting data and recording in a scientific notebook. The class is conducted through meeting with your advisor and in the laboratories.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

PHRSC630 - Scientific Communications

General

Subject Code ~
PHRSC

Course Number ~
630

Course Name (appears on the transcript) ~
Scientific Communications

Content

Description
This course will provide training in the major communication methods utilized within the pharmaceutical sciences, aiding students in the development of scientific writing and professional presentation skills.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

PHRSC690 - Special Topics in PHRSC

General

Subject Code ~
PHRSC

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in PHRSC

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrolled in 1st year of MSPS or other Pharmacy Master's programs

PHRSC699 - Special Topics in PHRSC

General

Subject Code ~
PHRSC

Course Number ~
699

Course Name (appears on the transcript) ~
Special Topics in PHRSC

Content

Description
This is a study of an advanced topic of pharmacy, but not offered on a regular basis.

Credit Hours

Max
3

Min
1

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Enrolled in 1st year of MSPS or other Pharmacy Master's programs

PHYS101 - Elements of Physics

General

Subject Code ~
PHYS

Course Number ~
101

Course Name (appears on the transcript) ~
Elements of Physics

Content

Description
This is a conceptual, inquiry based introductory survey of physics. It is designed to acquaint the student with typical qualitative reasoning and quantitative methods as encountered in the physical sciences. All subfields of physics will be explored.

Credit Hours

Min
3

PHYS103 - Elementary Physics

General

Subject Code ~
PHYS

Course Number ~
103

Course Name (appears on the transcript) ~
Elementary Physics

Content

Description
This is an elementary non-calculus based course for general students. Kinematic motion, Newton's laws, conservation laws, rotational motion, and oscillations are discussed. Three class hours, three-hour lab. Formerly "Elementary Physics I"

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

PHYS105 - Basic Physics

General

Subject Code ~
PHYS

Course Number ~
105

Course Name (appears on the transcript) ~
Basic Physics

Content

Description
This is a course for students in preparation for elementary school teaching. It covers the content knowledge associated with and the methods used in science in the context of a inquiry-based introductory course in basic physical sciences. The student is expected to acquire knowledge of the basic laws of physics, and apply them also to other sciences like astronomy, meteorology, and geology. Two class hours, three-hour lab. Restricted to Elem. Ed. students.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Open to Elementary Education majors only

PHYS110 - Physics of the Human Body

General

Subject Code ~
PHYS

Course Number ~
110

Course Name (appears on the transcript) ~
Physics of the Human Body

Content

Description
This is a basic lab science course for students seeking an introductory understanding of the application of ideas and methods from physics to the human body and medicine. The human body will be the laboratory to learn about energy, forces, motion and flows, electricity, sight and sound and radiation effects. This will be achieved utilizing lectures, demonstrations / discussions and hands-on laboratory activities. Two class hours, three-hour lab.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

PHYS123 - Physics of the Life Sciences I

General

Subject Code ~
PHYS

Course Number ~
123

Course Name (appears on the transcript) ~
Physics of Life Sciences I

Content

Description
This course is a calculus-based introduction to the fundamental principles of mechanics, thermodynamics, and some nuclear physics covering applications to chemistry, biology, and the life sciences. Emphasis is placed upon problem solving, deduction of solutions from first principles, and simple model building. Students gain an understanding of Kinematics, statics, energy, and momentum, Newton's laws, fluid motion, temperature, heat and thermodynamic laws, and nuclear physics as relevant to medical applications.

Credit Hours

Min
4

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete MATH 123, MATH 127, or MATH 133

PHYS124 - Physics of the Life Sciences II

General

Subject Code ~
PHYS

Course Number ~
124

Course Name (appears on the transcript) ~
Physics of Life Sciences II

Content

Description
This course is a calculus-based introduction to the fundamental principles of electricity and magnetism, geometric and wave optics, and modern physics covering applications to chemistry, biology and the life sciences. Emphasis is placed upon problem solving, deduction of solutions from first principles and simple model building. Students gain an understanding of electric forces, potentials and currents, electromagnetic induction and light, geometric and wave optics for sound, light and matter, and modern ideas relating to the structure of matter.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PHYS 123 or PHYS 133

PHYS131 - Elements of Mechanics I

General

Subject Code ~
PHYS

Course Number ~
131

Course Name (appears on the transcript) ~
Elements of Mechanics I

Content

Description
One unit of secondary school physics is recommended. This is an introductory course dealing with Newton's laws of motion and their applications. Linear and rotational kinematics and dynamics are presented with particular emphasis on the laws of conservation of linear momentum, angular momentum, and energy. Mechanical oscillations are discussed.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Corequisite MATH 109

PHYS133 - Mechanics

General

Subject Code ~
PHYS

Course Number ~
133

Course Name (appears on the transcript) ~
Mechanics

Content

Description
One unit of secondary school physics is recommended. This is an introductory course dealing with Newton's laws of motion and their applications. Linear and rotational kinematics and dynamics are presented with particular emphasis on the laws of conservation of linear momentum, angular momentum, and energy. Mechanical oscillations are discussed.

Credit Hours

Min
4

Requisites

Free Form Requirements
Pre or Corequisite: Complete MATH 123, MATH 124, MATH 127, or MATH 133

PHYS134 - Electricity & Magnetism

General

Subject Code ~
PHYS

Course Number ~
134

Course Name (appears on the transcript) ~
Electricity & Magnetism

Content

Description
This course is the study of electrostatics, electric and magnetic fields, DC circuits, electrical measurements, electromagnetism, electrical and magnetic properties of matter, and AC circuits.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PHYS 132 or PHYS 133 and MATH 123, MATH 124, MATH 127 or MATH 133

PHYS151 - General Astronomy

General

Subject Code ~
PHYS

Course Number ~
151

Course Name (appears on the transcript) ~
General Astronomy

Content

Description
This is an introductory course designed to acquaint students with an elementary description, in both qualitative and quantitative terms, of the solar system and the behavior and characteristics of the stars and galaxies. (NSP)

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PHYS 101, PHYS 103, PHYS 110, PHYS 123, PHYS 132, PHYS 133, HON 220, METR 101, CHEM 101, CHEM 103, CHEM 105, GEOL 101, OCN 101, BIO 101, or BIO 107 with BIO 117

PHYS152 - Energy & Mankind

General

Subject Code ~
PHYS

Course Number ~
152

Course Name (appears on the transcript) ~
Energy & Mankind

Content

Description
This course acquaints students with various sources of energy available to mankind. We will follow the various kinds of energy from the source to the consumer. We will consider the technical aspects of energy generation and distribution, the environmental and social consequences of use, future potential to benefit mankind, and the fundamental role energy plays in our society. Examples of energy sources to be investigated are nuclear, solar, hydroelectric, geothermal tidal, fossil fuel, wind, and magneto-hydrodynamics. PHYS 101 followed by this course will satisfy the Natural Science Perspective.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PHYS 101, PHYS 103, PHYS 105, PHYS 110, PHYS 123, PHYS 132, PHYS 133, HON 220, METR 101, CHEM 101, CHEM 105, GEOL 101, OCN 101, BIO 101, BIO 103, or BIO 107 with BIO 117

PHYS154 - Oceans

General

Subject Code ~
PHYS

Course Number ~
154

Course Name (appears on the transcript) ~
Oceans

Content

Description
The goal of this natural science perspective course is to provide students with a focus for better understanding and appreciating the oceans as a key part of the overall Earth environment. Students will gain background knowledge useful for evaluating future societal issues including global climate changes and pollution. Scientific information from geology, chemistry, physics, and biology will be incorporated to illustrate how each of these disciplines relates to the ocean. Topics covered in this course will include plate tectonics and the ocean floor, chemical properties of seawater, ocean circulation, waves and water dynamics, tides, ocean ecosystems, and marine life. (NSP) Students cannot receive credit for PHYS 154 and OCN 101.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PHYS 101, PHYS 103, PHYS 105, PHYS 110, PHYS 123, PHYS 132, PHYS 133, HON 220, METR 101, CHEM 101, CHEM 105, GEOL 101, BIO 101, BIO 103, or BIO 107 with BIO 117

PHYS155 - Meteorology

General

Subject Code ~
PHYS

Course Number ~
155

Course Name (appears on the transcript) ~
Meteorology

Content

Description
This is an introductory course in meteorology for the non-technical student. Topics include the earth-sun system, the earth's atmosphere, the earth's heat budget, weather measurements, clouds, horizontal air movement, stability, fronts, short-term weather forecasting, and climate.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PHYS 101, PHYS 103, PHYS 105, PHYS 110, PHYS 123, PHYS 132, PHYS 133, HON 220, METR 101, CHEM 101, CHEM 105, GEOL 101, OCN 101, BIO 101, BIO 103, or BIO 107 with BIO 117

PHYS156 - Sound & Music

General

Subject Code ~
PHYS

Course Number ~
156

Course Name (appears on the transcript) ~
Sound & Music

Content

Description
This course provides an introduction to the physical aspects of musical sound. The goal of this natural sciences perspectives course is to provide course participants with a theoretical understanding of the physical basis of musical sound allowing for further research, music-making, or appreciation as listeners. Beginning with the physical properties of sound waves such as wave speed, frequency and amplitude, we will examine how these affect musical concepts of pitch, timbre, mode, and consonance/dissonance. We will look at mechanisms of sound production in various musical instruments and explore the effects of auditorium acoustics, electronic enhancement, and sound recording and reproduction, looking at the variety of ways in which physical phenomena are used to create music.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PHYS 101, PHYS 103, PHYS 105, PHYS 110, PHYS 123, PHYS 132, PHYS 133, HON 220, METR 101, CHEM 101, CHEM 105, GEOL 101, OCN 101, BIO 101, BIO 103, or BIO 107 with BIO 117

PHYS190 - Special Topics in Physics

General

Subject Code ~
PHYS

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Physics

Content

Description
Topics in physics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete PHYS 101 or PHYS 103 or PHYS 105 or PHYS 110 or PHYS 123 or PHYS-133

PHYS191 - Special Topics in Physics

General

Subject Code ~
PHYS

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Physics

Content

Description
Topics in physics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Complete PHYS 101 or PHYS 103 or PHYS 105 or PHYS 110 or PHYS 123 or PHYS-133

PHYS192 - Special Topics in Physics

General

Subject Code ~
PHYS

Course Number ~
192

Course Name (appears on the transcript) ~
Special Topics in Physics

Content

Description
Topics in physics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PHYS290 - Special Topics in Physics

General

Subject Code ~
PHYS

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Physics

Content

Description
Topics in physics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

PHYS301 - Optics

General

Subject Code ~
PHYS

Course Number ~
301

Course Name (appears on the transcript) ~
Optics

Content

Description
This course is designed to provide juniors (and seniors) in engineering and the sciences with a solid foundation in optics and its applications. Specific topics covered are the theory and application of geometrical optics, fiber optics, optical instrumentation, electromagnetic waves, interference, diffraction, polarization, photon theory of light, and the basic principles and applications of lasers. Laboratory activities are used throughout the course to explore and emphasize important concepts.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete PHYS 124 or PHYS 134

PHYS310 - Forensic Physics

General

Subject Code ~
PHYS

Course Number ~
310

Course Name (appears on the transcript) ~
Forensic Physics

Content

Description
This course focuses on the application of basic physics concepts to Forensic Science with an emphasis on the quantitative analysis of real and contrived cases. It will expose the students to actual methods and techniques used by investigators in the field of Forensic Physics. The science of physics is especially important when dealing with ballistic evidence where the trajectory of a bullet is in question (kinematics). Physics is needed to aid in accident reconstruction, resolving the many different forces at work in order to explain how an event may have happened (Newton's laws, collisions, energy). Other topics are, e.g., the physics of explosions and arson (thermodynamics), analysis of bloodstain patterns (kinematics), and the use of physical and geometric optics principles to develop latent fingerprints.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete PHYS 123 or PHYS 133

PHYS320 - Modern Physics

General

Subject Code ~
PHYS

Course Number ~
320

Course Name (appears on the transcript) ~
Modern Physics

Content

Description
This course is an introduction to two great accomplishments of 20th century physics: Relativity and Quantum Mechanics. These theories are more difficult to understand than classical Newtonian physics because they usually relate to situations beyond our everyday experience, specifically velocities close to the speed of light and extremely small distances. Standard topics in Special Relativity will be covered including time dilation, length contraction, and the twin paradox. The basics of Quantum Mechanics will be introduced including the quantization of matter and energy, atomic structure, the Schrodinger Equation, and the hydrogen atom.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete PHYS-124 or PHYS-134; and MATH-124 or MATH-134

PHYS333 - Independent Study in Physics

General

Subject Code ~
PHYS

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Physics

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PHYS334 - Indep Study in Physics

General

Subject Code ~
PHYS

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Physics

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Min
3

PHYS390 - Special Topics in Physics

General

Subject Code ~
PHYS

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Physics

Content

Description
Topics in physics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

PHYS394 - Special Topics in Physics

General

Subject Code ~
PHYS

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Physics

Content

Description
Topics in physics that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PHYS440 - Undergraduate Research

General

Subject Code ~
PHYS

Course Number ~
440

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog. Students who show an interest and aptitude for independent and creative work may engage in undergraduate research. Students are expected to write a report based on this work. Class hours by arrangement.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Permission of the Department, approval of the Dean

POSC101 - Intro to Contemporary Global Issues

General

Subject Code ~
POSC

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Contemp Global Issues

Content

Description
The course examines numerous social, cultural, economic, and political issue areas from the vantage points of global community and global citizenship. Areas such as the regulation of business, the spread of technology, environmental pollution, health, poverty, crime, human rights, immigration, education, and democracy as well as war and peace are analyzed within the context of globalization.

Credit Hours

Min
3

POSC102 - American National Government

General

Subject Code ~
POSC

Course Number ~
102

Course Name (appears on the transcript) ~
American National Govern

Content

Description
This course is an introduction to national-level politics in the United States that emphasizes learning concepts and tools of analysis. Students will study the basic structure of the U.S. Constitution and the system of government that it establishes. This will include an examination of federalism, government institutions, and themes associated with citizen participation. Emphasis will also be placed on analyzing current political events.

Credit Hours

Min
3

POSC190 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

POSC201 - Comparative Politics

General

Subject Code ~
POSC

Course Number ~
201

Course Name (appears on the transcript) ~
Comparative Politics

Content

Description
This is an introduction to basic concepts of comparative political analysis. An appreciation for the diversity of political systems across the world is emphasized through case studies taken from Europe, Latin America, Asia, and Africa.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
POSC 101 or POSC 102 or INST 101, or Sophomore Standing

POSC203 - International Relations

General

Subject Code ~
POSC

Course Number ~
203

Course Name (appears on the transcript) ~
International Relations

Content

Description
This is an introduction to the elements essential for analyzing and understanding international behavior, organization, diplomacy, politics, law, and the multistate system.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete POSC 101 or POSC 102 or INST 101, or Sophomore Standing

POSC205 - Public Administration

General

Subject Code ~
POSC

Course Number ~
205

Course Name (appears on the transcript) ~
Public Administration

Content

Description
This is an introduction to public administration both as a field of study and in its practical applications in government. Areas of study include bureaucratic organization, budgeting, and public management. Problems of public service delivery are explored in relation to the contemporary American political scene.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete POSC 101 or INST 101 or POSC 102; Sophomore Standing

POSC207 - Introduction to Political Theory

General

Subject Code ~
POSC

Course Number ~
207

Course Name (appears on the transcript) ~
Introduction Political Theory

Content

Description
Survey course designed to introduce students to major political thinkers and schools of thought with an emphasis on classical liberalism and the social contract tradition.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
POSC 101 or POSC 102 or INST 101, or 3 crs of European history, or Sophomore Standing

POSC210 - State Politics in America

General

Subject Code ~
POSC

Course Number ~
210

Course Name (appears on the transcript) ~
State Politics in America

Content

Description
This is a general survey of politics in state and local government. Topics given special consideration include the power of governors and mayors, variations in state/local legislative assemblies, budgeting and taxation issues, intergovernmental relations, citizen ballot initiatives, and policy issues including education, criminal justice, the environment, transportation, and public welfare.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 101 or INST 101 or POSC 102; Sophomore Standing

POSC212 - Political Analysis

General

Subject Code ~
POSC

Course Number ~
212

Course Name (appears on the transcript) ~
Political Analysis

Content

Description
This course will introduce students to the ways in which scholars try to systematically describe and explain political phenomena. How is the study of politics a science? How do political scientists develop hypotheses and test them in such areas as citizen participation, the effects of news media and campaign ads on political attitudes, and the behavior of legislators, governors and presidents in policy-making? The course will cover the elements of research design as well as survey, experimental, and qualitative approaches to the study of politics. Students also will learn how to analyze data using descriptive statistics, t-tests, correlations, and multiple regression.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete POSC 102 and Sophomore Standing

POSC218 - Public Policy in America

General

Subject Code ~
POSC

Course Number ~
218

Course Name (appears on the transcript) ~
Public Policy in America

Content

Description
This is an examination in the setting of American politics of the process surrounding public decision-making and implementation. Attention is devoted to specific policy issues (environment, health care, education, etc.) and the way in which these are addressed in the public sector by interest groups, bureaucrats, and elected politicians.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete POSC 102

POSC225 - Law & Judicial Politics

General

Subject Code ~
POSC

Course Number ~
225

Course Name (appears on the transcript) ~
Law & Judicial Politics

Content

Description
This course will explore the basic principles and categories of American law, its processes and institutions. We will look at the legal profession, the guardians of the law, from their education to their roles in the legal system, and we will examine our courts and judges and the politics that surround their work.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete POSC 102 Not open to those w/POSC 325, POSC 326 or CJ 234

POSC290 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

POSC291 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

POSC307 - Justice, Diversity, and Democratic Citiz

General

Subject Code ~
POSC

Course Number ~
307

Course Name (appears on the transcript) ~
Justice, Diversity, and Democr

Content

Description
LSOC 307/POSC 307 examines how contemporary liberal democracies can and should come to terms with issues of national, cultural, ethnic, religious, and racial diversity. The course considers (1) whether, under what conditions, and to what extent national, cultural, ethnic, religious, and racial minorities can and should be accommodated, integrated, and/or assimilated in society and (2) to what extent (and in what ways) the state can and should promote a particular ideal of liberal democratic citizenship.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Junior Standing

POSC310 - Politics of Developing Societies

General

Subject Code ~
POSC

Course Number ~
310

Course Name (appears on the transcript) ~
Pol of Developing Societies

Content

Description
This is a study of the developing societies of the world in the context of rapidly changing socio-economic conditions and competing political ideologies. Objectives center on a consideration of the cyclical dynamics of democracy and authoritarianism, the rise of revolutionary pressures, and the role of the international economy in shaping domestic politics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 101 or INST 101 or POSC 102, and Junior Standing

POSC316 - Politics of Europe

General

Subject Code ~
POSC

Course Number ~
316

Course Name (appears on the transcript) ~
Politics of Europe

Content

Description
This is an analysis of the governmental and party structures of Great Britain, France, Germany, and Russia with comparisons to the United States. Special attention paid to European Union institutions.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete POSC 101 or INST 101 or POSC 102, and Junior Standing

POSC318 - Politics of the Middle East

General

Subject Code ~
POSC

Course Number ~
318

Course Name (appears on the transcript) ~
Politics of the Middle East

Content

Description
This is a study of the Middle East and North Africa in terms of the shared traditions of Arabic and Islamic culture, authoritarianism, and foreign intervention. Specific issues discussed include the Palestinian-Israeli conflict, the Persian Gulf, Islamic fundamentalism, terrorism, and the impact of oil production.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 101 or INST 101 or POSC 102, and Junior Standing

POSC321 - The US Congress

General

Subject Code ~
POSC

Course Number ~
321

Course Name (appears on the transcript) ~
The US Congress

Content

Description
This course introduces the world of legislative politics on Capitol Hill, including the people who serve there, congressional organization and procedure, Congress's relationship to other institutions like the President and the courts, and its struggle to solve, while reflecting, the nation's most difficult problems. Students who have successfully completed POSC 320 cannot receive credit for this course.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 102 and Junior Standing

POSC322 - The US Presidency

General

Subject Code ~
POSC

Course Number ~
322

Course Name (appears on the transcript) ~
The US Presidency

Content

Description
This course examines the history of the Presidency, but the focus is on the office in its current form. Topics include presidential management of the media and public opinion, decision making in the White House and the President's interaction with other governmental institutions.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 102 and Junior Standing

POSC324 - Parties & Elections

General

Subject Code ~
POSC

Course Number ~
324

Course Name (appears on the transcript) ~
Parties & Elections

Content

Description
This is a study of the electoral process that reviews the roles of candidates, parties, and political managers in the American political system as well as the laws that regulate political competition. Special attention will be given to learning how campaign contribution limits, accessibility rules, and other election laws help to either protect or limit voting rights and the election process. The course is taught in election years, and class exercises explore current candidates, campaign strategies and policy debates. Cross-listed with LSOC 324.

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
POSC 102 or Junior Standing.

POSC325 - Constitutional Law

General

Subject Code ~
POSC

Course Number ~
325

Course Name (appears on the transcript) ~
Constitutional Law

Content

Description
This is a study of constitutional principles as decided by the U.S. Supreme Court. Emphasis is on the Court's roles as arbiter of federalism and separation of powers and interpreter of the Bill of Rights and the Civil War Amendments.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 102 and Junior Standing

POSC326 - Civil Liberties

General

Subject Code ~
POSC

Course Number ~
326

Course Name (appears on the transcript) ~
Civil Liberties

Content

Description
This is a further study of constitutional law focusing on the First Amendment to the U.S. Constitution (Freedom of Speech, Press, and Religion). A secondary focus is on civil rights, affirmative action, and reproductive rights cases.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 102, and POSC 225 or CJ 234

POSC327 - Media Law & Politics

General

Subject Code ~
POSC

Course Number ~
327

Course Name (appears on the transcript) ~
Media Law & Politics

Content

Description
This class will address the role the media play in our democracy. We will discuss the responsibilities citizens have in a democracy and whether the media help or hinder citizens in living up to those responsibilities. Over the course of the semester, we will examine the interplay between political actors, the media, and citizens and examine the consequences these interactions have for the democratic process. The course will focus on traditional news media such as newspapers, television news broadcasts, radio and the Internet, as well as social media and other rapidly evolving forms of political communication. We will also look carefully at campaign communication and consider how well it helps citizens make informed voting decisions. Cross-listed as LSOC-327

Credit Hours

Min
3

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
POSC 102 and Junior Standing

POSC328 - Political Behavior

General

Subject Code ~
POSC

Course Number ~
328

Course Name (appears on the transcript) ~
Political Behavior

Content

Description
The course examines the motivations and reasoning behind American political behavior. How do we become socialized to play our role as citizens in a representative democracy? How do we process information about politics? From where do our opinions originate? Are we consistent in our political attitudes, partisanship and ideology? How do government officials, political parties and the news media influence our attitudes and behavior? We will explore these questions by drawing from theoretical and empirical work in political science, as well as from psychology and communications.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
POSC 102 and Junior or Senior Standing

POSC329 - Political Polling

General

Subject Code ~
POSC

Course Number ~
329

Course Name (appears on the transcript) ~
Political Polling

Content

Description
Polling is a central part of political campaigns. Candidates use public opinion data to shape their message, their campaign ads, and sometimes issue positions. This course examines how pollsters measure voters' perceptions of candidates and issues, and how candidates use polling data to adjust their message and strategy in the heat of a campaign. The course also will examine how voters form their political views and how best to measure those attitudes in a dynamic campaign environment. Students will take on the role of campaign consultant, and will "advise" candidates by drafting strategy memos during an election cycle and by providing a final post-election analysis of the outcome of the race. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
POSC 102 and Junior Standing

POSC333 - Independent Study in Political Science

General

Subject Code ~
POSC

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study Political Science

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

POSC334 - Independent Study in Political Science

General

Subject Code ~
POSC

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Political Science

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

POSC340 - International Law & Organization

General

Subject Code ~
POSC

Course Number ~
340

Course Name (appears on the transcript) ~
Int'l Law & Organization

Content

Description
This is analysis of international law and organization in the 20th century. Special attention is paid to landmark cases and principles as well as to the structure and processes of the United Nations, European Community, and other experiments in international organization.

Credit Hours

Min
3

Requisites

Free Form Requirements
POSC 101/INST 101 or POSC 102 Junior Standing

POSC342 - Environmental Law and Politics

General

Subject Code ~
POSC

Course Number ~
342

Course Name (appears on the transcript) ~
Environmental Law and Politics

Content

Description
This is an examination of how political institutions have addressed the issues of environmental quality, waste management, clean air, and energy policy. The focus of the course will be on environmental politics in the United States.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete POSC 102, and Junior Standing

POSC350 - American Foreign Policy

General

Subject Code ~
POSC

Course Number ~
350

Course Name (appears on the transcript) ~
American Foreign Policy

Content

Description
This is an analysis of American foreign relations. The emphasis is on the formulation and consequences of foreign policy as well as the role of diplomacy abroad and in the United Nations.

Credit Hours

Min
3

Requisites

Free Form Requirements
POSC-101 or INST-101 or POSC-102, and Junior Standing

POSC356 - Human Security

General

Subject Code ~
POSC

Course Number ~
356

Course Name (appears on the transcript) ~
Human Security

Content

Description
Human security is an emerging paradigm in political science and international relations. The human security concept was first coined in the 1994 United Nations Development Programme seminal publication titled: The Human Development Report. The human security concept is broader than our traditional security framework, which is state-centric and focused on the physical protection of state boundaries from external (and internal) military threats. Human security, by contrast, is focused on the individual and the protection of individuals from a plethora of challenges, many of which result from a more interconnected, globalized world. As such, the human security paradigm engages nontraditional security concerns including environmental degradation, human displacement, economic insecurity, communicable disease, and cyber threats.With the end of WWII and the collapse of cold war bipolarity, the international community has witnessed a decline in armed conflict; however, the absence of conflict does not mean we live in a more peaceful world and the most recent Human Security Report signals an increase in human insecurity, which is a troubling trend. The goal of this course is to further explore the causes and consequences of human insecurity as well as potential solutions that can promote a more peaceful and comfortable world for individuals.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete POSC 101 or INST 101 or POSC 102, and Junior Standing

POSC390 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior Standing

POSC391 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

POSC392 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

POSC394 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

POSC395 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

POSC396 - Special Topics in Political Science

General

Subject Code ~
POSC

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics Political Sci

Content

Description
Topics in political science that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

POSC480 - Internship in Political Science

General

Subject Code ~
POSC

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Political Sci

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

POSC481 - Internship in Political Science

General

Subject Code ~
POSC

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Political Sci

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

POSC490 - Seminar in Government

General

Subject Code ~
POSC

Course Number ~
490

Course Name (appears on the transcript) ~
Seminar in Government

Content

Description
This is an exploration of selected topics in political science with an emphasis on developing research and analytical skills. These skills are incorporated into a research project on a topic selected by the student. This course may be repeated if the topic differs. All senior political science majors are required to enroll in this course.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Senior Standing and 15 credits of POSC courses, or permission of instructor

PSY101 - Intro to Psychology

General

Subject Code ~
PSY

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Psychology

Content

Description
This is a survey of the primary topics of psychology including its historical evolution, aims and research methods. Topics include the scientific study of biopsychosocial bases of thought, feelings, and behavior, social determinants, and applications of psychology in various fields of human activity.

Credit Hours

Min
3

PSY105 - Human Sexuality

General

Subject Code ~
PSY

Course Number ~
105

Course Name (appears on the transcript) ~
Human Sexuality

Content

Description
Human Sexuality courses offer a scientific exploration of the psychological and physiological facets of sexual behavior. In this class, students will: (1) Deepen their understanding of how factors like gender, age, sexual orientation, religion, and racial/ethnic backgrounds shape perspectives on sexuality, (2) Learn to communicate about sexuality in an open and respectful manner, (3) Develop greater self-awareness, and (4) Recognize and appreciate the evolving needs of themselves and others in today's society.

Credit Hours

Min
3

PSY150 - Intro to Psychology Research

General

Subject Code ~
PSY

Course Number ~
150

Course Name (appears on the transcript) ~
Intro to Psychology Research

Content

Description
In this course the student will become familiar with basic research techniques, design and protocols conducted in the laboratory, as well as with the ethics of research procedures.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of the chair

PSY151 - Intro to Psychology Research II

General

Subject Code ~
PSY

Course Number ~
151

Course Name (appears on the transcript) ~
Intro to Psychology Resrch II

Content

Description
In this course the student will become familiar with basic research techniques, design and protocols conducted in the laboratory, as well as with the ethics of research procedures.

Credit Hours

Min
1

Requisites

Free Form Requirements
Permission of the chair

PSY190 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

PSY201 - Developmental Psychology

General

Subject Code ~
PSY

Course Number ~
201

Course Name (appears on the transcript) ~
Developmental Psychology

Content

Description
This is a study of behavior changes from infancy through adulthood. Topics examined include prenatal development and the development of motor, perceptual, social, emotional, and cognitive behavior. The interaction of genetic, physiological, and environmental variables at each stage is considered. Topics of contemporary interest such as developmental disabilities, parenting, and education are briefly considered.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101, or permission of the chair

PSY207 - Statistics for Behavioral Sciences

General

Subject Code ~
PSY

Course Number ~
207

Course Name (appears on the transcript) ~
Statistics for Behavioral Sci

Content

Description
This is an introduction to the descriptive and inferential techniques for presenting, analyzing, and interpreting data gathered in the social sciences. Topics include correlation and regression; sampling and sampling distributions; hypothesis testing; and tests of significance, including t tests, ANOVA, effect size, and SPSS.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MATH 100 or higher, or permission of the chair

PSY212 - Adolescent Development

General

Subject Code ~
PSY

Course Number ~
212

Course Name (appears on the transcript) ~
Adolescent Development

Content

Description
This course explores the adolescent experience through the examination of a variety of theories that look at physical, emotional, and intellectual development, and also the domains of family life, peer relationships, schooling, community, and cross-cultural experience.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY-201 or concurrently, or permission of the chair

PSY214 - Social Psychology

General

Subject Code ~
PSY

Course Number ~
214

Course Name (appears on the transcript) ~
Social Psychology

Content

Description
This is a study of the individual in society including interactions and relationships with group members. The emphasis is on sociocultural factors affecting attitudes and behavior. Topics include motivation, beliefs, prejudice, discrimination, interpersonal perceptions and communication, aggression, prosocial behavior and relationships.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101 or permission of the chair

PSY216 - Gender Issues in Psychology

General

Subject Code ~
PSY

Course Number ~
216

Course Name (appears on the transcript) ~
Gender Issues in Psychology

Content

Description
This class will examine the effect of gender on our everyday functioning by critically discussing and analyzing readings on gender issues in everyday life. Topics include inequality, eating disorders, stereotypes and stigma in the media, women's illnesses, and violence against women.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101, or permission of the chair

PSY218 - Psychology in the Media

General

Subject Code ~
PSY

Course Number ~
218

Course Name (appears on the transcript) ~
Psychology in the Media

Content

Description
This course will examine some central psychological concepts that are represented in the movies, television, and the popular press, and compare them to empirical findings in the psychological literature with the goal of teaching students to become critical consumers of media information. Topics covered will include development, psychopathology, relationships, discrimination, stress, memory and learning.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101, or permission of the chair

PSY220 - Health Psychology

General

Subject Code ~
PSY

Course Number ~
220

Course Name (appears on the transcript) ~
Health Psychology

Content

Description
This course will explore the relationship between psychological factors and physical and mental health illness. Included will be discussions of stress reactivity, psychoneuroimmunology, the role of cognitive behavior, stress hardiness, and prevention. Students will also learn and practice a variety of intervention protocols, including the relaxation response.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete PSY 101, or permission of the chair

PSY222 - Positive Psychology

General

Subject Code ~
PSY

Course Number ~
222

Course Name (appears on the transcript) ~
Positive Psychology

Content

Description
This course examines the application of research on positive psychology topics such as pleasure and happiness, grit and determination, strength of character, resilience, interests and talents, relationships that thrive, and zest for work.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

PSY224 - Cognitive Psychology

General

Subject Code ~
PSY

Course Number ~
224

Course Name (appears on the transcript) ~
Cognitive Psychology

Content

Description
This course examines the major subject areas of cognitive psychology including perception, attention, memory systems and processes, problem solving, decision making, reasoning, as well as memory errors, eyewitness testimony, and abnormal behavior.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 101, or permission of the chair

PSY250 - Intermed Psychology Research

General

Subject Code ~
PSY

Course Number ~
250

Course Name (appears on the transcript) ~
Intermed Psychology Research

Content

Description
In this course the students will increase their knowledge and skills in general research protocol, ethics, and techniques by assisting one of our faculty with their research in designing and performing experiments.

Credit Hours

Max
3

Min
1

PSY251 - Intermed Psychology Research II

General

Subject Code ~
PSY

Course Number ~
251

Course Name (appears on the transcript) ~
Intermed Psychology Resrch II

Content

Description
In this course the students will increase their knowledge and skills in general research protocol, ethics, and techniques by assisting one of our faculty with their research in designing and performing experiments.

Credit Hours

Max
3

Min
1

PSY289 - Issues in Adolescence

General

Subject Code ~
PSY

Course Number ~
289

Course Name (appears on the transcript) ~
Issues in Adolescence

Content

Description
Students will be introduced to theories of adolescent development to prepare them for a practical experience working in an alternative high school environment. This experience will include the opportunity to observe, teach, advise, assess, counsel, and interview at-risk youth.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PSY290 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

PSY291 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY301 - Intro to Interviewing

General

Subject Code ~
PSY

Course Number ~
301

Course Name (appears on the transcript) ~
Intro to Interviewing

Content

Description
This is an overview of the techniques of interviewing. The course is intended to familiarize students with interviewing skills in a wide range of business and human service situations. Topics include theoretical orientations, ethical issues, and community applications.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101 and Junior Standing, or permission of the chair

PSY302 - Organizational Psychology

General

Subject Code ~
PSY

Course Number ~
302

Course Name (appears on the transcript) ~
Organizational Psychology

Content

Description
This is a study of the behavior of individuals within complex social systems. The focus is upon groups and their responses to various organizational structures. Concerns of the industrial psychologist, recruitment, selection, training, and incentives are also treated.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 101

Sophomore Standing or Permission from the Department Chair

PSY303 - Personality

General

Subject Code ~
PSY

Course Number ~
303

Course Name (appears on the transcript) ~
Personality

Content

Description
Personality Psychology is the scientific study of the various internal, underlying causes of attitudes, behavior and experience. The course examines the most prominent personality theories within the field of Psychology in order to highlight commonalities and differences between these perspectives and to gain a better appreciation of factors contributing to human personality. Since this course qualifies as a writing intensive experience, a significant amount of time will be dedicated to researching, developing and submitting a 20 page polished APA-style theoretical paper on a topic relevant to existing personality theory. Satisfies one of the Writing Intensive Course requirements for Arts and Sciences students.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing PSY major, completed PSY 101; or permission of the chairperson

PSY304 - Educational Psychology

General

Subject Code ~
PSY

Course Number ~
304

Course Name (appears on the transcript) ~
Educational Psychology

Content

Description
This is a psychological analysis of the educational process with special attention to the nature of learning and the classroom environment. Topics examined include cognitive and emotional development, learning theory, social adjustment, as well as current educational issues affecting learning and development.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete PSY 101 and Sophomore Standing, or permission of the chair

PSY305 - Psychology of Women

General

Subject Code ~
PSY

Course Number ~
305

Course Name (appears on the transcript) ~
Psychology of Women

Content

Description
This is an examination of the social, cultural, political, and biological influences on female development, attitudes, relationships, and other behavior. The course also considers the cultural and historical significance and validity of gender expectations in the development of women.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete PSY 101
Sophomore Standing or Permission from the Department Chair

PSY307 - Psychological Assessment

General

Subject Code ~
PSY

Course Number ~
307

Course Name (appears on the transcript) ~
Psychological Assessment

Content

Description
This course considers the application of the basic principles associated with psychological tests and assessment measures as a systematic means of sampling, describing, and understanding individual behavior. Tests of ability, achievement, aptitude, and personality are presented along with the importance of situating test results within a broader ecological framework. Additional topics include historical considerations, continuing controversies, collection and evaluation of observational data, basic principles of test construction, and appropriate test selection.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 101, and PSY-207 or BIS-220 or equivalent, or permission of the chair

PSY309 - Research Methods

General

Subject Code ~
PSY

Course Number ~
309

Course Name (appears on the transcript) ~
Research Methods

Content

Description
This is a study of the methodology of psychological research from the conception of a hypothesis to the publication of the results. Attention is given to the advantages and limitations of various research designs, the ethical guidelines of research, and the writing style requirements (APA) for psychology papers.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101
Corequisite- PSY 207 or Permission from the Department Chair

PSY310 - Research Methods II

General

Subject Code ~
PSY

Course Number ~
310

Course Name (appears on the transcript) ~
Research Methods II

Content

Description
This course is a continuation of PSY 309. Students undertake a critical review of a research area of their choice and design an original research proposal based on their findings and ethical principles of the American Psychological Association. The proposals are presented as papers written in the style of the American Psychological Association and as posters.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 313, or permission of the chair

PSY311 - Child Behavior Mgmt: Theory & Pract

General

Subject Code ~
PSY

Course Number ~
311

Course Name (appears on the transcript) ~
Child Behavior Management

Content

Description
This is an examination of the basic principles of behavior management with children. Emphasis is on the practical application of learning principles and communication theory with the goal of developing psychologically healthy relationships between parents, or other caregivers, teachers, and children. Topics include how to communicate effectively with a child, how to reward appropriate behavior, how to use token systems, time-out, and other strategies for dealing with disruptive or other inappropriate behavior in the family, school setting, or clinic.

Credit Hours

Min
3

Requisites

Free Form Requirements
PSY 101 and PSY 201, or permission of the chair

PSY312 - Physiological Psychology

General

Subject Code ~
PSY

Course Number ~
312

Course Name (appears on the transcript) ~
Physiological Psychology

Content

Description
This is a systematic study of the physiological bases of behavior with an emphasis on the role of the central nervous system. Topics include the structure and function of the nervous system, sensation and perception, neuroanatomy and the biochemistry of learning, memory, emotions, affective disorders, and substance abuse.

Credit Hours

Min
3

PSY313 - Learning

General

Subject Code ~
PSY

Course Number ~
313

Course Name (appears on the transcript) ~
Learning

Content

Description
This is an examination of the theoretical principles of operant and respondent conditioning using human and comparative studies from laboratory, educational, and therapeutic settings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101 and Sophomore Standing, or permission of the chair

PSY315 - Cultural Psychology

General

Subject Code ~
PSY

Course Number ~
315

Course Name (appears on the transcript) ~
Cultural Psychology

Content

Description
This is a culture sensitive approach to the development of individuals and groups in various cultural settings. The emphasis is on cultural diversity and its influence upon various psychological processes at both the individual and collective levels.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 101 and Junior Standing, or permission of the chair

PSY317 - Psychology of Exceptional Persons

General

Subject Code ~
PSY

Course Number ~
317

Course Name (appears on the transcript) ~
Psych Exceptional Persons

Content

Description
This is a survey of the unique needs and problems of exceptional people including those who have intellectual disability, learning disabilities, autism, giftedness, sensory handicaps, cultural disadvantages, and emotional disturbance, as well as those who belong to multiple categories of exceptionality. The course extends beyond identification criteria and treatment and considers these individuals as they function in, influence, and are influenced by their families, schools, and larger cultural contexts.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete PSY 101 and Sophomore Standing, or permission of the chair

PSY319 - Forensic Psychology

General

Subject Code ~
PSY

Course Number ~
319

Course Name (appears on the transcript) ~
Forensic Psychology

Content

Description
In this course, principles and theories of psychology as they apply to the civil and criminal justice systems will be studied. Topics of investigation will include: role and responsibilities of forensic psychologists, criminal profiling, lie detection, police interrogation and confession, insanity, domestic violence, sexual abuse, the death penalty, and public policy.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete PSY 101 and Sophomore Standing

PSY321 - Sports Psychology

General

Subject Code ~
PSY

Course Number ~
321

Course Name (appears on the transcript) ~
Sports Psychology

Content

Description
This course focuses on psychological theories and interventions used to research and enhance sports performances, the social psychological aspects of sports, and the psychological effects of participating in sports and exercise programs.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Sophomore standing, Complete PSY 101 and PSY 201, or permission of the chair

PSY322 - School Psychology

General

Subject Code ~
PSY

Course Number ~
322

Course Name (appears on the transcript) ~
School Psychology

Content

Description
This course is designed to introduce students to the field of school psychology. Students will gain an understanding of the various roles and functions of school psychologists, as well as changes and challenges in school psychology training and practice. Other topics include the history of the filed, role of professional organizations, multicultural assessment in the schools, and ethics and law for school psychologists.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 313, or permission of the chair

PSY323 - Applied Behavior Analysis

General

Subject Code ~
PSY

Course Number ~
323

Course Name (appears on the transcript) ~
Applied Behavior Analysis

Content

Description
This is an application of the principles of learning theory to behavior change with specialized populations and a variety of behavior disorders. This course includes a number of practicum exercises, an individualized self-adjustment project and paper, and several class presentations.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 313 and NSCI 212, or permission of the chair

PSY324 - Drugs & Behavior

General

Subject Code ~
PSY

Course Number ~
324

Course Name (appears on the transcript) ~
Drugs & Behavior

Content

Description
This is a course in behavioral pharmacology with an emphasis on examining the pharmacokinetics and behavioral effects of recreational and prescribed psychoactive drugs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 313; or permission of chair

PSY326 - Abnormal Psychology

General

Subject Code ~
PSY

Course Number ~
326

Course Name (appears on the transcript) ~
Abnormal Psychology

Content

Description
The concept of abnormality is considered from a perspective that views the contribution of both constitutional factors and life experiences to the manifestation of behavioral disorders. Major categories of disorders, relevant research findings, various theoretical orientations, and treatment options are presented. Within these topics, attention is paid to the importance of such forces as culture, race, ethnicity, gender, age, and socioeconomic status as they relate to our understanding of normal and abnormal development.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101
Junior Standing or Permission from the Department Chair

PSY327 - Multicultural Psychology

General

Subject Code ~
PSY

Course Number ~
327

Course Name (appears on the transcript) ~
Multicultural Psychology

Content

Description
This class is an introduction to major subject areas, theoretical approaches, and empirical findings regarding the psychology of diversity, prejudices, stereotypes, and discrimination. Assignments, discussions, and activities will help you discover the origins, maintenance, and influences of prejudices, stereotypes and discrimination on behavior and mental processes. Perspectives regarding the influence of prejudices, stereotypes, and discrimination on members of marginalized groups will be covered. Relatedly, different social categories and their relationship to prejudices, stereotypes, and discrimination will be covered, including gender identity, race, age, and weight status. Furthermore, best practices regarding the reduction of prejudices, stereotypes, and discrimination, as well as structuring intergroup interactions will be addressed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing or permission of the chair

PSY328 - Childhood Disorders & Interventions

General

Subject Code ~
PSY

Course Number ~
328

Course Name (appears on the transcript) ~
Childhood Disorders/Inter

Content

Description
This course is designed to familiarize students with contemporary research and professional issues associated with the assessment and treatment of clinical disorders among children and adolescents (e.g., pediatric feeding disorders, conduct disorders, depression, anxiety, substance abuse). The target audience will include students interested in graduate training or careers that may involve clinical research, child psychology, or the implementation of evidence-based practices with children and adolescents.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 201 and PSY 313, or permission of the chair

PSY330 - Addiction: Assessment & Treatment

General

Subject Code ~
PSY

Course Number ~
330

Course Name (appears on the transcript) ~
Addiction: Assess & Treat

Content

Description
This course will provide students with the opportunity to gain an understanding of the etiology of substance abuse disorders, as well as the opportunity to learn the skills necessary to screen for, assess, and provide or refer to treatment persons with such disorders.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 101 and Junior Standing, or permission of the chair

PSY331 - Conservation Psychology

General

Subject Code ~
PSY

Course Number ~
331

Course Name (appears on the transcript) ~
Conservation Psychology

Content

Description
Conservation psychology is the scientific study of the reciprocal relationship between humans and nature. This course will immerse students in current psychological theory and research as it pertains to understanding human conservation behavior, methods to modify negative environmental behavior, and research related to understanding the human impact on nature and nature's impact on humans.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY-101 and PSY-214, or permission of the chair

PSY332 - Community Psychology

General

Subject Code ~
PSY

Course Number ~
332

Course Name (appears on the transcript) ~
Community Psychology

Content

Description
Community psychology is an applied area of psychology that studies the real-world interaction between the individual and their community. Social issues and social policy play an integral role in an individual?s health and well-being. This course emphasizes citizen participation and empowerment, social change, social justice, program evaluation and program development. Utilizing a service learning framework students will engage in a community program/project to experience the course material in action.

Credit Hours

Min
4

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 101 and Junior Standing, or permission of the chair

PSY333 - Independent Study in Psychology

General

Subject Code ~
PSY

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Psychology

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PSY334 - Independent Study in Psychology

General

Subject Code ~
PSY

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Psychology

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

PSY340 - Professional Skills in Psychology

General

Subject Code ~
PSY

Course Number ~
340

Course Name (appears on the transcript) ~
Professional Skills in Psych

Content

Description
This course provides upper-level students the opportunity to enhance knowledge and develop professional skills essential to meet the demands of graduate school and/or future careers related to Psychology and the social sciences. Students will learn and practice professional written and verbal communication techniques, application writing, interviewing, mentoring, networking and professional etiquette. The course will emphasize experiential learning through a series of faculty and student-led exercises. Each student will develop a personal professional portfolio that will be a resource for graduate school and/or career opportunities.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 201 and PSY 214 and PSY Major or Minor

PSY346 - Applied Programming I

General

Subject Code ~
PSY

Course Number ~
346

Course Name (appears on the transcript) ~
Applied Programming I

Content

Description
This course allows students to design, test, and evaluate instructional programs for the teaching of specific subject matter for remedial application to behavior problems and to test instructional theory. Supervision is provided through a weekly programming research and data seminar in collaboration with the student's advisor. Course available only to students enrolled in the cooperative program at the New England Center for Children.

Credit Hours

Min
4

Requisites

Free Form Requirements
Enrollment in the New England Center for Children (NECC) program

PSY350 - Adv Psychology Research

General

Subject Code ~
PSY

Course Number ~
350

Course Name (appears on the transcript) ~
Adv Psychology Research

Content

Description
In this course the students will further increase their knowledge and skill level of general research techniques, design, protocols and ethical procedures. The student will conduct research more independently; assist in the training and supervision of other students; and read, comprehend, and provide a synopsis of relevant research articles.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Permission of the chair

PSY351 - Adv Psychology Research II

General

Subject Code ~
PSY

Course Number ~
351

Course Name (appears on the transcript) ~
Adv Psychology Research II

Content

Description
In this course the students will further increase their knowledge and skill level of general research techniques, design, protocols and ethical procedures. The student will conduct research more independently; assist in the training and supervision of other students; and read, comprehend, and provide a synopsis of relevant research articles.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Permission of the chair

PSY352 - Adv ABA Res: Des Hlthy Env Yng Chld

General

Subject Code ~
PSY

Course Number ~
352

Course Name (appears on the transcript) ~
Des Health Env Young Child

Content

Description
This course will involve students in the implementation and evaluation of evidence-based practices as they work with local teachers in developing academically and socially significant behavior of young children in local schools, culminating in a professional poster or manuscript describing a scientifically-sound behavioral intervention.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 309 and PSY 313, or permission of the chair

PSY353 - Adv ABA Res: Des Hlthy Env Yng Chld II

General

Subject Code ~
PSY

Course Number ~
353

Course Name (appears on the transcript) ~
Des Health Env Young Child II

Content

Description
This course will involve students in the implementation and evaluation of evidence-based practices as they work with local teachers in developing academically and socially significant behavior of young children in local schools, culminating in a professional poster or manuscript describing a scientifically-sound behavioral intervention..

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 352, or permission of the chair

PSY354 - Adv ABA Res: Early Interv & Disab

General

Subject Code ~
PSY

Course Number ~
354

Course Name (appears on the transcript) ~
Adv ABA Res: Early Int/Dis

Content

Description
This course will involve students in the implementation and evaluation of evidence-based practices as they work with local teachers to solve language and literacy problems with young children in area schools, culminating in a professional poster or manuscript describing a scientifically-sound behavioral intervention.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 309 and PSY 313, or permission of the chair

PSY355 - Adv ABA Res: Early Interv & Disab II

General

Subject Code ~
PSY

Course Number ~
355

Course Name (appears on the transcript) ~
Adv ABA Res: Early Int/Dis II

Content

Description
This course will involve students in the implementation and evaluation of evidence-based practices as they work with local teachers to solve language and literacy problems with young children in area schools, culminating in a professional poster or manuscript describing a scientifically-sound behavioral intervention.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 354, or permission of the chair

PSY356 - Adv Social Psych Research

General

Subject Code ~
PSY

Course Number ~
356

Course Name (appears on the transcript) ~
Adv Social Psych Research

Content

Description
This course will further expose students to theory and research in social psychology. A significant component of this course will be exposure to and participation in all aspects of the social psychological research process, culminating in an APA style research proposal, presentation, or poster. Topics include, but are not limited to: stereotype threat, prejudice and discrimination, attribution theory, and social-cognitive models of behavior. (e.g., theory of planned behavior, health belief model, etc.)

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 214 and PSY 309, or permission of the chair

PSY358 - Adv Cognitive Psychology Research

General

Subject Code ~
PSY

Course Number ~
358

Course Name (appears on the transcript) ~
Adv Cognitive Psych Research

Content

Description
This is an advanced examination of the basic research and theories in learning, human memory and cognition and their applications to human behavior, culminating in an APA style research proposal, presentation, or poster. Topics include operant and respondent conditioning, memory, cognitive theory, conceptual behavior, and biological influences on learning, memory, and cognition. Students may not receive credit for both PSY 358 and HON 358.

Credit Hours

Min
4

Requisites

Free Form Requirements
PSY309 or permission of the chair

PSY388 - Sexuality/Sexual Assault in Society

General

Subject Code ~
PSY

Course Number ~
388

Course Name (appears on the transcript) ~
Sex/Sexual Assault in Soc

Content

Description
The first half of this course examines the complex interplay of psychological, sociocultural, and biological factors in the development and expression of sexual attitudes and behaviors. We will cover a wide variety of topics, including the major psychological theories of sexuality, the development of gender and gender identity, variations in sexual orientation, attraction processes and romantic love, sexual dysfunctions and sex therapy, and atypical sexual behaviors. The second half of this course examines sexual assault, including its incidence across a wide variety of contexts, its biopsychosocial impact, societal reactions to sexual assault including how criminal cases are handled in the justice system, and sexual violence prevention. The course will use a combination of research literature, textbook material, and popular literature to promote and discuss these topics.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PSY390 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

PSY391 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing

PSY392 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY393 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY394 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
394

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY395 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
395

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY396 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
396

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY397 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
397

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY398 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
398

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY399 - Special Topics in Psychology

General

Subject Code ~
PSY

Course Number ~
399

Course Name (appears on the transcript) ~
Special Topics in Psychology

Content

Description
Topics in psychology that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

PSY414 - Conditioning & Learning Lab

General

Subject Code ~
PSY

Course Number ~
414

Course Name (appears on the transcript) ~
Conditioning & Learning Lab

Content

Description
The basic principles of operant conditioning are demonstrated using standard operant conditioning equipment with rats covering unconditioned and conditioned reinforcement, extinction, shaping, schedules of reinforcement, discrimination training, and behavior chaining. The care and ethical treatment of laboratory animals and the extension of these principles to the behavior of organisms outside the laboratory are covered. Students will be required to prepare an APA formatted paper based on their experimental results.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 313, or permission of the chair

PSY416 - Counseling Skills

General

Subject Code ~
PSY

Course Number ~
416

Course Name (appears on the transcript) ~
Counseling Skills

Content

Description
This is a survey of personality and counseling theory and the development of counseling skills. Through the extensive use of modeling, role playing, and video playback, students learn the skills of counseling. The emphasis is on the integration of theories, skills, and practice of counseling. Students will prepare weekly reaction papers on each of the major personality theories of counseling and psychotherapy covered.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Senior Standing in Psychology, or permission of the chair

PSY418 - Behavioral Counseling Methods

General

Subject Code ~
PSY

Course Number ~
418

Course Name (appears on the transcript) ~
Behavioral Counseling Methods

Content

Description
This is a survey of current, empirically supported methods of behavioral and cognitive-behavioral counseling. The emphasis is on helping clients change their behavior. Case materials include examples from a wide range of settings and client characteristics. Students will be required to prepare an APA formatted paper based on an extensive literature review.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete PSY 313, or permission of the chair

PSY420 - History of Psychology

General

Subject Code ~
PSY

Course Number ~
420

Course Name (appears on the transcript) ~
History of Psychology

Content

Description
This capstone course is an examination of the history of psychology and personality theory that includes major philosophical and scientific influences such as Darwin, Wundt, Freud, Jung, Rogers, James, Skinner, and systems of psychology such as structuralism, functionalism, and behaviorism. The course traces philosophical concepts such as rationalism, empiricism, mechanism, dualism, and determinism. Students are required to complete an APA style review paper and take the psychology major field test.

Credit Hours

Min
3

Requisites

Free Form Requirements
Sophomore Standing in Psychology, or permission of the chair

PSY421 - Modern Theories of Psychology

General

Subject Code ~
PSY

Course Number ~
421

Course Name (appears on the transcript) ~
Modern Theories of Psychology

Content

Description
This is an examination of the development of modern behaviorism and cognitive psychology as the two dominant paradigms in modern psychology. Topics include scientific methodology, the role of scientific explanation in psychology, the study of verbal behavior and creativity, and applications of these paradigms to the development of educational, social, and cultural systems.

Credit Hours

Min
3

Requisites

Free Form Requirements
PSY 313 and Junior Psychology Standing or permission of the chair

PSY440 - Undergraduate Research

General

Subject Code ~
PSY

Course Number ~
440

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
4

Min
1

Requisites

Free Form Requirements
PSY 309 and Senior Standing, or permission of the chair

PSY441 - Undergraduate Research

General

Subject Code ~
PSY

Course Number ~
441

Course Name (appears on the transcript) ~
Undergraduate Research

Content

Description
See "Undergraduate Research" in the Catalog.

Credit Hours

Max
4

Min
1

Requisites

Free Form Requirements
PSY 309 and Senior Standing, or permission of the chair

PSY450 - Senior Psychology Research Project

General

Subject Code ~
PSY

Course Number ~
450

Course Name (appears on the transcript) ~
Sr Psychology Research Project

Content

Description
In the first semester of this course the student will prepare and present a research proposal to the Psychology faculty and students, collect data, and work on the Introduction and Methods section of their research paper. In the second semester the student will complete the data collection, present the results to the Psychology faculty and students, and complete the research paper in APA format. The student will also assist in preparing the data for publication if applicable.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 309, and permission of the chair

PSY451 - Senior Psychology Research Project

General

Subject Code ~
PSY

Course Number ~
451

Course Name (appears on the transcript) ~
Sr Psychology Research Project

Content

Description
In the first semester of this course the student will prepare and present a research proposal to the Psychology faculty and students, collect data, and work on the Introduction and Methods section of their research paper. In the second semester the student will complete the data collection, present the results to the Psychology faculty and students, and complete the research paper in APA format. The student will also assist in preparing the data for publication if applicable.

Credit Hours

Min
4

Requisites

Free Form Requirements
Complete PSY 309, and permission of the chair

PSY480 - Internship in Psychology

General

Subject Code ~
PSY

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Psychology

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PSY481 - Internship in Psychology

General

Subject Code ~
PSY

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Psychology

Content

Description
See "Internships" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

PSY501 - Principles of Behavior Analysis

General

Subject Code ~
PSY

Course Number ~
501

Course Name (appears on the transcript) ~
Princ of Behavior Analysis

Content

Description
This course will orient students to the concepts, processes, and scientific principles of behavior on which the field of applied be-havior analysis was founded. Topics of study will include the his-tory and defining features of applied behavior analysis as well as the role of basic principles in producing socially meaningful beha-vior change (positive and negative reinforcement, punishment, dis-criminative control of behavior, and motivating operations).

Credit Hours

Min
3

PSY502 - Behavioral Assessment

General

Subject Code ~
PSY

Course Number ~
502

Course Name (appears on the transcript) ~
Behavioral Assessment

Content

Description
This course will provide an introduction to key concepts, methods, and ethical considerations associated with behavioral assessment. Course objectives will include teaching students to distinguish be-tween idiographic and norm-referenced assessment approaches, to conduct pertinent behavioral assessments (preference assessments, functional assessments, and skills assessments), and to incorporate assessment outcomes with treatment selection and design in accor-dance with contemporary best practices in the field of applied be-havior analysis.

Credit Hours

Min
3

PSY503 - Behavioral Interventions

General

Subject Code ~
PSY

Course Number ~
503

Course Name (appears on the transcript) ~
Behavioral Interventions

Content

Description
This course will prepare students to identify, implement, and main-tain effective behavioral interventions in applied settings. Specific objectives will include teaching students to select and implement function-based interventions for the reduction of problem beha-viors, skills-based prevention strategies, and a variety of behavioral teaching tactics. Tactics for promoting procedural integrity and facilitating the generalization and maintenance of treatment effects will also be reviewed.

Credit Hours

Min
3

PSY504 - Autism & Related Disabilities

General

Subject Code ~
PSY

Course Number ~
504

Course Name (appears on the transcript) ~
Autism & Related Disabilities

Content

Description
The purpose of this course is to provide students with a foundation in etiological, diagnostic, ethical, and treatment-related considerations affecting services for individuals with autism and other disabilities. Topics of study will include current data on causal variables, issues in early identification, and a survey of evidence-based models of treatment, outcome evaluation, and effective systems support for individuals with pervasive developmental disabilities.

Credit Hours

Min
3

PSY505 - Methods of Evaluation

General

Subject Code ~
PSY

Course Number ~
505

Course Name (appears on the transcript) ~
Methods of Evaluation

Content

Description
This course will equip students with skills needed to confirm the clinical efficacy of interventions by subjecting them to experimen-tal evaluation using single-subject designs. Students will learn to develop valid and reliable systems for measuring behavior, to dis-play data using popular and accessible graphing software, and to assess for orderly changes in behavior through visual inspection and interpretation of graphic data.

Credit Hours

Min
3

PSY506 - Evidence-Based Teaching

General

Subject Code ~
PSY

Course Number ~
506

Course Name (appears on the transcript) ~
Evidence-Based Teaching

Content

Description
This course will provide students with a comprehensive review of empirically-supported behavioral teaching procedures for individ-uals with autism and related disabilities. Topics will focus on teaching skills in a variety of content areas such as language, social, and self-help. Procedures for teaching these include, match-to-sample discrimination training, task analysis, as well as prompting procedures including prompt fading and video modeling.

Credit Hours

Min
3

PSY507 - Theoretical Foundations

General

Subject Code ~
PSY

Course Number ~
507

Course Name (appears on the transcript) ~
Theoretical Foundations

Content

Description
This course will provide students with a comprehensive review of the theoretical foundations of radical behaviorism and the history of behaviorism in psychology. The primary focus will be to outline the fundamental underpinnings of a science of the individual. Stu-dents will be exposed to Skinner's theoretical writings, which will be compared and contrasted with contemporary conceptualizations of complex human behavior

Credit Hours

Min
3

PSY508 - Verbal Behavior

General

Subject Code ~
PSY

Course Number ~
508

Course Name (appears on the transcript) ~
Verbal Behavior

Content

Description
This course will expose students to the basis for a functional analysis of human language with an emphasis on application. Topics will include the elementary verbal operants, the ways in which verbal behavior is established, the relevance of the behavior of the listener, and the organization of verbal behavior. Focus will be placed on the use of an analysis of verbal behavior in addressing socially significant problems.

Credit Hours

Min
3

PSY509 - Ethics & Professional Issues

General

Subject Code ~
PSY

Course Number ~
509

Course Name (appears on the transcript) ~
Ethics & Professional Issues

Content

Description
This course will orient students to the ethical and professional guidelines for Board Certified Behavior Analysts. The course will review ethical guidelines for assessment, treatment, and research. Students will learn to dexcribe and apply professional and ehtical guidelines specifying the Behavior Ananlysts' responsibility to their clients, colleagues, and field and to society.

Credit Hours

Min
3

PSY510 - Thesis Research

General

Subject Code ~
PSY

Course Number ~
510

Course Name (appears on the transcript) ~
Thesis Research

Content

Description
This course will provide the structure for conducting, writing, and presenting thesis research. Students will meet individually with the thesis advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

PSY511 - Applied Behavior Analy Practicum I

General

Subject Code ~
PSY

Course Number ~
511

Course Name (appears on the transcript) ~
ABA Practicum I

Content

Description
This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst, and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min
2

PSY512 - Applied Behavior Analy Practicum II

General

Subject Code ~
PSY

Course Number ~
512

Course Name (appears on the transcript) ~
ABA Practicum II

Content

Description
This course will orient students to the ethical and professional guidelines for Board Certified Behavior Analysts. The course will review ethical guidelines for assessment, treatment, and research. Students will learn to describe and apply professional and ethical guidelines specifying the Behavior Analysts' responsibility to their clients, colleagues, and field and to society.

Credit Hours

Min
2

PSY513 - Applied Behavior Analy Practicum III

General

Subject Code ~
PSY

Course Number ~
513

Course Name (appears on the transcript) ~
ABA Practicum III

Content

Description
This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst, and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min
2

PSY514 - Applied Behavior Analy Practicum IV

General

Subject Code ~
PSY

Course Number ~
514

Course Name (appears on the transcript) ~
ABA Practicum IV

Content

Description
This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst, and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min
2

PSY515 - Personnel Management & Supervision

General

Subject Code ~
PSY

Course Number ~
515

Course Name (appears on the transcript) ~
Personnel Management/Supervis

Content

Description
This course will prepare students to conduct behavior-analytic supervision. Students will learn to establish clear performance expectations, select goals based on an assessment of the supervisee's skills, develop function-based strategies for improving performance, and design empirically supported staff training procedures. Students will learn to develop performance monitoring, feedback, and reinforcement systems and to evaluate the effects of supervision.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

PSY519 - Supervised Practicum in ABA

General

Subject Code ~
PSY

Course Number ~
519

Course Name (appears on the transcript) ~
Supervised Practicum in ABA

Content

Description
This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are im-plemented. Students will be supervised by a Board Certified Beha-vior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feed-back.

Credit Hours

Min
1

PSY520 - Supervised Practicum in ABA

General

Subject Code ~
PSY

Course Number ~
520

Course Name (appears on the transcript) ~
Supervised Practicum in ABA

Content

Description
This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are im-plemented. Students will be supervised by a Board Certified Beha-vior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feed-back.

Credit Hours

Min
1

PSY521 - Supervised Practicum in ABA

General

Subject Code ~
PSY

Course Number ~
521

Course Name (appears on the transcript) ~
Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY522 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

522

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY523 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

523

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY524 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

524

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY525 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

525

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY526 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

526

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY527 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

527

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY528 - Supervised Practicum in ABA

General

Subject Code ~

PSY

Course Number ~

528

Course Name (appears on the transcript) ~

Supervised Practicum in ABA

Content

Description

This practicum will involve at least 10 hours per week of work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are implemented. Students will be supervised by a Board Certified Behavior Analyst and supervision will consist of bi-weekly observations and weekly 1:1 or group meetings consisting of review of clinical cases, discussion of practice-related topics, and performance feedback.

Credit Hours

Min

1

PSY529 - Thesis Research Continuation

General

Subject Code ~

PSY

Course Number ~

529

Course Name (appears on the transcript) ~

Thesis Research Continuation

Content

Description

This course will provide the structure for conducting, writing, and presenting thesis research. Students will meet individually with the thesis advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings. This course is for students who have not completed the thesis requirement prior to earning 36 credits in the program.

Credit Hours

Min

1

Requisites

Free Form Requirements

Graduate Standing

PSY560 - BACB Exam Preparation

General

Subject Code ~
PSY

Course Number ~
560

Course Name (appears on the transcript) ~
BACB Exam Preparation

Content

Description
This course will review the BACB task list and knowledge areas and provide practice opportunities for the Behavior Analyst Certification Board (BACB) exam.

Credit Hours

Min
1

PSY590 - Special Topics Applied Behavior Analysis

General

Subject Code ~
PSY

Course Number ~
590

Course Name (appears on the transcript) ~
Special Topics in App Behav an

Content

Description
This seminar will conduct an in-depth review of a current topic in Applied Behavior Analysis. Topics may include but are not limited to: social development, behavioral pharmacology, ethical and professional issues, stimulus control, behavioral therapy.

Credit Hours

Min
3

PSY610 - Prof Issues, Ethics & Research Des

General

Subject Code ~
PSY

Course Number ~
610

Course Name (appears on the transcript) ~
Prof Issues, Ethics & Res

Content

Description
This course will (a) introduce students to the expectations of students within the doctoral program at Western New England College, (b) bring students into contact with the values and rules of behavior analysis and psychology through primary and secondary source writings on ethics and professional issues (e.g., submitting or reviewing original research), (c) allow students to apply these value systems to their own clinical, educational, and research endeavors via class discussion, (d) review the institutional review board processes and human subjects research guidelines, and (e) review the logic and ethical application of single-subject and traditional group designs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into PhD program

PSY620 - Experimental Analysis of Behavior

General

Subject Code ~
PSY

Course Number ~
620

Course Name (appears on the transcript) ~
Experim Analysis of Behav

Content

Description
The course will provide the student with a thorough review of the development of the experimental analysis of behavior beginning with Watson and Skinner and continuing into the present. The focus will be on understanding the development of the field in elucidating general principles of behavior (e.g., reinforcement, extinction, shaping, respondent-operant interactions, discrimination, generalization, punishment and aversive control, etc., paying particular attention to experimental and applied interactions.

Credit Hours

Min
3

PSY630 - Descriptive & Inferential Stats

General

Subject Code ~
PSY

Course Number ~
630

Course Name (appears on the transcript) ~
Descript & Inferent Stats

Content

Description
This course will focus on interpretation and application of descriptive and inferential statistical techniques required for an understanding of data presentations in psychological research. The primary focus will include: Measures of central tendency and variability, frequency distributions and graphical presentations; the normal curve, probability theory; hypothesis testing; the ttest, analysis of variance (ANOVA), multivariate analysis of variance (MANOVA), multiple regression, and correlation.

Credit Hours

Min
3

PSY640 - Quantitative Analysis of Behavior

General

Subject Code ~
PSY

Course Number ~
640

Course Name (appears on the transcript) ~
Quant Analysis of Behavior

Content

Description
The course will provide an introduction to the use of quantitative analysis in behavior analytic research and clinical practice. Topics will include statistical inference in behavior analysis; visual vs. statistical analysis; hypothesis testing, effect size, power, and non parametric tests; and quantitative models of common behavioral phenomena. (e.g., choice, matching law, molar vs. molecular analyses).

Credit Hours

Min
3

PSY650 - The Philosophy of Behavior

General

Subject Code ~
PSY

Course Number ~
650

Course Name (appears on the transcript) ~
Philosophy of Behavior

Content

Description
Behaviorism is the philosophy of the scientific approach to the study of behavior, including verbal behavior and private events. The approach holds that all behavior is a function of the interactions of ontogenic and phylogenic variables rather than hypothetical structures. This course focuses on the philosophies of methodological, radical, and cognitive behaviorism. The primary focus is on B.F. Skinner, his conceptual works, and his major critics.

Credit Hours

Min
3

PSY705 - Early Intensive Behavior Intervent

General

Subject Code ~
PSY

Course Number ~
705

Course Name (appears on the transcript) ~
Early Inten Behav Interv

Content

Description
This course will focus on current research and practice in early intensive behavioral intervention (EIBI) for autism and related disorders. Best practices and evidence-based approaches will be identified and reviewed. Attention will also be paid to effective preschool design, home-based intervention for common pediatric problems, and factors influencing successful inclusion of children with disabilities in typical classrooms.

Credit Hours

Min
3

PSY720 - Assessmt Severe Behavior Disorder

General

Subject Code ~
PSY

Course Number ~
720

Course Name (appears on the transcript) ~
Assess Severe Behav Disor

Content

Description
A brief overview of each of the three functional assessment methods currently in use will be covered (indirect or anecdotal methods, descriptive analysis, and functional analysis). After reviewing the defining characteristics, major procedural variations, strengths and weaknesses of each approach, the course will examine current research involving modifications and extensions of current functional analysis methodology and function-based interventions.

Credit Hours

Min
3

PSY735 - Organizational Behavior Management

General

Subject Code ~
PSY

Course Number ~
735

Course Name (appears on the transcript) ~
Org Behavior Management

Content

Description
This course examines individual human behavior in organizations. The objective of this course is to teach students how to analyze organizational behavior and performance improvement techniques from a behavioral perspective; as well as to learn about common Organizational Behavior Management (OBM) and Performance Management techniques to improve performance in organizations. Topics include: the history of OBM, performance appraisal, performance diagnosis (measurement and assessment), behavioral systems analysis/metacontingency analysis, feedback, goal setting, rewards, and monetary incentives, and the relationship between job satisfaction and performance.

Credit Hours

Min
3

PSY740 - Developmental Psychology

General

Subject Code ~
PSY

Course Number ~
740

Course Name (appears on the transcript) ~
Developmental Psychology

Content

Description
This course will survey the history, philosophies, and theories of typical and atypical development with particular emphasis on early-childhood through young adulthood. The role of organismic and environmental variables in the development of motor, perceptual, social, emotional, and cognitive behavior will be-examined. The relation between development and education will also be covered.

Credit Hours

Min
3

Requisites

Free Form Requirements
Acceptance into PhD program

PSY750 - Adv Verbal Behavior

General

Subject Code ~
PSY

Course Number ~
750

Course Name (appears on the transcript) ~
Adv Verbal Behavior

Content

Description
This course will review the conceptual and empirical foundations of a functional-analytic approach to human language and cognition. This approach represents the underpinnings of a scientific analysis of language. Research on the elementary verbal relations, generative language, symbolic behavior, grammar and syntax, as well as applied research on language training will be discussed.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 620

PSY770 - Teaching in College Environment

General

Subject Code ~
PSY

Course Number ~
770

Course Name (appears on the transcript) ~
Teach in College Environ

Content

Description
This course will focus on practical issues and methods for teaching in the college environment. It will focus on selection and use of teaching materials; course structure and development of instructional sequences; the role of lecture, discussion, and active participation; student evaluation and grading practices; and student motivation.

Credit Hours

Min
3

PSY780 - Brain & Behavior

General

Subject Code ~
PSY

Course Number ~
780

Course Name (appears on the transcript) ~
Brain & Behavior

Content

Description
The focus of the course is the relationship between nervous system function and behavior function. The course will cover cellular function and neurotransmission, organization of the vertebrate nervous system, the generation and organization of adaptive networks, and the neurobiology of motor systems and action generation. Emphasis is given to the neurocircuitry serving learning processes, motivation, and emotion as a point of basic research interest and as it relates to human clinical disease and dysfunction.

Credit Hours

Min
3

PSY790 - Special Topics in Behavior Analysis

General

Subject Code ~
PSY

Course Number ~
790

Course Name (appears on the transcript) ~
Special Topics in Behavior an

Content

Description
This seminar will conduct an in-depth review of a current topic in applied or experimental analysis of behavior. Topics may include: social skills and play behavior, joint attention, behavioral pharmacology, stimulus control and stimulus equivalence, relational frame theory, behavioral counseling, or behavioral medicine.

Credit Hours

Min
3

PSY801 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
801

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

PSY802 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
802

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PSY803 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
803

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

PSY804 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
804

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PSY805 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
805

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

PSY806 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
806

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

PSY807 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
807

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

PSY808 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
808

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

PSY809 - Behavior Analysis Practicum

General

Subject Code ~
PSY

Course Number ~
809

Course Name (appears on the transcript) ~
Behavior Analysis Practicum

Content

Description
This supervised practicum experience will involve at least 20 hours per week of field work in a supervised clinical practice, educational, or research setting in which procedures based on behavior-analytic principles are being implemented.

Credit Hours

Min
1

Session Cycle ~
SPO - Spring Only

PSY851 - Dissertation Research

General

Subject Code ~
PSY

Course Number ~
851

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 610

PSY852 - Dissertation Research

General

Subject Code ~
PSY

Course Number ~
852

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 610

PSY853 - Dissertation Research

General

Subject Code ~
PSY

Course Number ~
853

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 610

PSY854 - Dissertation Research

General

Subject Code ~
PSY

Course Number ~
854

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 610

PSY855 - Dissertation Research

General

Subject Code ~
PSY

Course Number ~
855

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 610

PSY856 - Dissertation Research

General

Subject Code ~
PSY

Course Number ~
856

Course Name (appears on the transcript) ~
Dissertation Research

Content

Description
This course will provide the structure for designing, conducting, writing, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete PSY 610

PSY857 - Dissertation Research Continuance

General

Subject Code ~
PSY

Course Number ~
857

Course Name (appears on the transcript) ~
Dissert Research Contin

Content

Description
This course will provide the structure for designing, conducting, sriting, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings. This course id for students who have not completed the dissertation requirement prior to earning 54 course credits in the program.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete PSY 610

PSY858 - Dissertation Research Continuance

General

Subject Code ~
PSY

Course Number ~
858

Course Name (appears on the transcript) ~
Dissert Research Contin

Content

Description
This course will provide the structure for designing, conducting, sriting, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings. This course id for students who have not completed the dissertation requirement prior to earning 54 course credits in the program.

Credit Hours

Min
1

PSY859 - Dissertation Research Continuance

General

Subject Code ~
PSY

Course Number ~
859

Course Name (appears on the transcript) ~
Dissert Research Contin

Content

Description
This course will provide the structure for designing, conducting, sriting, and presenting dissertation research. Students will meet individually with the dissertation advisor and will attend a general research meeting at least monthly. Formal presentation and discussion of the dissertation research will take place during these research meetings. This course id for students who have not completed the dissertation requirement prior to earning 54 course credits in the program.

Credit Hours

Min
1

PSY860 - Dissertation Research Continuance

General

Subject Code ~
PSY

Course Number ~
860

Course Name (appears on the transcript) ~
Dissert Research Contin

Content

Credit Hours

Min
1

PSY861 - Dissertation Research Continuance

General

Subject Code ~
PSY

Course Number ~
861

Course Name (appears on the transcript) ~
Dissert Research Contin

Content

Credit Hours

Min
1

PSY862 - Dissertation Research Continuance

General

Subject Code ~
PSY

Course Number ~
862

Course Name (appears on the transcript) ~
Dissert Research Contin

Content

Credit Hours

Min
1

QR112 - Quantitative Reasoning for Business

General

Subject Code ~
QR

Course Number ~
112

Course Name (appears on the transcript) ~
Quantitative Reason Busin

Content

Description
This course is designed to introduce students to the general principles of statistics and probability with a concentration on real world business applications. Topics include data collection methods, graphical and numerical methods for summarizing data, probability theory, random variables, discrete and continuous distributions including the normal distribution, and sampling distributions. Excel is used throughout the course.

Credit Hours

Min
3

REL101 - Spirituality & Religious Studies

General

Subject Code ~
REL

Course Number ~
101

Course Name (appears on the transcript) ~
Spirituality & Religious

Content

Description
This course begins with the question, What is religion? Is it a set of (theological) beliefs? A group of (spiritual) practices and rituals? A way of life? Does religion necessarily involve belief in God or gods? The course then goes on to compare a variety of religious traditions and to address such issues as how religion influences culture and how culture influences religion, the concepts of the divine and religious experience, the nature of spirituality, the origins of religion, and religion's psychological, sociological, political, and ethical functions. The course will not proselytize for religion or privilege one religious tradition over another. The focus may vary by instructor.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

REL290 - Special Topics in Religion

General

Subject Code ~
REL

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics Religion

Content

Description
Topics in religious studies that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

SL101 - Basic Sign Language, Level I

General

Subject Code ~
SL

Course Number ~
101

Course Name (appears on the transcript) ~
Basic Sign Lang, Level I

Content

Description
This course is an introduction to American Sign Language, introducing nonsigners to the handshape, palm orientation, location, and movement of common signs, as well as the linguistic principles of ASL.

Credit Hours

Min
3

SL203 - Intermediate Sign Lang, Level II

General

Subject Code ~
SL

Course Number ~
203

Course Name (appears on the transcript) ~
Intermed Sign Lang, Lev II

Content

Description
This course focuses on developing fluency in contemporary ASL. Offered every spring semester.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete SL 101

SL290 - Special Topics in Sign Language

General

Subject Code ~
SL

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Sign Lang

Content

Description
Topics in sign language that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Min
3

SL333 - Independent Study in Sign Language

General

Subject Code ~
SL

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study Sign Lang

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

SL334 - Independent Study in Sign Language

General

Subject Code ~
SL

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study Sign Lang

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

SL390 - Special Topics in Sign Language

General

Subject Code ~
SL

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Sign Lang

Content

Description
Topics in sign language that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

SO101 - Intro to Sociology

General

Subject Code ~
SO

Course Number ~
101

Course Name (appears on the transcript) ~
Intro to Sociology

Content

Description
This course is an overview of the three major sociological perspectives, social science research methods, and the processes of socialization. Study of social groups, organizations, and institutions of the family, education, and economy is included. Other topics include social stratification based on class, gender, race and ethnicity, deviance, and social change.

Credit Hours

Min
3

SPAN101 - Elementary Spanish I

General

Subject Code ~
SPAN

Course Number ~
101

Course Name (appears on the transcript) ~
Elementary Spanish I

Content

Description
This is an introduction to the language including basic pronunciation, simple conversation structure, and structural analysis of sentences. Class activities will focus on speaking, listening, and reading in Spanish.

Prerequisite: Since this course is an introduction to the language, it is not recommended for students with more than 3 years of high school Spanish.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

SPAN102 - Elementary Spanish II

General

Subject Code ~
SPAN

Course Number ~
102

Course Name (appears on the transcript) ~
Elementary Spanish II

Content

Description
Prerequisite: SPAN 101 or the equivalent. This is a continuation of SPAN 101 at a level of increasing complexity and with some attention to writing the language.

Approximately eight hours of laboratory work are required outside of class time.

Offered every spring.

Since the course is considered an introduction to the language, it is not recommended for students with more than 3 years of high school Spanish.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete SPAN 101 or the equivalent

SPAN130 - Spanish for Criminal Justice

General

Subject Code ~
SPAN

Course Number ~
130

Course Name (appears on the transcript) ~
Spanish: Criminal Justice

Content

Description
This is an introduction to the specialized vocabulary and basic grammatical structures needed by people working in the field of law enforcement. The course provides students with the opportunity to use their linguistic foundation to develop conversational facility in Spanish. Their conversational skills are developed through creating dialogues and presenting original skits centering on probable law enforcement situations.

Offered once a year.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Not open to students who have completed SPAN 102, or a 200 or 300-level SPAN course, or with two or more years of high school Spanish

SPAN140 - Spanish for Social Services

General

Subject Code ~
SPAN

Course Number ~
140

Course Name (appears on the transcript) ~
Spanish for Social Serv

Content

Description
The course introduces students to the specialized vocabulary and basic grammatical structures needed by people working in the field of social services. It gives students the opportunity to use their linguistic foundation to develop conversational ability in Spanish. Each lesson in the supplementary text focuses on a situation commonly encountered by social service professionals. Conversational skills are developed through realistic dialogues and original skits and conversations, which introduce the words and expressions that social service professionals need in their daily work.

Offered once a year.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

SPAN190 - Special Topics in Spanish

General

Subject Code ~
SPAN

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Spanish

Content

Description
Topics in Spanish that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

SPAN203 - Intermed Spanish I

General

Subject Code ~
SPAN

Course Number ~
203

Course Name (appears on the transcript) ~
Intermed Spanish I

Content

Description
This is a review of Spanish grammar and sentence structure with study and practice in the more complex structures of the language. Class time and activities will focus on building language skills and cultural knowledge through conversation, reading, speaking and composition.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete SPAN 102 or the equivalent

SPAN204 - Intermed Spanish II

General

Subject Code ~
SPAN

Course Number ~
204

Course Name (appears on the transcript) ~
Intermed Spanish II

Content

Description
This is a continuation of SPAN 203.

Emphasis is on advancing cultural awareness and conversational skills. Classroom activities will also center on developing the student?s oral, writing, and reading skills.

Offered every spring.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Requisites

Free Form Requirements
Complete SPAN 203 or the equivalent

SPAN290 - Special Topics in Spanish

General

Subject Code ~
SPAN

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Spanish

Content

Description
Topics in Spanish that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

SPAN305 - Adv Conversational Spanish I

General

Subject Code ~
SPAN

Course Number ~
305

Course Name (appears on the transcript) ~
Adv Conversational Spanish I

Content

Description
This course studies oral aspects of the language: colloquialisms, pronunciation, vocabulary building, and practical use of advanced Spanish. Class discussions; conversations, and presentations are used to develop cultural awareness and fluency in the spoken language.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete SPAN 204, or the equivalent

SPAN306 - Adv Conversational Spanish II

General

Subject Code ~
SPAN

Course Number ~
306

Course Name (appears on the transcript) ~
Adv Conversational Spanish II

Content

Description
This is a continuation of SPAN 305 with emphasis on cultural and societal conditions in contemporary Latin America. Offered every other year.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
OY - Odd Years

Requisites

Free Form Requirements
Complete SPAN 305 or the equivalent

SPAN325 - Goya to Almodovar: Hispanic Culture

General

Subject Code ~
SPAN

Course Number ~
325

Course Name (appears on the transcript) ~
Goya to Almodovar: Hisp Cul

Content

Description
This course will provide students with an overview of important intellectual and literary currents in the Spanish-Speaking world from the Enlightenment to the contemporary period. Throughout the course, students will analyze canonical texts in literature, art, poetry, and film in order to better understand the major debates and events that shaped Hispanic culture and society.

This course is meant for advanced students and will be taught entirely in Spanish.

Credit Hours

Min
3

Session Cycle ~
SPO - Spring Only

Yearly Cycle ~
EY - Even Years

Requisites

Free Form Requirements
Complete SPAN 204 or equivalent, or permission of the instructor

SPAN333 - Independent Study in Spanish

General

Subject Code ~
SPAN

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Spanish

Content

Description
See "Independent Study".

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

SPAN334 - Independent Study in Spanish

General

Subject Code ~
SPAN

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Spanish

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

SPAN390 - Special Topics in Spanish

General

Subject Code ~
SPAN

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Spanish

Content

Description
Topics in Spanish that are not offered on a regular basis are examined. The course may be repeated for credit if the topic varies.

Credit Hours

Max
3

Min
1

SPAN480 - Internship in Spanish

General

Subject Code ~
SPAN

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Spanish

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

SPMN190 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Sport Man

Content

Description
This course is a study of topics in sport management, but not carried in the catalog on a regular basis.

Credit Hours

Max
3

Min
1

SPMN191 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
191

Course Name (appears on the transcript) ~
Special Topics in Sport Man

Content

Description
This course is a study of topics in sport management, but not carried in the catalog on a regular basis.

Credit Hours

Max
3

Min
1

SPMN250 - Managing Sport Organizations

General

Subject Code ~
SPMN

Course Number ~
250

Course Name (appears on the transcript) ~
Managing Sport Organizations

Content

Description
The course provides an introduction to the field of sport management through an application of significant management principles to sport organizations and the role of the manager in ensuring organizational performance. Key learning outcomes focus on the understanding and recognition of the: history and development of sport management as a profession and discipline; management, legal, financial, and marketing principles; vocabulary and themes of the sport industry; concepts, issues, and management practices unique to sport industries; research skills including data collection and analysis; and sport career exploration and investigation. Offered: Fall and Spring

Credit Hours

Min
3

SPMN333 - Indep Study in Sport Management

General

Subject Code ~
SPMN

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Sport Man

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

SPMN334 - Indep Study in Sport Management

General

Subject Code ~
SPMN

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Sport Man

Content

Description
See "Independent Study" in the Catalog.

Credit Hours

Max
3

Min
1

SPMN342 - Scouting & Player Personnel Develop

General

Subject Code ~
SPMN

Course Number ~
342

Course Name (appears on the transcript) ~
Scouting & Player Pers Dev

Content

Description
This course is designed to provide students with an introduction to the techniques relating to player evaluation and assessment in amateur and professional sport. The course will focus specifically on the function of scouting and recruitment of amateur and professional athletes and will provide students hands-on experience in player personnel development with specific focus on the baseball industry segment. Students will explore important historical and contemporary economic development issues related to player development as well as contemporary issues relating to organizational design, management, and the development and integration of quantitative analysis methods. Course content will consist of lectures, readings, extensive class and group discussion, video, guest lecturers, and extensive player analysis fieldwork.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete SPMN 250

SPMN355 - Sport Facility Planning & Managemt

General

Subject Code ~
SPMN

Course Number ~
355

Course Name (appears on the transcript) ~
Sport Facility Plan & Mgt

Content

Description
The course provides an overview of sport facility planning and management. Key learning outcomes focus on understanding managerial issues related to various sport facilities including stadiums, arenas, resorts, and health and fitness clubs; sport facility planning, design, and construction; sport facility finance; project feasibility; economic impact of sport facilities and events; outsourcing of operational services; application of management principles including budgeting, promotion, public relations, security and risk management, event planning, and game operations.

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Complete SPMN 250

SPMN366 - Sport Marketing

General

Subject Code ~
SPMN

Course Number ~
366

Course Name (appears on the transcript) ~
Sport Marketing

Content

Description
This course compares and applies concepts of mainstream marketing to the sport industries and examines the marketing of sport products and the marketing of mainstream products through sport. Key learning outcomes include the understanding and use of the historical foundations of sport marketing; the application of marketing principles to the specific organizational environments of collegiate and professional sport, special events, sporting goods, and licensed product manufacturing; and facility management. Offered: Fall and Spring

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete MK-200 or HONB-200, and SPMN 250;

SPMN378 - Sport Analytics

General

Subject Code ~
SPMN

Course Number ~
378

Course Name (appears on the transcript) ~
Sport Analytics

Content

Description
As more and more successful sport organizations rely heavily on data-driven decision-making using sport analytics, students in this course will have an opportunity to develop a skill-set that can provide them with a noticeable competitive advantage in the marketplace. This course was specifically designed for students majoring in sport management or other majors seeking employment in a sport-related career.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete SPMN 250 and BAIM 221

SPMN380 - Golf Industry & Golf Management

General

Subject Code ~
SPMN

Course Number ~
380

Course Name (appears on the transcript) ~
Golf Industry & Golf Mgmt

Content

Description
This course is designed to introduce students to the business of the golf industry. Student will explore all aspects of golf operations including management of tournaments, leagues, food service, pro shop, membership programs and the golf course itself. Golf industry specific business applications including marketing strategies, revenue development, customer service, organizational structure and governance, human resource management and environmental impact and sustainability will be examined. Current issues in golf management including trend analysis and technological applications will be discussed. Students will also learn about employment requirements and opportunities in the golf business.

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior Standing

SPMN390 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Sport Man

Content

Description
This course is a study of advanced topics in sport management, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

SPMN391 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Sport Man

Content

Description
This course is a study of advanced topics in sport management, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

SPMN392 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Sport Man

Content

Description
This course is a study of advanced topics in sport management, but not carried in the catalog on a regular basis.

Credit Hours

Min
3

SPMN393 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
393

Course Name (appears on the transcript) ~
Special Topics in Sport Man

Content

Description
This course is a study of advanced topics in sport management, but not carried in the catalog on a regular basis.

Credit Hours

Min
2

Session Cycle ~
SPO - Spring Only

SPMN420 - International Sport Management

General

Subject Code ~
SPMN

Course Number ~
420

Course Name (appears on the transcript) ~
International Sport Management

Content

Description
This course provides students with an in depth look at the diverse and expanding professional practice of sport management in an international context. Students will explore international sport from historical, cultural, political, and business perspectives. Emphasis is given to an examination of the Olympic movement as well as to the globalization of professional sport. Current issues related to the management of international sport organizations are examined. Opportunities for employment in international sport organizations are also identified.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete SPMN 250, or permission of instructor

SPMN450 - Man Collegiate/Scholastic Ath Prog

General

Subject Code ~
SPMN

Course Number ~
450

Course Name (appears on the transcript) ~
Man. Collegiate/Scholastic Ath

Content

Description
The course examines contemporary issues in sport management. Key learning outcomes focus on understanding and problem solving applications associated with revenue development models across a variety of sport business life-cycle events; environmental forces shaping policy-making within sport organizations; ownership models and issues; sport governing bodies and regulatory agencies; maximization of sport organization revenue streams; budget analysis; human resource development practices in sport organizations including CORI/SORI checks, salary caps, player development, and volunteer training.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete SPMN 250 or permission of the instructor

SPMN460 - Adv Field Experience-Sport Mgt

General

Subject Code ~
SPMN

Course Number ~
460

Course Name (appears on the transcript) ~
Adv Field Exper-Sport Mgt

Content

Description
The goal of this course is to provide students with the opportunity to gain extensive hands-on experience in a sport organization. Students are placed in a sport business environment and their work experience is communicated to a faculty sponsor via faculty-student meetings, on-site visits, written assignments, oral presentations, final project, and formal AFE defense. Only students who have demonstrated academic excellence, a high degree of commitment to a career in the sport industry, and the necessary motivation, leadership and managerial skills to undertake the AFE course are eligible for enrollment. The AFE is a six-credit course designed to primarily be taken in the senior year. Concurrent enrollment in SPMN 460 and SPMN 461 is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
3.0 overall GPA, instructor permission, and two faculty endorsements
Concurrent enrollment in SPMN 460 and SPMN 461 is required

SPMN461 - Adv Field Experience-Sport Mgt

General

Subject Code ~
SPMN

Course Number ~
461

Course Name (appears on the transcript) ~
Adv Field Exper-Sport Mgt

Content

Description
The goal of this course is to provide students with the opportunity to gain extensive hands-on experience in a sport organization. Students are placed in a sport business environment and their work experience is communicated to a faculty sponsor via faculty-student meetings, on-site visits, written assignments, oral presentations, final project, and formal AFE defense. Only students who have demonstrated academic excellence, a high degree of commitment to a career in the sport industry, and the necessary motivation, leadership and managerial skills to undertake the AFE course are eligible for enrollment. The AFE is a six-credit course designed to primarily be taken in the senior year. Concurrent enrollment in SPMN 460 and SPMN 461 is required.

Credit Hours

Min
3

Requisites

Free Form Requirements
3.0 overall GPA, instructor permission, and two faculty endorsements
Concurrent enrollment in SPMN 460 and SPMN 461 is required

SPMN465 - Seminar in Sport Management

General

Subject Code ~
SPMN

Course Number ~
465

Course Name (appears on the transcript) ~
Sem in Sport Management

Content

Description
This course examines contemporary issues in sport management. Key learning outcomes focus on understanding and problem solving applications associated with revenue development models across a variety of sport business life-cycle events; environmental forces shaping policy-making within sport organizations; ownership models and issues; sport governing bodies and regulatory agencies; maximization of sport organization revenue streams; budget analysis; human resource development practices in sport organizations including CORI/SORI checks, salary caps, player development, and volunteer training. Offered: Fall and Spring.

Credit Hours

Min
3

Requisites

Free Form Requirements
Senior Sport Management majors only

SPMN480 - Internship in Sport Management

General

Subject Code ~
SPMN

Course Number ~
480

Course Name (appears on the transcript) ~
Internship in Sport Management

Content

Description
See "Internships".

Credit Hours

Max
3

Min
3

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

SPMN481 - Internship in Sport Management

General

Subject Code ~
SPMN

Course Number ~
481

Course Name (appears on the transcript) ~
Internship in Sport Management

Content

Credit Hours

Max
3

Min
1

Requisites

Free Form Requirements
At least 60 credit hours and have a minimum GPA of 2.5 overall and in the major, except where an internship is required in the major, or obtain special permission of their dean to undertake an internship

SPMN631 - Sport Leadership/Maximizing Team

General

Subject Code ~
SPMN

Course Number ~
631

Course Name (appears on the transcript) ~
Sport Leadership/Max Team

Content

Description
This course provides an opportunity to examine leadership issues from multiple perspectives: sport, historical, sociological, psychological, and business management. Readings from these domains supply material to assess a range of leadership qualities and abilities. Students take the Klein Group Instrument for Effective Leadership and Participation in Teams (KGI) and the Myers-Briggs Type Indicator (MBTI) to help them determine their own leadership styles and to guide them in refining their skills during the semester. Participants are assigned to a specific small group to perform an array of activities that serve as a context for personal skill building. They learn to analyze a variety of leadership functions and develop a reflective practice that enables them to continue to perfect their leadership skills in the future. Students also learn how to utilize the two assessments to train others in leadership and group skills. They learn a system of coaching and training techniques that will nurture leadership development in sport contexts. Students will be assessed based on several papers related to KGI/MBTI skill building, tests on key concepts, short reaction papers, and participation in small-group presentations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing
Residency Required

SPMN632 - Sport Analytics & Data Dec Making

General

Subject Code ~
SPMN

Course Number ~
632

Course Name (appears on the transcript) ~
Sport Analytics/Data Dec

Content

Description
Analytics are the present and future of sports, on and off the field. The sports industry is an analytics pioneer and data driven decision-making has become essential to successful sport business and team operation. This course focuses on developing and designing analytics strategy for both team personnel and sport business administration components of the sport organization. Students will learn about the application of analytics in sports for purposes of in-game strategy, player performance, team management, sports business planning, problem-solving and decision-making. The class will emphasize the value and role of analytics in leading the sport organization and best practices of data development, management and manipulation. Implementation of analytics programs across the organization will be explored as well as the role of analytics in effective sport leadership and organization management.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

SPMN633 - Compliance/Governance of Sport Org

General

Subject Code ~
SPMN

Course Number ~
633

Course Name (appears on the transcript) ~
Compliance/Gov Sport Org

Content

Description
This course will examine the various sport governing and regulatory agencies that influence the sport organizations. The course will focus on identifying and examining laws, rules and regulations of each sport?s governing body as well as current issues and future trends for each governing agency. Governance of intercollegiate and scholastic athletics and professional sport, including legislation and bylaws associated with the NCAA, governing bodies and Commissioner?s Office will be emphasized. The course will also examine the compliance function within the sport organization. The connection between external and internal governance and policy will be examined within the context of organizational leadership and operations.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

SPMN634 - Sport Agency, Player Personnel Eval

General

Subject Code ~
SPMN

Course Number ~
634

Course Name (appears on the transcript) ~
Sport Agency, Player Eval

Content

Description
This course is designed to provide students with techniques related to player evaluation and amateur and professional sport. The course will focus specifically on the scouting and recruitment of amateur and professional athletes grounded in both qualitative and quantitative methods including basic observational, sport science, and analytics metrics. Students will gain hands-on experience in player evaluation while examining important historical and economic issues related to player recruitment and evaluation. Contemporary issues in scouting, organizational design, team construction, athlete representation and agency will be covered. Students will also examine important issues in sport labor relations, collective bargaining agreements, NCAA regulations, and player agreements and contracts.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

SPMN635 - Resource Dev for Sport/Athletic Org

General

Subject Code ~
SPMN

Course Number ~
635

Course Name (appears on the transcript) ~
Res Dev for Sport/Ath Org

Content

Description
This course will explore theoretical and practical models of revenue development for the sport organization. Strategies for the creation and management of a successful athletic development program will be examined. Revenue development has become a critical competency for sport organization leaders and program managers. The course will also identify and examine opportunities for developing revenue for the sport organization ranging from broadcast rights, corporate partnership, licensing and merchandise programs. Topics will include strategies and programs critical to athletic development including annual giving, booster clubs, donor communications, event fund raising, stakeholder relations, and revenue program control and evaluation.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing
Residency Required

SPMN681 - Sport Focus Prof Issues & Res Proj

General

Subject Code ~
SPMN

Course Number ~
681

Course Name (appears on the transcript) ~
Sport Focus Prof Issues

Content

Description
This course introduces students to the sport research process. The course provides students with a framework for conducting research within the sport organization while reviewing based constructs such as techniques and tools for applied research such as sampling, research design, data collection, and analysis. As part of the course, students will engage in a research project linked specifically to a focused professional issue faced by the sport organization where they are completing their mentored field experience.

(This course is to be taken concurrently with SPMN 682)

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

SPMN682 - Coaching/Athletic Admin Mentor Fld

General

Subject Code ~
SPMN

Course Number ~
682

Course Name (appears on the transcript) ~
Coach/Athletic Adm Mentor

Content

Description
This course is designed to provide students with the opportunity to apply theories and best practices in sport organization leadership introduced in the curriculum to a professional setting. The student is expected to engage in significant managerial and or operational activities where the effective leadership of a team is required. The student will be partnered with a faculty mentor who will work closely with the student and the field experience site supervisor to develop functional organizational skills while implementing their own personal leadership development plan.

(This course is to be taken concurrently with SPMN 681)

Credit Hours

Min
3

Session Cycle ~
FLO - Fall Only

Requisites

Free Form Requirements
Graduate Standing and SPMN 631

SPMN690 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
690

Course Name (appears on the transcript) ~
Special Topics in Sport Mgmt

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

Requisites

Free Form Requirements
Graduate Standing

SPMN691 - Special Topics in Sport Management

General

Subject Code ~
SPMN

Course Number ~
691

Course Name (appears on the transcript) ~
Special Topics in Sport Mgmt

Content

Description
Topics offered depend upon student interests as well as particular interest of instructors. The course is offered as often as faculty time and student interest permit. May be repeated for credit if topic differs.

Credit Hours

Min
3

STAB450 - Study Abroad I

General

Subject Code ~
STAB

Course Number ~
450

Course Name (appears on the transcript) ~
Study Abroad I

Content

Credit Hours

Min
6

STAB451 - Study Abroad II

General

Subject Code ~
STAB

Course Number ~
451

Course Name (appears on the transcript) ~
Study Abroad II

Content

Credit Hours

Min
6

THTR101 - Acting I

General

Subject Code ~
THTR

Course Number ~
101

Course Name (appears on the transcript) ~
Acting I

Content

Description
Learn the fundamental techniques of the craft of acting through theatre exercises, presentations, and scene work from popular Broadway and Off-Broadway Plays.

Credit Hours

Min
3

THTR110 - Introduction to Theatre

General

Subject Code ~
THTR

Course Number ~
110

Course Name (appears on the transcript) ~
Introduction to Theatre

Content

Description
Students will explore theatre as a collaborative art through lecture and participation. The disciplines of acting, directing, playwriting, design, and criticism will be surveyed through the backdrop of popular American theatre. Students will attend and review play productions on and off campus, view live theatre on video, view films based on popular plays read in class, and participate in a group generated performance project.

Credit Hours

Min
3

THTR152 - Stageless Players

General

Subject Code ~
THTR

Course Number ~
152

Course Name (appears on the transcript) ~
Stageless Players

Content

Description
Students participate in the theatre productions of the Stageless Players. May be taken more than once. (151 is Fall and 152 is Spring.)

Credit Hours

Min
1

THTR153 - Stageless Players

General

Subject Code ~
THTR

Course Number ~
153

Course Name (appears on the transcript) ~
Stageless Players

Content

Description
Students participate in the theatre productions of the Stageless Players. May be taken more than once.

Credit Hours

Min
1

THTR154 - Stageless Players

General

Subject Code ~
THTR

Course Number ~
154

Course Name (appears on the transcript) ~
Stageless Players

Content

Description
Students participate in the theatre productions of the Stageless Players. May be taken more than once. (151 is Fall and 152 is Spring.)

Credit Hours

Min
1

THTR155 - Stageless Players

General

Subject Code ~
THTR

Course Number ~
155

Course Name (appears on the transcript) ~
Stageless Players

Content

Description
Students participate in the theatre productions of the Stageless Players. May be taken more than once.

Credit Hours

Min
1

THTR156 - Stageless Players

General

Subject Code ~
THTR

Course Number ~
156

Course Name (appears on the transcript) ~
Stageless Players

Content

Description
Students participate in the theatre productions of the Stageless Players. May be taken more than once. (151 is Fall and 152 is Spring.)

Credit Hours

Min
1

THTR160 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
160

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR161 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
161

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR162 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
162

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR163 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
163

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR164 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
164

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR165 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
165

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR167 - Improv on the Rocks

General

Subject Code ~
THTR

Course Number ~
167

Course Name (appears on the transcript) ~
Improv on the Rocks

Content

Description
Students performing with Improv on the Rocks must rehearse two evenings a week, perform in a minimum of four shows throughout the semester, and If during the spring term, compete in ImprovBoston's Regional Improv Troupe Tournament. A Final Paper at the end of the semester discusses the experience of performance and how the techniques from Improv Comedy Class, and the additional readings, were used in each performance.

Credit Hours

Min
1

Requisites

Free Form Requirements
Complete THTR-220, and permission of the instructor

THTR190 - Special Topics in Theater

General

Subject Code ~
THTR

Course Number ~
190

Course Name (appears on the transcript) ~
Special Topics in Theater

Content

Description
Topics in theatre that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Min
3

THTR201 - Acting II

General

Subject Code ~
THTR

Course Number ~
201

Course Name (appears on the transcript) ~
Acting II

Content

Description
This course will explore the acting techniques of Stanislavski through monologue and scenework from the great playwrights of Realism.

Credit Hours

Min
3

Requisites

Free Form Requirements
Complete THTR-101, or permission of instructor

THTR220 - Improvisational Comedy I

General

Subject Code ~
THTR

Course Number ~
220

Course Name (appears on the transcript) ~
Improvisational Comedy I

Content

Description
This course is an intensive introduction to the art and performance of short form improvisation. This course is designed to teach the fundamentals of short form improvisation, which include game playing, scene work, ensemble, and performance. In addition, students will learn the art of creating sketch comedy through journaling, observation, improvisation, and performance. The methods of Viola Spolin and the Players Workshop of Chicago, The Second City of Chicago, Keith Johnstone, and Theatre Sports will be used. The creation and presentation of four public improvisational comedy performances is the backbone of the course. The success of the class is dependent on the creation of an ensemble of players who are committed to the other as being the most important person on stage. The ensemble is more important than the individual in improvisation.

Credit Hours

Min
3

THTR221 - Improvisational Comedy II

General

Subject Code ~
THTR

Course Number ~
221

Course Name (appears on the transcript) ~
Improvisational Comedy II

Content

Description
This course is an intensive introduction to the art and performance of long form improvisation. Long form is at least 10 minutes in length and consists of a number of short scenes edited by the performers onstage... The individual parts of long form should be related in some fashion (Libera, The Second City Almanac of Improvisation). This course is designed to teach the fundamentals of improv scene work, game playing in scenes, basic rules of improv, several long form structures, group mind in an ensemble, and performance of the taught structures. The methods of I.O. (Formerly Improv Olympic), Viola Spolin, The Second City of Chicago, and Keith Johnstone will be used.

Satisfies the aesthetic perspective of the GUR.

Credit Hours

Min
3

Requisites

Free Form Requirements
THTR 101 or 220, or permission of instructor

THTR230 - Playwriting

General

Subject Code ~
THTR

Course Number ~
230

Course Name (appears on the transcript) ~
Playwriting

Content

Description
Playwriting is a participatory, workshop style class. Students will become equipped with the basic literary and dramatic skills to write a 10 minute play. The 10 minute play is a hot commodity for playwrights, and is an easy way to have their work seen, read by peers, and most importantly, brought to the stage. Students will work toward having a staged reading of their final piece by the end of the semester, as well as prepare their plays to be sent to competitions and festivals.

Satisfies the Aesthetics Perspective of the GUR and the Arts & Sciences writing intensive course requirement.

Credit Hours

Min
3

Requisites

Free Form Requirements
Prerequisite: Sophomore standing and "C-" or better in ENGL 133, or permission of English Chair

THTR290 - Special Topics in Theatre

General

Subject Code ~
THTR

Course Number ~
290

Course Name (appears on the transcript) ~
Special Topics in Theatre

Content

Description
Topics in theatre that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Min
3

THTR291 - Special Topics in Theater

General

Subject Code ~
THTR

Course Number ~
291

Course Name (appears on the transcript) ~
Special Topics in Theater

Content

Description
Topics in theatre that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Min
3

THTR333 - Independent Study in Theater

General

Subject Code ~
THTR

Course Number ~
333

Course Name (appears on the transcript) ~
Indep Study in Theater

Content

Description
See "Independent Study".

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

THTR334 - Independent Study in Theater

General

Subject Code ~
THTR

Course Number ~
334

Course Name (appears on the transcript) ~
Indep Study in Theater

Content

Credit Hours

Min
3

Requisites

Free Form Requirements
Junior or Senior Standing plus a minimum grade point average of 3.0 overall or in the major field

THTR390 - Special Topics in Theater

General

Subject Code ~
THTR

Course Number ~
390

Course Name (appears on the transcript) ~
Special Topics in Theater

Content

Description
Topics in theatre that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Min
3

THTR391 - Special Topics in Theater

General

Subject Code ~
THTR

Course Number ~
391

Course Name (appears on the transcript) ~
Special Topics in Theater

Content

Description
Topics in theatre that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Min
3

THTR392 - Special Topics in Theater

General

Subject Code ~
THTR

Course Number ~
392

Course Name (appears on the transcript) ~
Special Topics in Theater

Content

Description
Topics in theatre that are not offered on a regular basis are examined. This course may be repeated for credit if the topic varies.

Credit Hours

Min
3