Master of Science in Medical Sciences

Overview

A 30 credit MS in Medical Sciences degree ("MSMS" program) is being offered by the Department of Pharmaceutical and Administrative Sciences in the College of Pharmacy and Health Sciences. This program can be completed in as few as two full-time semesters (fall, spring). With an MSMS program from WNE University, a graduate will be ready to make the most of emerging opportunities in various medical/health care fields through a well-rounded program that aligns with one's personal career goals. The MSMS is designed to assist students who would like to enhance their academic credentials for entry into medical, dental, veterinarian, pharmacy, nursing or other professional healthcare programs, and could open opportunities in clinical work, research positions, or public health or administrative careers. Students have the ability to customize their MS degree through their selection of the available elective courses.

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 health care fields, including knowledge of basic cell biology, biochemistry, genetics, and other biological systems.
2. To demonstrate an in-depth and integrated knowledge of the processes underlying normal and abnormal function in the human body in preparation for advanced studies in a healthcare field, comprehending and having a thorough understanding of critical subjects, such as pathophysiology, pharmacology, biostatistics and medical genetics.
3. Demonstrate the ability to work as part of a team to integrate and apply concepts in the medical sciences and draw linkages between structure and function at the level of molecules, cells, organs and systems.
4. To achieve proficiency in the ability to critically read and analyze the scientific literature, propose and test a hypothesis and communicate findings clearly, incorporating them into the existing body of knowledge.
5. To develop proficiency in oral and written communication related to dissemination of health care concepts and interprofessional collaboration.

MSMS Admissions Requirements

Applications to the MSMS program must be submitted via PharmGrad.org or the Western New England University free application.

Application Requirements:

- Bachelor's degree: A bachelor's degree from a regionally accredited college or university.

- Preferred Bachelor's degree majors: Biochemistry, Biology, Biotechnology, Chemistry, Dental Surgery, Health Sciences, Health Studies, Medical Engineering, Medicine, Medical Lab Technology, Microbiology, Pharmaceutical Sciences, Pharmacy, Physiotherapy, Surgery, or Veterinary Science & Animal Husbandry

- Preferred minimum GPA: Undergraduate GPA of 3.00 or foreign equivalent is preferred.
- Transcripts: Transcripts from all colleges attended must be submitted.

- Recommendations: A minimum of two recommendations must be submitted within your application; one recommendation must be from a professor.

- A current résumé or CV must be submitted.

- 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

- List of 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 United Kingdom.
- Qualified candidates may be invited to participate in an interview and complete a writing sample.

Total Credit Hours: 30

Degree Requirements

A total of 30 credits is required for graduation.

Core Course Requirements - 18 credits

Requirements - 18 crs

- Principles of Pharmacology (3 credits)
- Data Analysis & Biostatistics (3 credits)
- Responsible Conduct of Research (3 credits)
- Pathophysiology (3 credits)
- Basic Principles Genetics & Genomics (2 credits)
- Advanced Genetics & Genomics (1 credit)
- Advanced Pharmacology & Drug Action (3 credits)

Subtotal: 18

Electives - 12 crs

- Electives selected based on personal goals and consultation with faculty advisor.

Subtotal: 12

Course Sequence

First Year - Fall Semester

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	Electives	6 cr.

Subtotal: 15

First Year - Spring Semester

PHAR 522	Pathophysiology	3 cr.
PHAR 523 w/ PHRSC 552	Basic Prin. Genetics & Genomics w/ Adv. Genetics & Genomics	2+1= 3 cr.
PHRSC 532	Adv Pharmacology & Drug Action	3 cr.
PHAR/PHRSC XXX	Electives	6 cr.

Subtotal: 15

Subtotal: 30
Total Credit Hours: 30

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.

Elective Course Possibilities

Potential Fall Semester Electives include, but are not limited to:

PHAR 510 - Intro to Pharmacy and Health Professions	1 cr
PHAR 511 – Drug Information and Informatics	2 cr
PHAR 512 – Immunology	3 cr
PHAR 513 – Biochemistry	3 cr
PHAR 516 – Pharmacy Ethics	3 cr
PHAR 517 – Health Care Policy & Delivery	2 cr
PHRSC 551 – Intro Genetics & Genetic Counseling	3 cr
PHAR 610 – Principles of Pharmacokinetics	4 cr
PHAR 612 – Principles of Medicinal Chemistry	3 cr
PHAR 616 – Practice Management I	2 cr

Potential Spring Semester Electives include, but are not limited to:

PHAR 520 – Health Care Communications	3 cr
PHAR 526 – Pharmacy Outcomes	2 cr
PHAR 527 – Self Care Therapeutics	3 cr
PHAR 528 - Intro to Pharmacy and Health Professions	1 cr
PHRSC 553 – Genetic Data Analysis & Bioinformatics	3 cr
PHAR 626 – Practice Management II	2 cr
PHAR 628 - Literature Evaluation/ Evidence Based Practice	3 cr
PHAR 656 – Drug Design & Delivery	3 cr
PHAR 658 - Introduction to Public Health	3 cr
PHAR 664 – Cosmeceuticals	3 cr
PHAR 756 – CVS Electrophysiology: Bench-Bedside	3 cr