

Strategic Directions

2023-2028

WESTERN NEW ENGLAND UNIVERSITY | **WNE**

College of **Engineering**



Strategic Directions 2023-2028

PREAMBLE

The strategic plan outlines the mission and vision of the College of Engineering and presents four goals that will direct the course of action of the College of Engineering for the time period from 2023 to 2028. Outlined within each of the goals are strategies, followed by a list of actions that support achievement of the respective goal.

The plan complements the *Western New England University Strategic Direction (One University, One Vision)* which can be found on the University [website](#). The University strategic direction outlines the mission and vision of the institution and identifies five strategic themes. Outlined within each of the themes are initiatives and, in many cases, strategies for implementation. Implementation of the COE Strategic Plan, including its underlying goals, strategies, and actions, will be carried out by the departments and administration of the college. The College of Engineering strategic plan also reflects our core values as stated below.

College of Engineering Core Values

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

Student-Centered and Active Learning

Promoting a student-centered and active learning environment to ensure the success of our students

Innovation and Discovery

Contributing to the research, development, dissemination, and application of innovative engineering knowledge, integrating theory and practice

Responsibility, Ethics, and Professionalism

Demonstrating integrity, ethics, and professionalism in all of our activities.

Teamwork and Leadership

Providing pedagogy and opportunities for the development of teaming and leadership skills.

Community

Being an active and collaborative contributor to Western New England University and the local, national, and global community.

Diversity, Equity, and Inclusion

Cultivating an inclusive and equitable learning environment that celebrates diversity in all forms

Continuous Improvement

Demonstrating successful continuous improvement processes of our College and its programs.

College of Engineering Mission, Vision, and Goals

Mission - We will provide our students with an excellent, well-rounded education, tailored to the dynamic and challenging demands of the engineering profession, in an atmosphere of individual attention and support.

Vision - Our graduates will be recognized for leadership excellence in solving complex societal/global problems. We will strive for global recognition by providing an innovative engineering education that promotes entrepreneurial thinking, preparing our graduates for life-long success.

GOAL 1: Prepare students for the future of work

Strategy 1.1: Cultivate a world-class learning environment

Actions:

- 1.1.1 Encourage faculty to develop and implement innovative pedagogical techniques by providing access to training, workshops, and virtual materials.
- 1.1.2 Provide state-of-the-art classroom spaces and technologies that encourage the application of innovative pedagogical techniques.
- 1.1.3 Provide students and faculty access to cutting-edge instructional technologies and software that provide flexibility to work both on campus and remotely.
- 1.1.4 Encourage faculty stay up to date with the latest advances in their technical field(s)

Strategy 1.2: Promote experiential, entrepreneurially minded, multi-disciplinary education across all levels of our programs

Actions:

- 1.2.1 Establish a multidisciplinary maker space that is accessible to all University students, faculty, & staff
- 1.2.2 Build on existing faculty expertise in entrepreneurially minded learning (EML) to become nationally recognized thought leaders in this space
- 1.2.3 Encourage joint projects across disciplines throughout the engineering curriculum, including senior projects
- 1.2.4 Continually enhance the first-year engineering experience to instill design and innovation from day one
- 1.2.5 Enhance the COE's focus on experiential learning through curricular and extracurricular activities

Strategy 1. 3: Provide students with opportunities to engage with industry

Actions:

- 1.3.1 Leverage College of Engineering faculty industrial connections to help our students engage with industry
- 1.3.2 Leverage alumni connections to help our students find internships and full-time employment opportunities
- 1.3.3 Establish a formal internship program with industry partners
- 1.3.4 Encourage course work that further provides students opportunities for industry engagement

Strategy 1. 4: Enhance and expand curricula

Actions:

- 1.4.1 Develop curricula that meet the dynamic demands of the various engineering fields
- 1.4.2 Benchmark, evaluate and ensure that our degree programs meet contemporary engineering needs
- 1.4.3 Expand undergraduate research opportunities

GOAL 2: Be a center for innovation and discovery

Strategy 2.1: Promote an environment that fosters excellence in engineering education and research

Actions:

- 2.1.1 Develop a network of researchers across college and campus disciplines to facilitate collaborative activities and proposals.
- 2.1.2 Encourage and support interdisciplinary collaborations within the university and with other institutions.
- 2.1.3 Optimize utilization of existing COE space and facilities for innovative instruction and research
- 2.1.4 Maintain and expand the necessary space and facilities, including instructional IT, for innovative research and instruction in the College of Engineering
- 2.1.5 Pursue funding to support research opportunities for graduate student
- 2.1.6 Develop a common, equitable faculty workload model that allows faculty to balance research, teaching and service
- 2.1.7 Foster faculty retention by offering mentoring, career development opportunities, and competitive compensation

Strategy 2.2: Increase research productivity of the College of Engineering

Actions:

- 2.2.1 Encourage and support faculty to develop sustainable and student-centered research programs that are appropriately supported by staff
- 2.2.2 Develop and/or grow graduate programs in the college in a sustainable manner
- 2.2.3 Increase the number of peer-reviewed publications associated with engineering education and technical research
- 2.2.4 Actively promote and support an increase in the number of external grants written by engineering faculty in support of the mission of the college

GOAL 3: Enhance our brand

Strategy 3.1: Improve Recognition of the College

Actions:

- 3.1.1 Enhance our brand recognition as a leader in student-centered engineering education at a small, private comprehensive university
- 3.1.2 Encourage and support student activities that promote recognition of the college
 - 3.1.2.1 Increase student participation at regional and national conferences
 - 3.1.2.2 Increase student participation in engineering competitions
- 3.1.3 Empower faculty to strive for prominence in their fields
 - 3.1.3.1 Encourage and support faculty to assume leadership roles in engineering societies
 - 3.1.3.2 Encourage professional service at the national level such as reviewing papers, serving as reviewers for funding agencies, ABET PEV etc.
 - 3.1.3.3 Nominate faculty for awards and fellowships at the national level
- 3.1.4 Host regional and national conferences and competitions related to engineering education, technical research, and STEM outreach (e.g., FIRST ROBOTICS)

Strategy 3. 2: Recruit and retain high caliber students

Actions:

- 3.2.1 Explore additional mechanisms to provide financial support, including scholarships, for students with excellent academic credentials
- 3.2.2 Promote the College of Engineering's Honors program
- 3.2.3 Increase diversity in student population
- 3.2.4 Explore summer program opportunities for high school and community college students and instructors
- 3.2.5 Expand the pool of transfer students and strengthen efforts to recruit transfer students
- 3.2.6 Improve retention rate of our students
- 3.2.7 Establish a sustainable growth plan for the college that balances the student population size and diversity with available human and physical resources

Strategy 3.3: Develop a plan to improve international recognition

Actions:

- 3.3.1 Enhance marketing materials that include cultural and language-specific advertising and utilize new media to promote global recognition of the College of Engineering's accomplishments
- 3.3.2 Work with the administration to establish infrastructure in support of international programs

Strategy 3.4: Create programs in support of international collaborations

Actions:

- 3.4.1 Promote a culture that embraces diversity
- 3.4.2 Promote the recruitment of students from abroad
- 3.4.3 Encourage faculty to write joint international research/educational proposals.
- 3.4.4 Promote international internships and research
- 3.4.5 Participate in international engineering competitions
- 3.4.6 Encourage semester-long visiting professorships from faculty of reputable international universities.
- 3.4.7 Support the growth of international visiting scholars' program

Strategy 3.5: Cultivate and promote international student/faculty exchange programs

Actions:

- 3.5.1 Establish formal relationships with international institutions
- 3.5.2 Expand engineering study abroad programs.
- 3.5.3 Expand joint degree programs with international institutions
- 3.5.4 Encourage and support faculty to offer for-credit courses internationally
- 3.5.5 Support faculty efforts in developing courses with global perspectives including those requiring field work in developing countries

Goal 4: Cultivate an active partnership with our stakeholders

Strategy 4.1: Strengthen and expand mutually beneficial partnerships with our constituents

Actions:

- 4.1.1 Seek and promote collaboration for applied research with local and national industry to pursue mutually beneficial goals that enhance our graduates' educational experience
- 4.1.2 Provide continued technical educational opportunities in areas of interest to external constituents
- 4.1.3 Strive to serve as the engineering resource for the Western Massachusetts community
- 4.1.4 Work with our constituents to support student recruitment and retention

Strategy 4.2: Enhance and foster partnership with College of Engineering alumni to provide leadership and resources for the intellectual and economic development of COE

Actions:

- 4.2.1 Work with alumni, seek career advice, mentoring, placements, internships and jobs for current students
- 4.2.2 Work with the development office to engage alumni for annual fund raising activities, for new College of Engineering initiatives, and sponsoring research projects for faculty and students

Strategy 4.3: Increase engineering knowledge transfer to and from industry & graduate programs

Actions:

- 4.3.1 Develop partnerships with local, regional, national, and international industries
- 4.3.2 Establish centers of excellence to support collaboration within and outside of the college of engineering
- 4.3.3 Work with the administration to generate needed support for technology transfer