

College of Engineering

Website (<http://www.coe.neu.edu>)

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The mission of the College of Engineering is to provide a teaching, learning, and research environment that results in the highest-quality education for our students. Consistent with this goal, while providing a practice-oriented, experiential, and interdisciplinary program, the College of Engineering seeks to prepare students to contribute to the accumulation and application of technical knowledge. The college further seeks to help students master the fundamental mathematical and scientific principles underlying a particular branch of engineering; develop and demonstrate competence in analysis and design appropriate to an engineering specialization; reason clearly and communicate effectively; and recognize the need to continue professional development.

Through laboratory exercises, senior design projects, professional association activities, cooperative work assignments, and other experiential opportunities, students put theory into practice and clarify their professional goals.

The college offers a Bachelor of Science degree with specializations in bioengineering, chemical engineering, civil engineering, computer engineering, electrical engineering, environmental engineering, industrial engineering, and mechanical engineering. Five-year and four-year options are available to complete the Bachelor of Science degree program. The five-year option includes eighteen months of cooperative education work experience, and the four-year option includes twelve months of cooperative education experience. Customized four-year programs without co-op experience are also available.

The college encourages students to study the arts, sciences, business, and other areas outside engineering to allow for an increased awareness of the social, economic, political, aesthetic, and philosophical influences that shape the world in which graduates will practice their professions. Students may complete a minor in different areas such as business, computer science, biomedical engineering, math, or music. In many cases, the minor can be completed without course overloads.

The college also offers an array of international educational experiences, including a number of study-abroad options, international cooperative educational experiences, and Dialogue of Civilizations classes (which offer a four- to six-week opportunity to study engineering or a related field in the context of an international experience).

In addition to a full array of university services, specialized advising and other support services (including tutoring) are provided. Students in the University Honors Program may participate in honors sections

of a number of courses. Active student chapters of many national professional engineering organizations and honor societies are supported by the college as an enriching addition to academic studies and co-op experience.

The Bachelor of Science programs in chemical engineering, civil engineering, computer engineering, electrical engineering, industrial engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of ABET (<http://www.abet.org>).

Bachelor of Science/Master of Science Degree Programs

The Departments of Bioengineering, Chemical Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, and Mechanical and Industrial Engineering offer programs leading to both the bachelor's and master's degrees in five years. All students begin with the common first-year engineering program. Upon successful completion of required course work (four or five semesters in the undergraduate curriculum depending upon departmental requirements), students may petition to enter a BS/MS program. Degree candidates must maintain a 3.200 cumulative grade-point average (GPA), carry extra courses, and reduce the number of cooperative education semesters to complete the course requirements.

Academic Standards

ACADEMIC PROGRESSION STANDARDS

In addition to meeting university progression standards, it is expected that full-time engineering students enroll in four courses with appropriate labs and recitations and successfully complete at least 12 semester hours each academic semester with an acceptable GPA as noted below. Any exceptions to the course load requirement must be approved in writing by the student's academic advisor prior to the start of each semester. Only general electives taken outside the College of Engineering may be taken on a pass/fail grading basis.

GPA REQUIREMENTS FOR GRADUATION

A minimum cumulative GPA requirement of 2.000 in major (department) courses and a minimum cumulative GPA requirement of 2.000 overall are required for graduation.

CRITERIA FOR ACADEMIC PROBATION

Full-time students in the College of Engineering will be placed on academic probation effective for the following academic semester for any of the reasons noted below:

First-year Students:

- Not maintaining a semester GPA of at least a 1.800 at the end of each full-term semester (fall, spring) of the first-year curriculum
- Not earning at least 12 semester hours at the end of each semester of the first-year curriculum
- Not earning at least 24 semester hours at the end of the two full-term semesters (fall, spring) of the first-year curriculum

Upper-class and Transfer Students:

- Not earning at least 12 semester hours in the academic full-term semester (fall, spring) just completed
- Not maintaining an overall cumulative GPA of at least 2.000 at the end of each full-term academic semester (fall, spring)
- Not maintaining a GPA of at least a 2.000 in the major at the end of the fourth academic full-term semester of the curriculum and at the end of each full-term academic semester (fall, spring) thereafter

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- Accumulating three outstanding course deficiencies (grades of F, I, W, NE, U, or missing grades)
- Earning a full-term semester (fall, spring) GPA of 1.800 or lower
- Not following a program of study approved by the student's academic advisor

A notation of the academic probation action will appear on the internal record but not on the permanent transcript.

CRITERIA FOR ACADEMIC DISMISSAL

Students who have below a 1.000 GPA in any academic term following their first semester or cumulatively may be dismissed, regardless of their prior academic status, at the discretion of the college.

Full-time students on academic probation in the College of Engineering are eligible for academic dismissal from the university for any of the reasons noted below:

- Earning less than a 1.800 GPA in a current term (fall, spring, summer, summer 1, or summer 2)
- Completing fewer than 12 semester hours in a full-term (fall, spring) academic semester
- Not following a program of study approved by the student's academic advisor
- Remaining on academic probation after two full-term (fall, spring) academic semesters

Notation of this academic dismissal action will appear on the permanent transcript.

PASS/FAIL COURSE WORK

Students may elect to take courses on a pass/fail basis in accordance with university policy. A maximum of two courses may be taken pass/fail toward fulfillment of degree requirements in the College of Engineering.

GRADUATION REQUIREMENTS

The college reserves the right to amend programs, courses, and degree requirements to fulfill its educational responsibility to respond to relevant changes in the field.

Students must complete all of the requirements in the degree program in which they are candidates. Degree requirements are based upon the year of graduation, determined by the date of entry or reentry into the College of Engineering. Degree requirements and the year of graduation for a degree candidate who fails to make normal academic progress will be subject to review and possible change.

PROGRESSION TOWARD FULFILLMENT OF DEGREE REQUIREMENTS

Students are expected to develop and follow a program of study outlining scheduled course work to complete degree requirements. If changes to the year of graduation are to be made after completion of the third year of study in the major program curriculum, revised plans should be submitted to an academic advisor for review and approval. Students pursuing a minor course of study should declare their minor no later than the third year.