

CATALOG REVISION

MS Degree Admission Requirements in Engineering for Students with Bachelor's Degrees from non-Engineering Disciplines

(The following revisions were unanimously approved by Program Committees and the Graduate College Committee)

Students with bachelor's degrees in non-engineering disciplines may satisfy the undergraduate engineering requirements and earn an M.S. degree in bio-engineering, computer science, computer engineering, electrical engineering, mechanical engineering, ocean engineering, or civil engineering. Part time or full time study is possible. To receive the M.S. degree in engineering, these students must correct deficiencies in their programs of study by taking, in addition to regular graduate engineering courses, certain undergraduate engineering courses appropriate to the master's degree objective. Four or five such courses are typically required of students with B.S. degrees in science and 10-12 courses for non-science/engineering students. Students participating in this degree program may opt for thesis or non-thesis options. The program of study will be individually tailored to each student's academic background, graduate engineering degree objective, and relevant experience. It is expected that full time students with appropriate preparation and background in math, science, and engineering will complete the undergraduate courses phase of the program in one year.

Students enrolling in the program must satisfy the following eligibility requirements:

1. A cumulative GPA of 3.00.
2. Completion of at least two semesters of college calculus and received a grade of B or better.
3. Satisfaction of departmental minimum GRE score requirements
4. A letter of recommendation from their potential thesis advisor

Specific course requirements for each program in the College of Engineering and Computer Science are listed as follow:

A: EE Program

Each student and an academic advisor shall work out a customized plan of study based on the student's background and desired graduate area of study. The following remedial course-work represents a maximum plan: it can be shorter if the students have already taken some of the courses or equivalent courses. Students are expected to score C or better in each of the courses and to maintain an average of 3.0 or better for all the remedial courses.

- 1) Plan for Science majors - 6 courses, as follows:
 - a) EEL 2161 C for Engineers
 - b) EEL 3111 Circuits 1
 - c) EEE 3300 Electronics 1
 - d) EEL 3118L Lab 1

- e) EEL 4656 Analysis of Linear Systems
 - f) One course taken from the following menu:
 - f1) EEL 3470 EM Fields and Waves
 - f2) EEL 4652 Control Systems 1
 - f3) EEL 4512 Communication Systems
 - f4) EEL 4510 Intro to DSP
- 2) Plan for non-Science majors - 10 courses as follows:
- A) - f) as for Science majors above
 - g) Calculus 1 (4 credits)
 - h) Calculus 2 (4 credits)
 - i) Physics 1 for Engineers (No Lab) (3 credits)
 - j) Physics 2 for Engineers (No Lab) (3 credits)

B: Civil, Environmental Engineering Program

The CEGE specifies the following prerequisite classes for students with non engineering BS degrees planning to enter the MS program in Civil or Environmental Engineering.

1. Statics
2. Strength of Materials
3. Two Civil and/or Environmental Engineering courses in the relevant track as determined by the graduate supervisory committee.
4. Any other course dictated by the graduate supervisory committee

C: Ocean and Mechanical Engineering Programs

Ocean and Mechanical Engineering Department requires six deficiency classes which should have been taken at the undergraduate level, or need to be taken, in order to enter the graduate program in Ocean or Mechanical Engineering. These courses are in addition to Calculus I & II and are:

Calc III
Eng. Math I or Diff Eq.
Statics
Dynamics
Strength of Materials
Fluid Dynamics

If students have not taken these classes during their undergraduate studies, their case needs to be reviewed by the Department graduate committee who may require them to take pre requisite classes for the graduate program and pass them with a grade B or better.