

# Engineering, B.S.

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The Henry Samueli School of Engineering offers a general undergraduate major in Engineering to upper-division students who wish to pursue broad multidisciplinary programs of study or who wish to focus on a special area not offered in the six departments. Examples of other areas that may be of interest are biochemical engineering, electromechanical engineering, project management, or hydrology. The program of study in any area, aside from the established specializations, is determined in consultation with a faculty advisor.

Faculty in the Departments of Biomedical Engineering, Chemical and Biomolecular Engineering, Civil and Environmental Engineering, Electrical Engineering and Computer Science, Materials Science and Engineering, and Mechanical and Aerospace Engineering also teach courses in the major in Engineering program

The general major in Engineering is only open to junior-standing students who have completed the required lower-division courses with a high level of achievement. Freshmen are not eligible to apply for this major. The sequential nature of the Engineering program and the fact that many courses are offered only once a year make it beneficial for students to begin their studies in the fall quarter.

**Transfer Students:** The general Engineering major is a specialized program for students who are seeking careers in areas other than traditional engineering disciplines and is open to upper-division students only. Preference will be given to junior-level applicants with the highest grades overall, and who have satisfactorily completed the following **required** courses: one year of approved calculus, one year of calculus-based physics with laboratories (mechanics, electricity and magnetism), one course in computational methods (e.g., C, C++), and one year of general chemistry (with laboratory).

Students are encouraged to complete as many of the lower-division degree requirements as possible prior to transfer. Students who enroll at UCI in need of completing lower-division coursework may find that it will take longer than two years to complete their degrees. For further information, contact The Henry Samueli School of Engineering at 949-824-4334.

Credit for at least 180 units, and no more than 196 units. All courses must be approved by a faculty advisor and the Associate Dean of Student Affairs prior to enrollment in the program.

**All students must meet the University Requirements** (<http://catalogue.uci.edu/informationforadmittedstudents/requirementsforabachelorsdegree/>).

**All students must meet the School Requirements** (<http://catalogue.uci.edu/thehenrysamuelischoolofengineering/#schoolrequirementstext>).

## Major Requirements

*Mathematics and Basic Science Courses:* MATH 2A-MATH 2B-MATH 2D, MATH 2E, MATH 3A, and MATH 3D. PHYSICS 7C, PHYSICS 7LC, PHYSICS 7D, and PHYSICS 7LD. With the approval of a faculty advisor and the Associate Dean, students select all additional Mathematics and Basic Science courses.

*Engineering Topics Courses:* ENGRMAE 10 or equivalent. With the approval of a faculty advisor and the Associate Dean, students select all additional Engineering Topics courses.

Design unit values are indicated at the end of each course description. The faculty advisors and the Student Affairs Office can provide necessary guidance for satisfying the design requirements.

Students should keep in mind that the program for the major in Engineering is based upon a rigid set of prerequisites, beginning with adequate preparation in high school mathematics, physics, and chemistry. Therefore, the course sequence should not be changed except for the most compelling reasons. Students must have their programs approved by an academic counselor in Engineering. A sample program of study is available in the Student Affairs Office.