

# BIOMEDICAL ENGINEERING

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Department Website ([https://sc.edu/study/colleges\\_schools/engineering\\_and\\_computing/study/biomedical\\_engineering/](https://sc.edu/study/colleges_schools/engineering_and_computing/study/biomedical_engineering/))

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Biomedical engineers are involved in the design and improvement of products and procedures that promote improved health. Contributions of biomedical engineers range from the design of artificial organs to the discovery of new therapeutic pharmaceuticals to the development of surgical procedures and associated instrumentation. The Departments of Chemical Engineering and Mechanical Engineering collaborate to offer the Bachelor of Science in Biomedical Engineering. The curriculum provides a strong foundation in the basic and applied sciences, as well as in the liberal arts, to provide students with a well-balanced education. Increasing emphasis is placed upon the application of engineering principles to biological systems in the junior and senior years. The curriculum provides the opportunity to engage in technical electives, laboratory course components, and a capstone design experience. Additional elective components and the design experience can be tailored to the specific interests of the student.

## Bachelor's/Master's Degrees Accelerated Program

The Bachelor's/Master's Degrees Accelerated Program in Biomedical Engineering allows undergraduate students to complete both the B.S. degree and M.S. degree in as few as five years. The use of dual credit-courses that can be used toward both degrees enables acceleration of the program, reducing the total enrollment of the student by one semester.

Biomedical Engineering undergraduate students may apply for approval of an accelerated education plan in the semester in which they will complete 90 hours of undergraduate course work. In addition, students must have a sufficient foundation in biomedical engineering course work to enable them to take graduate-level courses. University and program regulations stipulate that applicants must have a minimum GPA of 3.40, both overall and in biomedical engineering courses. Students in the accelerated program must maintain a GPA of 3.40 while pursuing the B.S. degree.

Students applying to this program must submit to The Graduate School a completed "Application for Admission to a Combined Bachelor's/Master's Education Plan" (G-BMPA) with endorsements of the undergraduate advisor, research advisor and the program graduate director. The dean of The Graduate School has final authority for approving accelerated education plans. A "Bachelor's/Master's Degree Accelerated Plan Course Work Authorization" form must be submitted for each semester in which one or more of these courses are taken.

Participation in the accelerated program does not require or insure acceptance into The Graduate School. Students wishing to continue towards a master's degree in biomedical engineering at USC must apply formally to the Graduate School by submitting the appropriate application and all required supporting documents. Students in the accelerated program will be eligible for graduate assistantships upon admission to The Graduate School.

Only graduate-level courses (numbered 500 and above, including up to 3 credit hours of project/research work) satisfying both B.S. and Master's

degree requirements may be used for dual credit. BMEN core graduate courses (excluding 1-hour seminar courses and thesis preparation, BMEN 799) or courses from list of the approved BMEN graduate electives (refer to the graduate student handbook) may be used for graduate-level coursework. No more than twelve credit hours may be used as dual credit. The graduate courses used for dual credit must be taken during the student's final undergraduate year.