

B.S. in Biomedical Engineering

Biomedical Engineering

The Bachelor of Science in Biomedical Engineering (BME) provides students with a rigorous foundation in engineering, mathematics, and the life sciences, preparing graduates to address challenges at the intersection of technology and human health. The program is designed to prepare students for professional practice in medical device development, biotechnology, healthcare innovation, and graduate study in engineering, medicine, or related fields.

The curriculum is structured to provide both breadth and depth across engineering and science topics consistent with program educational objectives and student outcomes. In alignment with ABET expectations for biomedical engineering programs, the curriculum ensures that students gain experience in:

- Applying principles of engineering, biology, human physiology, chemistry, calculus-based physics, mathematics (through differential equations), and statistics;
 - Solving biomedical engineering problems, including those associated with the interaction between living and non-living systems;
 - Analyzing, modeling, designing, and realizing biomedical devices, systems, components, or processes; and
 - Making measurements on and interpreting data from living systems.
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- B.S. Biomedical Engineering - Biomaterials and Tissue Engineering (<https://catalog.stmarytx.edu/undergraduate/majors-programs/science-engineering-technology/engineering/biomedical-engineering/biomaterials-and-tissue-engineering/>)
 - B.S. Biomedical Engineering - Bioinformatics and Data Science (<https://catalog.stmarytx.edu/undergraduate/majors-programs/science-engineering-technology/engineering/biomedical-engineering/bioinformatics-and-data-science/>)
 - B.S. Biomedical Engineering - Bioinstrumentation and Medical Devices (<https://catalog.stmarytx.edu/undergraduate/majors-programs/science-engineering-technology/engineering/biomedical-engineering/bioinstrumentation-and-medical-devices/>)