

Biomedical Engineering

The undergraduate program in biomedical engineering is a Bachelor of Science degree program that is based upon the integration of engineering fundamentals, mathematics, physics, anatomy and physiology, chemistry, organic and biochemistry, biology, biomechanics and biomaterials. The biomedical engineering program is intended for students who want to pursue careers where engineering interfaces with the physical and biological sciences. Biomedical engineering advances fundamental concepts and develops materials, processes, implants, devices and informatics approaches for the prevention, diagnosis and treatment of disease for patient rehabilitation and for improving health. Biomedical engineers develop devices and procedures that solve medical and health-related problems by combining their knowledge of biology and medicine with engineering principles and practices. Many do research, along with life scientists, chemists and medical scientists, to develop and evaluate systems and products such as artificial organs, prostheses, instrumentation, medical information systems, and health management and care delivery systems. Some specialties include biomaterials, biomechanics, medical imaging, rehabilitation engineering and orthopedic engineering. The biomedical engineering program is accredited by the Engineering Accreditation Commission of ABET (<http://www.abet.org>).

Biomedical Engineering Program Mission

The mission of Wichita State University's biomedical engineering program is to provide students a comprehensive education, including integration of life sciences and engineering principles, to prepare students to address health needs at the local, national and global levels.

Program Educational Objectives

The educational objectives of the biomedical engineering program are driven by Wichita State University's mission to be an essential educational, cultural and economic driver for Kansas and the greater public good, as well as the biomedical engineering program mission to prepare students to address health needs. Specifically, biomedical engineering program alumni, within a few years of receiving their baccalaureate degree, will be successful professionals as evidenced by having:

1. Secured employment in engineering, biomedical, life-science and/or health-related professions;
2. Pursued professional development, including further study in graduate or professional schools; or
3. Served in leadership roles in addressing societal needs at the local, national and global levels.

Transfer Articulation Agreements

- Butler Community College: Biomedical Engineering 2+2
- Cowley College: Biomedical Engineering 2+2

Majors in Biomedical Engineering

- Accelerated BS to MS in Biomedical Engineering (<http://catalog.wichita.edu/undergraduate/engineering/biomedical-engineering/accelerated-bs-to-ms-in-biomedical-engineering/>)
- BS in Biomedical Engineering (<http://catalog.wichita.edu/undergraduate/engineering/biomedical-engineering/biomedical-engineering-bs/>)

Certificates in Biomedical Engineering

- Certificate in Biomaterials Engineering (<http://catalog.wichita.edu/undergraduate/engineering/biomedical-engineering/certificate-biomaterials-engineering/>)

Courses in Biomedical Engineering

- Biomedical Engineering (BME) (<http://catalog.wichita.edu/undergraduate/courses/bme/>)

Note: For a course to be used as a prerequisite to BME courses, it must have been passed with a grade of C or better (generating 2.000 grade points or better).