

# BIOMEDICAL ENGINEERING, M.S.

The Department of Biomedical Engineering offers three distinct master of science (M.S.) degree programs in Biomedical Engineering:

- Biomedical Engineering M.S., Research (<http://guide.wisc.edu/graduate/biomedical-engineering/biomedical-engineering-ms/biomedical-engineering-research-ms/>) – traditional master’s program culminating in a thesis
- Biomedical Engineering M.S., Accelerated Program (<http://guide.wisc.edu/graduate/biomedical-engineering/biomedical-engineering-ms/biomedical-engineering-accelerated-program-ms/>) – accelerated, course-based master’s program with the opportunity to choose a specialty area
- Biomedical Engineering M.S., Biomedical Innovation, Design, and Entrepreneurship (<http://guide.wisc.edu/graduate/biomedical-engineering/biomedical-engineering-ms/biomedical-engineering-biomedical-innovation-design-entrepreneurship-ms/>) – accelerated, course- and project-based master’s program with an emphasis in design, business, and engineering

Biomedical engineering is the application of engineering tools for solving problems in biology and medicine. It is an engineering discipline that is practiced by professionals trained primarily as engineers, who specialize in medical and biological applications. This area of study combines fundamentals of the biomedical sciences with advanced engineering methods of analysis and design, and brings together these two fields in order to contribute to the design of new medical instruments and devices, apply engineering principles for understanding and repairing the human body and other biological systems, and use engineering tools for decision making and cost containment.

The Department of Biomedical Engineering should be of interest to students who wish to practice engineering or engage in research in an engineering specialization in medicine and biology. An individualized course of study is planned with a faculty advisor. Biomedical engineering faculty and affiliated faculty come from the various colleges and professional schools throughout the university. They specialize in biomedical engineering areas as diverse as biomechanics, bioinstrumentation, biomedical imaging and biophotonics, micro and nanotechnology, systems biology, biomaterials, cellular engineering, tissue engineering, neuroengineering, and rehabilitation and human performance. A list of biomedical engineering faculty, affiliated faculty, and their respective areas of specialization is available from the department website (<https://directory.engr.wisc.edu/bme/faculty/>).