The Biomedical Engineering program uses an integrated and interdisciplinary approach to advance the knowledge of its graduates toward developing an understanding of fundamental issues at the interface of engineering, biology and medicine.

**Program Overview**

In the Master's of Biomedical Engineering program, students learn about the evolutionary processes focusing on how living things function and how several branches of engineering and science are interconnected in these processes. It improves human health through cross-disciplinary activities that integrate the engineering sciences with the biomedical sciences and clinical practice. The integration of biology with engineering is of increasing importance in all engineering disciplines.

This program emphasizes improving thinking skills in several areas of research and education, including tissue regeneration, biomaterials, tissue engineering, bioelectronics, biomechanics, bioMEMS, biosensing, biorobotics, biosignaling, bioinformatics and several associated areas of man-machine interface.

**Biomedical Engineering Careers**

- Bioelectronics
- Bioinformatics
- Biomaterials Tissue Engineering
- Biomechanics
- BioMEMS
- Biorobotics
- Biosensing
- Biosignaling
- Biotechnology
- Man-Machine Interface
- Nanotechnology and Materials
- Tissue Regeneration

**About UB**

The University of Bridgeport is an international, doctoral-intensive, comprehensive university, offering award-winning academic programs in a variety of innovative undergraduate and graduate degree programs. Our 50-acre, seaside campus overlooks Long Island Sound on Connecticut’s corporate Gold Coast, and is within easy driving distance of New York City and Boston.

Our student-faculty ratio is 15:1, and our full- and part-time faculty members include Fulbright Scholars, National Science Foundation Fellows, Ford Fellows, National Endowment for the Humanities Fellows, American Council for Learned Societies Scholars and Phi Beta Kappa Scholars. Some 32 percent of our students are members of minorities and students from more than 80 countries who live and learn within our community.
Dual Degrees
The department offers the opportunity to acquire dual graduate degrees along with the M.S. degree in Biomedical Engineering. Candidates for these dual Master’s Degree programs are typically required to complete a total of 48-52 credit hours to satisfy the requirements of two Master’s Degrees. This implies 15-19 credit hours in addition to the 34 hours required for the M.S. degree in Biomedical Engineering.

Program Core
Students in the Biomedical Engineering graduate program must earn 34 credits. While 28 credits are earned by taking classes, six credits are earned by completing a team-based, publishable graduate-level research project. The core curriculum accounts for 16 credits.

- BMEG 565: Biomedical Materials and Engineering
- BMEG 580: Tissue Engineering
- BMEG/ELEG 412: Bioelectronics
- BMEG/ELEG 511: Master’s Thesis or Project
- ENGR 400: Engineering Colloquium

Concentrations
Students will be able to choose from a broad range of concentrations beyond the curriculum.

Biomaterials and Biomechanics
- BMEG 508: Biomechanics
- BMEG 565: Biomedical Materials and Engineering
- BMEG/ELEG 547: BioMEMS
- BMEG/ELEG 562: Nanofabrication with Softmaterials

Bioelectronics
- BMEG/ELEG-412: Bioelectronics
- BMEG/ELEG-443: Digital Signal Processing
- BMEG/ELEG 453: Pattern Recognition
- BMEG/ELEG 513: Biomedical Image Processing

Cellular and Molecular Bioengineering
- BMEG 580: Tissue Engineering
- BMEG/ELEG 511: Applied Cardioengineering

Bioninformatics
- BMEG/ELEG 413: Bioinformatics
- BMEG/TCMG 466: Management of Biomedical Data