

BIOMEDICAL ENGINEERING

Biomedical engineering is the convergence of life sciences, medicine and engineering. The field of biomedical engineering is devoted to solving biological, environmental and medical problems. The program prepares students to design and develop devices and systems that improve human health and quality of life. Students may specialize in one of the following concentrations:

Biomaterials and Tissue Engineering – This concentration focuses on the fundamental knowledge of biomaterials and cellular biology to educate students in the field of tissues and regenerative medicine. This concentration is a combination of materials science, chemical and mechanical engineering, cell and molecular biology and physiology.

Biomechanics and Human Performance Engineering – This concentration applies engineering principles to study the interactions between humans and various machine systems in both working and living environments. The concentration is a combination of mechanical engineering, psychology and physiology.

Biomedical Informatics –The field of bioinformatics enables information to be interpreted for early detection, diagnosis, and treatment of complex diseases such as cancer. This concentration is a combination of computer science, information systems technology, cell and molecular biology, genomics and proteomics.

Biomedical Devices and Imaging –The concentration in biomedical devices and imaging is for those individuals interested in careers in medical imaging, medical device development, and clinical engineering. The concentration covers the fundamentals of modern imaging methodologies, covering aspects of light imaging, ultrasound imaging, and volumetric and functional imaging systems, and the principles of magnetic resonance imaging (MRI).

Neuroengineering – The neuroengineering concentration focuses on the theory of neural signaling, locomotion and pattern generation, central control of movement, and the processing of sensory information. This concentration is a combination of electrical engineering and neuroscience.

Students wanting specific information about the major are encouraged to stop by the department office in room 718 of the Bossone Research Enterprise Center, call the department at 215.895.2215, or visit their website at biomed.drexel.edu.

Employers Who Have Hired Drexel Students Include:
Children's Hospital of Philadelphia DSM Biomedical/Kensey Nash Fox Chase Cancer Center GlaxoSmithKline Globus Medical, Inc. Integra Life Sciences Johnson & Johnson Merck Rex Medical Stryker Orthobiologics

JOB TITLES

Applications Chemist
Genetic Toxicology
Assistant Hematologist
Laboratory Research Assistant
Assistant Scientist Pharmaceutical
Process Engineer

Biochemical/Investigative Toxicology
R&D Engineer
Biomaterials Engineering Assistant
Product Development Engineer
Biomedical Engineering Assistant
Rehabilitation Technician

Please refer to drexel.edu/scdc for our most recent co-op salary information.

PROFESSIONAL ASSOCIATIONS & INTERNET RESOURCES

Pennsylvania BIO
pennsylvaniabio.org

Society for Biomaterials
biomaterials.org

BioPharmGuy
biopharmguy.com/business.php

BioSpace
biospace.com

Device Space:
devicespace.com

National Institutes of Health
nih.gov

National Institute of Biomedical Imaging
www.nibib.nih.gov

The International Society for Magnetic Resonance in Medicine
ismrm.org/career-center

Biomedical Engineering Society
bmes.org/careers.asp

Whitaker Foundation
whitaker.org

CAREER RESOURCES

Resume, Interviewing and Job Search Best Practices
drexel.edu/scdc/professional-pointers

Workshop Calendar
drexel.edu/scdc/calendars-events/workshops

DREXEL DEPARTMENTS

Bossone Research Enterprise Center
31st and Market Streets
215.895.2215
biomed.drexel.edu/new04

**Career Services Library
Careers Collection**
Hagerty Library
33rd and Market Streets, Room 136
www.library.drexel.edu/guides/careers