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.

Employers who have hired Drexel students include:

Amicus Therapeutics
Centocor
Exponent
Genentech
GlaxoSmithKline
Children's Hospital of Philadelphia
Johnson & Johnson
Kensey Nash Corporation
Merck
Moss Rehab Research Institute
Novacare Outpatient Rehabilitation
Sanofi Aventis
Synthes
Wyeth Pharmaceuticals

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 Systems and Imaging – The biomedical systems and imaging concentration focuses on the theoretical and practical issues related to machine vision, image processing and analysis, and signal processing such as ultrasound, optics, magnetic resonance, and autoradiographic imaging. This concentration is a combination of electrical engineering, chemical engineering, physics and physiology.

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 http://www.biomed.drexel.edu/new04

Job Titles

Applications Chemist
Assistant Hematologist
Assistant Scientist
Biochemical/Investigative Toxicology
Biomaterials Engineering Assistant
Biomedical Engineering Assistant
Genetic Toxicology
Laboratory Research Assistant
Pharmaceutical Process Engineer
Process Design and Development Engineer
Product Development Engineer
Rehabilitation Technician

Professional Associations & Internet Resources

Steinbright Career Development Center
Pre-Health Advising, Thomas Coyne
215-895-2215
www.biomed.drexel.edu/new04

Am. Assoc. of Engineering Societies
www.aaes.org

Am. Medical Informatics Association
www.amia.org/inside/jobex

Biomedical Engineering Alliance for Industrial Internships
www.aii-bmes.org

Biomedical Engineering Network
www.bmenet.org/BMEnet

Biomedical Engineers.com
www.biomedicalengineer.com

Biomedical Engineering Society
www.bmes.org/careers.asp

BioSpace
www.biospace.com

Biotechnology Industry Organization
www.bio.org

The International Society for Magnetic Resonance in Medicine
www.ismrm.org/jobs

Medical Link Device
www.careercenter.devicelink.com

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

National Society of Professional Engineers
www.nspe.org

Pennsylvania BIO
www.pennsylvaniabio.org

Rehabilitation Engineering and Assistive Technology Society of North America
www.resna.org

Society for Biomaterials
www.biomaterials.org

Tissue Engineering Pages
www.tissue-engineering.net

IEEE Job Site
www.careers.ieee.org

Drexel Departments

Bossone Research Enterprise Center
31st and Market Streets
215-895-2215
www.biomed.drexel.edu/new04

Career Services Library
Careers Collection
Hagerty Library
33rd and Market Streets, Room 136
215-895-6843
www.library.drexel.edu/services/refcareers.html