Bachelor’s Degree Program

BIOMEDICAL ENGINEERING TECHNOLOGY

ABOUT THIS DEGREE PROGRAM

Biomedical engineering technologists install, improve, develop, adjust, repair and maintain devices and systems that diagnose and treat injuries and illnesses. These devices and systems include equipment, such as CAT scanners, MRI machines, patient monitoring devices, prosthetics, surgical devices and medical information systems.

As a student, you can study human anatomy and physiology, and combine these disciplines with engineering principles and practices. Our curriculum introduces you to quality assurance testing and troubleshooting of common equipment used in today's leading hospitals and surgery centers. You can focus on real-world problems and solutions.

The Biomedical Engineering Technology degree program is accredited by The Engineering Technology Accreditation Commission (ETAC) of the Accreditation Board for Engineering and Technology (ABET). Some courses may be taken interchangeably between onsite and online to fulfill graduation requirements. The most recent information on which programs are ETAC of ABET accredited at which locations is available in the Academic Catalog and at http://www.devry.edu/academics/accreditation.html.

GENERAL EDUCATION COURSEWORK¹

Communication Skills
ENGL112 Composition
ENGL135 Advanced Composition
ENGL216 Technical Writing
SPCH275 Public Speaking

Humanities
HUMN303 Introduction to the Humanities
ETHC445 Principles of Ethics
LAS432 Technology, Society, and Culture

Social Sciences
ECON312 Principles of Economics
SOCS185 Culture and Society

Mathematics and Analytical Methods
ECET345 Signals and Systems with Lab
MATH114 Algebra for College Students
MATH190 Pre-Calculus
MATH260 Applied Calculus I
MATH270 Applied Calculus II

Natural Sciences
BIOS135 Foundations in Biology and Chemistry with Lab
BIOS195 Anatomy and Physiology for Health Sciences with Lab
PHYS204 Applied Physics with Lab

Personal and Professional Development
CARD405 Career Development
COLL348 Critical Thinking and Problem-Solving

¹Most courses with the designator ECET may not be applied to this program if the courses are taken online.

²Students enrolled at a New Jersey location take ENGL108 in lieu of this course.

CORE-DEGREE COURSEWORK

Electronic Circuits and Devices
CEES100 Introduction to Engineering Technology and Information Sciences
ECET105 Digital Fundamentals with Lab
ECET110 Electronic Circuits and Devices I with Lab
ECET210 Electronic Circuits and Devices II with Lab
ECET220 Electronic Circuits and Devices III with Lab
ECET380 Signal Processing with Lab

Digital Circuits and Microprocessors
ECET230 Digital Circuits and Systems with Lab
ECET330 Microprocessor Architecture with Lab
ECET340 Microprocessor Interfacing with Lab

Computer Programming and Networking
CIS170C Programming with Lab
CIS247C Object-Oriented Programming with Lab
CIS355A Business Application Programming with Lab
ECET375 Data Communications and Networking with Lab
NETW310 Wired, Optical and Wireless Communications with Lab

Biomedical Engineering Technology
BMET313 Biomedical Equipment and Instrumentation I with Lab
BMET323 Biomedical Equipment and Instrumentation II with Lab
BMET433 Medical Imaging Technology with Lab
BMET436 Telemedicine and Medical Informatics with Lab

Senior Project Design and Development
ECET390 Product Development
ECET492L Senior Project Development Lab I
ECET493L Senior Project Development Lab II
ECET494L Senior Project Development Lab III

Technology Integration
ECET299 Technology Integration I
ECET497 Technology Integration II

ACCREDIATION MATTERS

The Biomedical Engineering Technology (BMET) degree program is accredited by location, by The Engineering Technology Accreditation Commission of ABET (ETAC of ABET). ETAC of ABET promotes technical education excellence by offering programmatic accreditation to institutions that meet their quality standards. This is a global mark of quality that is valued by employers and professional associations within the field of Engineering Technology. To learn more visit www.abet.org.
The biomedical engineering industry is experiencing exciting progress. The prospects for improving human health and extending human lifespan offer students many opportunities in the workplace today.

DeVry University’s Biomedical Engineering Technology degree program can provide students a broad range of applicable coursework, including medical devices, biomedical instrumentation systems, computer techniques in medical imaging systems, and telemedicine and biomedical networking.

Graduates of DeVry University’s Biomedical Engineering Technology degree program may consider careers including, but not limited to, the following:

- Applications Engineer
- Biomedical Equipment Technician
- Biomedical Sales Engineer
- Computer Automated Teller and Office Machine Technician
- Computer Support Specialist
- Customer Service Engineer
- Electronics Technician
- Energy Technical Project Manager
- Engineering Technician
- Field Service Technician
- Image Processing and Archiving
- Manufacturing Technician
- Medical Equipment Repairer
- Sales Engineer
- Test Engineer/Technologist

For comprehensive consumer information, visit devry.edu/studentconsumerinfo. Important information about the education debt, earnings and completion rates of students who attended this program can be found at devry.edu/bbet-ge. For additional program information, visit devry.edu/bbet.


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BIOENGINEERING TECHNOLOGY — Analyze biological and biomedical problems using fundamental concepts and tools, including electrodes, biopotential measurements, electrocardiogram equipment, pacemakers, defibrillators and ultrasonics. Apply engineering principles to acquire, monitor and analyze biological signals.

BIOMEDICAL INSTRUMENTATION SYSTEMS — Study the principles of medical instrumentation, including diagnostics and techniques for measuring physiological variables in living systems. Understand product liability and safety issues.

COMPUTER TECHNIQUES IN MEDICAL IMAGING — Use computer tools to design and implement data and image acquisition and analysis in biomedical environments. Understand the physics of producing images in applications such as X-ray, computerized tomography (CT), magnetic resonance imaging (MRI) and ultrasonic imaging.

MICROPROCESSOR INTERFACING — Learn how microprocessors interface with peripheral devices, including A/Ds, D/A's, keyboards, displays, and serial and parallel communication channels. Develop software (high-level and assembly) and hardware aspects of these devices.

PHYSICS — Predict and apply physical principles and laws to fluid, material and atmospheric dynamics, as well as mechanical, electrical, atomic and sub-atomic structures and processes.

BIOLOGY — Understand plant and animal organisms along with their tissues, cells, functions, interdependencies and interactions with each other and the environment.

MATHEMATICS — Understand and apply arithmetic, algebra, geometry, calculus and statistics.

COMPLEX PROBLEM SOLVING — Identify complex problems and review related information to develop and evaluate options and implement solutions.