

# Biomedical Equipment Technology

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**Program Description:** The Biomedical Equipment Technology Program prepares students to repair and maintain medical equipment utilized in hospitals and other healthcare environments. The program will be of particular interest to students who want to work in the healthcare arena but are more interested in working with medical technology and supporting the healthcare providers who utilize the equipment than in providing direct patient care. The program is intended to provide students with direct entry to the work environment, and students are expected to find employment in hospitals, with third-party organizations that hospitals may contract with for healthcare technology management services, and with medical device manufacturers who need to provide technical support to their customers. Additional employment opportunities may be found at dialysis centers, medical equipment rental companies, etc.

## Program Learning Outcomes:

Upon successful completion of this program, students will be able to:

- Apply knowledge of medical devices, electronics, computer networks and anatomy and physiology to resolving medical equipment repair problems.
- Demonstrate professional behavior in the workplace such as teamwork, communication, etc.
- Work in accordance with applicable safety procedures to ensure their own safety, as well as that of patients and other employees.
- Follow applicable department, hospital and legal guidelines in relation to record keeping, patient privacy, etc.

**Program Entry Requirements:** This program is open to interested students. However, new students are normally required to take the College's placement test at their time of entry. Students' placement test results must show readiness for ENGL 101 and FNMT 118 or higher for admission to the program. Internship is required for completion of the program and adds significantly to student learning and preparation to enter the workforce. The hospitals where students perform their internships require various clearances, such as medical clearances, criminal and child abuse background checks and drug screening.

**Program of Study and Graduation Requirements:** To qualify for the A.A.S. degree in Biomedical Equipment Technology, students must complete a minimum of 70 credit hours as prescribed and attain a grade point average of 2.0 ("C" average). A grade of "C" or better is required for all courses applied towards the degree. Students who follow the course sequence below may complete the degree in two years.

## Course Sequence:

Semester 1

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">FNMT 118 - Intermediate Algebra</a> or a higher level math course	FNMT 017 or FNMT 019 completed or FNMT 118 (or higher) placement	3 credits	Quantitative Reasoning
BIOL 108 - Essentials of Human Anatomy and Physiology or BIOL 110 - Anatomy and Physiology II*	For BIOL 108: FNMT 118 (or higher) placement  For BIOL 110: BIOL 109	4 credits	Scientific Reasoning
<a href="#">BMET 101 - Biomedical Equipment Technology I</a>	<a href="#">BIOL 108</a> or <a href="#">BIOL 110</a> , which may be taken concurrently	4 credits	
<a href="#">CIS 103 - Computer Applications &amp; Concepts</a>		3 credits	Technological Competency
<a href="#">ENGL 101 - English Composition I</a>		3 credits	Writing/Research/Info Lit 1

Semester 2

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">ENGL 102 - The Research Paper</a>	<a href="#">ENGL 101</a> with a grade of "C" or better	3 credits	Writing/Research/Info Lit 2
<a href="#">ELEC 120 - Direct and Alternating Current Circuits</a>	<a href="#">FNMT 118</a> or higher MATH with a grade of "C" or better or placement in <a href="#">MATH 161</a> or higher	4 credits	
<a href="#">BMET 102 - Biomedical Equipment Technology II</a>	<a href="#">BMET 101</a> with a grade of "C" or better and ELEC 120, which may be taken concurrently	4 credits	

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">CIS 105 - Computer Systems Maintenance</a>		4 credits	
ENGL 115 - Public Speaking or ENGL 116 - Interpersonal Communication or ENGL 117 - Group and Team Communication or ENGL 118 - Intercultural Communication	ENGL 101, which may be taken concurrently	3 credits	Oral Communication/ Creative Expression

#### Summer

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">BMET 103 - Biomedical Equipment Technology Internship I</a>	<a href="#">BMET 102</a> with a "C" or better and FNMT 118 or higher. Department Head approval is required to ensure that students have completed the necessary clearances.	1 credit	

#### Semester 3

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">ELEC 124 - Semiconductor Devices</a>	<a href="#">ELEC 120</a> with a grade of "C" or better	4 credits	
<a href="#">CHEM 110 - Introductory Chemistry</a> or higher level chemistry	<a href="#">FNMT 118</a> ready and <a href="#">ENGL 101</a> ready	4 credits	
<a href="#">BMET 201 - Medical Devices</a>	BMET 103 with a grade "C" or better	4 credits	
CIS 150 - Network Technology		4 credits	

Semester 4

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">PHYS 105 - Survey of Physics</a> or higher physics course (except PHYS 108 - Astronomy)		4 credits	
<a href="#">BMET 202 - Medical Devices in a Networked Environment</a>	<a href="#">BMET 201</a> ; <a href="#">ELEC 130</a> , which may be taken concurrently; <a href="#">CIS 105</a> ; and <a href="#">CIS 150</a> with a grade of "C" or better in all courses	4 credits	
<a href="#">ANTH 112 - Cultural Anthropology</a> or <a href="#">HIST 150 - History of American Health Care</a> or PSYC 101: Introduction to Psychology or <a href="#">SOC 101 - Introduction to Sociology</a> or SOC 105: Health and Society, or <a href="#">SOC 115 - Gender and Society</a>		3 credits	Cultural Analysis & Interpretation
<a href="#">ELEC 130 - Digital Electronics</a>	<a href="#">FNMT 118</a> completed or higher math placement	4 credits	

Summer

Course Number and Name	Prerequisites and Corequisites	Credits	Gen Ed Req.
<a href="#">BMET 203 - Biomedical Equipment Technology Internship II</a>	<a href="#">BMET 202</a> (with a "C" or better) Department Head approval is required to ensure that students have completed the necessary clearances.	3 credits	

**Minimum Credits Needed to Graduate: 70**

\* Students who choose to take BIOL 109-110: Anatomy and Physiology I & II will earn an additional four credits.

**General Education Requirements:** All general education requirements necessary for graduation are met through the courses in the program as indicated above. Students who wish to take courses that differ from the general education courses indicated above must complete a course substitution request form. To access the form, login to the [MyCCP portal](#), and in the **Student** tab, under **Electronic Forms**, click on the **Records and Registration Forms** link, then choose **Request for Course Substitution of Graduation Requirement** link. A [more detailed explanation](#) of the College's general education requirements is also available.

**For More Information, Contact:** The Division of Math, Science, and Health Careers, Room W1-1, 1700 Spring Garden Street, Philadelphia, PA 19130, Telephone (215) 751-8430 or the College Information Center (215) 751-8010.

### Courses and Completion Sequence

The following courses and sequence of courses is designed for the optimal success and completion of the Biomedical Equipment Technology degree/certificate. Any alterations should be discussed with your academic advisor.

#### Semester 1

Course Number and Name	Credits	Advisory Notes	Course Type
<a href="#">FNMT 118 - Intermediate Algebra</a> or a higher level math course	3 credits	Prerequisite for ELEC 120	Quantitative Reasoning
BIOL 108 - Essentials of Human Anatomy and Physiology or BIOL 110 - Anatomy and Physiology II *	4 credits	Prerequisite for BMET 101, which may be taken concurrently	Scientific Reasoning
<a href="#">BMET 101 - Biomedical Equipment Technology I</a>	4 credits	Prerequisite for BMET 102	Major Course
<a href="#">CIS 103 - Computer Applications &amp; Concepts</a>	3 credits		Technological Competency
<a href="#">ENGL 101 - English Composition I</a>	3 credits	Prerequisite for ENGL 102; Must earn a C or better	Writing/Research/Info Lit 1

Semester 2

Course Number and Name	Credits	Advisory Notes	Course Type
<a href="#">ENGL 102 - The Research Paper</a>	3 credits		Writing/Research/Info Lit 2
<a href="#">ELEC 120 - Direct and Alternating Current Circuits</a>	4 credits	Prerequisite for ELEC 124	Major Course
<a href="#">BMET 102 - Biomedical Equipment Technology II</a>	4 credits	Prerequisite for BMET 103	Major Course
<a href="#">CIS 105 - Computer Systems Maintenance</a>	4 credits	Prerequisite for BMET 202, must earn a C or better	Major Course
ENGL 115 - Public Speaking or ENGL 116 - Interpersonal Communication or ENGL 117 - Group and Team Communication or ENGL 118 - Intercultural Communication	3 credits		Oral Communication/ Creative Expression

Summer

Course Number and Name	Credits	Advisory Notes	Course Type
<a href="#">BMET 103 - Biomedical Equipment Technology Internship I</a>	1 credit	Prerequisite for BMET 201. BMET 103 requires Department Head approval to ensure that students have completed the necessary clearances.	Major Course

Semester 3

Course Number and Name	Credits	Advisory Notes	Gen Ed Req.
<a href="#">ELEC 124 - Semiconductor Devices</a>	4 credits		Major Course
<a href="#">CHEM 110 - Introductory Chemistry</a> or higher level chemistry	4 credits		
<a href="#">BMET 201 - Medical Devices</a>	4 credits	Prerequisite for BMET 202	Major Course
CIS 150 - Network Technology	4 credits	Prerequisite for BMET 202; must earn a C or better	

#### Semester 4

Course Number and Name	Credits	Advisory Notes	Course Type
<a href="#">PHYS 105 - Survey of Physics</a> or higher physics course (except PHYS 108 - Astronomy)	4 credits		
<a href="#">BMET 202 - Medical Devices in a Networked Environment</a>	4 credits	Prerequisite for BMET 203	Major Course
<a href="#">ANTH 112 - Cultural Anthropology</a> or <a href="#">HIST 150 - History of American Health Care</a> or PSYC 101: Introduction to Psychology or <a href="#">SOC 101 - Introduction to Sociology</a> or SOC 105: Health and Society, or <a href="#">SOC 115 - Gender and Society</a>	3 credits		Cultural Analysis & Interpretation
<a href="#">ELEC 130 - Digital Electronics</a>	4 credits	Prerequisite for BMET 202, may be taken concurrently	Major Course

**Summer**

<b>Course Number and Name</b>	<b>Credits</b>	<b>Advisory Notes</b>	<b>Course T ype</b>
<a href="#">BMET 203 - Biomedical Equipment Technology Internship II</a>	3 credits	Department Head approval is required to ensure that students have completed the necessary clearances.	Major Course