

# Biomedical Equipment Technology I Proficiency Certificate

**Description:** Biomedical Equipment Technicians (BMETs) are professionals that work in health care settings to test, maintain and repair medical equipment, such as ECG and blood pressure monitors, defibrillators, ventilators, infusion pumps, among others. BMETs typically work for hospitals, medical device manufacturers, or third party companies that provide service to hospitals. To be successful in this field, BMETs need to have an understanding of the operation and functions of a range of medical devices and their clinical applications and the ability to test medical device operation to a set of specifications.

Students who complete the proficiency certificate for Biomedical Equipment Technology I will be able to function as entry level BMETs. Students may continue their education by earning an additional Biomedical Technology Proficiency Certificate, which will increase qualifications and enhance the potential for advancement. All credits earned towards the BMET Proficiency Certificates can be applied to earning an Associate of Applied Science degree in **Biomedical Equipment Technology**.

## Student Learning Outcomes:

Upon completion of the Biomedical Technician Proficiency Certificate the student will be able to:

- Explain the role of biomedical equipment technicians in health care settings
- Solve basic circuit problems involving DC and AC circuits
- Explain the structure and function of major organ systems in the human body, such as the cardio-vascular, nervous, endocrine, and renal systems
- Describe the theory of operation, functioning and clinical application of medical devices such as heart monitors, blood pressure monitors, pulse oximeters, infusion pumps, suction devices, and centrifuges and carry out operational checks on such devices

**Program Entry Requirements:** This certificate is open to interested students. New students are normally required to take the College's placement test at their time of entry. Students who are identified as needing developmental course work must satisfactorily complete the appropriate English and mathematics course(s) as part of the certificate.

Applicants must be at least 18 years of age at the start of the internship experience.

**Program of Study and Graduation Requirements:** Successful completion of the program requires a "C" grade or better in each of the courses listed. In order to receive a "C" grade or better and thus demonstrate competency, students must complete assignments, exams and participate in class activities.

Pending departmental review, students may be terminated from the Program for behavior that is inconsistent with the professional standards of the field.

## Course Sequence

Course Number and Name	Prerequisites	Credits
<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="#">BIOL 108 - Essentials of Human Anatomy and Physiology</a> or <a href="#">BIOL 110 - Anatomy and Physiology II</a> *	For BIOL 108: placement in <a href="#">FNMT 118</a> or higher For BIOL 110: BIOL 109 with a grade of "C" or better	4 credits
<a href="#">FNMT 118 - Intermediate Algebra</a> or higher	<a href="#">FNMT 017</a> or <a href="#">FNMT 019</a> completed or <a href="#">FNMT 118</a> (or higher) placement	3 credits
<a href="#">ELEC 120 - Direct and Alternating Current Circuits</a>	<a href="#">FNMT 118</a> or higher with a grade of "C" or placement in MATH 161 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
<a href="#">CIS 105 - Computer Systems Maintenance</a>		4 credits
<a href="#">BMET 103 - Biomedical Equipment Technology Internship I</a>	<a href="#">BMET 102</a> with a "C" or better and <a href="#">FNMT 118</a> or higher	1 credit

**Minimum Credits Needed to Graduate: 24**

\* Students who choose to take [BIOL 109](#) and [BIOL 110](#): Anatomy and Physiology I & II will earn 28 credits.

### Courses and Completion Sequence

The following courses and sequence of courses is designed for the optimal success and completion of the [Biomedical Equipment Technology I Proficiency Certificate](#) degree/certificate. Any alterations should be discussed with your academic advisor.

Fall Semester

Course Number and Name	Credits	Advisory Notes
<a href="#">BMET 101 - Biomedical Equipment Technology I</a>	4	BMET 101 only offered in the fall semester. Prerequisite for BMET 102.

<a href="#">BIOL 108 - Essentials of Human Anatomy and Physiology</a> or <a href="#">BIOL 110 - Anatomy and Physiology II</a> *	4	Prerequisite, which may be taken concurrently, for BMET 101
<a href="#">FNMT 118 - Intermediate Algebra</a> or higher	3	Prerequisite for ELEC 120 and BMET 103

Spring Semester

<b>Course Number and Name</b>	<b>Credits</b>	<b>Advisory Notes</b>
<a href="#">BMET 102 - Biomedical Equipment Technology II</a>	4	BMET 102 only offered in the spring semester. Prerequisite for BMET 103
<a href="#">ELEC 120 - Direct and Alternating Current Circuits</a>	4	Prerequisite for ELEC 124 (for students continuing after the level 1 certificate).
<a href="#">CIS 105 - Computer Systems Maintenance</a>	4	

Summer

<b>Course Number and Name</b>	<b>Credits</b>	<b>Advisory Notes</b>
<a href="#">BMET 103 - Biomedical Equipment Technology Internship I</a>	1	Prerequisite for BMET 201 (for students continuing after the level 1 certificate).