

# BIOMEDICAL ELECTRONICS TECHNOLOGY: CP

Certificate of Proficiency | 28 credit hours minimum

**Area of Interest: Advanced Manufacturing, Industrial Occupations, and Transportation**

**Program Website** (<https://stlcc.edu/programs-academics/pathways/a-m-i-o-t/biomedical-electronics-technology/>)

**Academic Advising** (<https://stlcc.edu/admissions/advising/>)

## Program Description:

The Biomedical Electronics Technology Certificate of Proficiency provides students with skills necessary to enter the field of Biomedical Electronics service and support as Biomedical Electronics Technicians (BMET). Students will learn electrical and electronic concepts associated with medical electronics and devices, basic science behind instruments, and troubleshooting techniques.

An individual who has been convicted of a felony may not be qualified for employment as a BMET in healthcare.

**Locations.** This program is offered in its entirety at Florissant Valley.

**Related Programs.** The Engineering Technology and Manufacturing Department offers an associate in the following area:

**Electrical/Electronic Engineering Technology, Associate in Applied Science** (<http://catalog.stlcc.edu/programs/electrical-electronic-engineering-technology-aas/>)

**Cost of Attendance.** For more information on cost of attendance visit **MoSCORES** (<https://scorecard.mo.gov/Search/>).

**Program Career and Salary Information.** Pursuant to Missouri HB 1606 (2018), information regarding the number of credit hours, program length, employment rate, wage data, and graduates employed in careers related to their program of study at St. Louis Community College can be found at the following URL: <https://scorecard.mo.gov/scorecard/> ([https://www.google.com/url?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E\\_j2lO96zEytILO-s5xaJCQ](https://www.google.com/url?q=https://scorecard.mo.gov/scorecard/&sa=D&ust=1555536894857000&usg=AFQjCNG1xf3E_j2lO96zEytILO-s5xaJCQ)). Search using School / Program “St. Louis Community College” and choose the degree or credential type of interest.

The following limitations to the data apply: Information provided is based on the most recent cohorts available. Typically, most recent cohorts for wage

and completion data are six years prior to the current academic year. Time to complete a program of study varies depending on the number of credit hours students earn per semester.

**Interested in this program?** Start the enrollment process by visiting the **Apply to STLCC** (<https://www.stlcc.edu/admissions/apply-to-stlcc/>) page.

## At the completion of the program, students are expected to:

1. repair basic medical patient monitoring equipment.
2. troubleshoot common problems and issues with electronic equipment.
3. describe the regulatory requirements that govern a hospital's or clinic's ability to provide a safe environment for patients and employees.
4. evaluate medical equipment for electrical safety (including electrostatic discharge, ESD).
5. read schematic diagrams and service manuals in order to address issues with complex equipment.
6. analyze electronic circuits, both Alternating Current (AC) and Direct Current (DC), using instruments, meters, and analyzers to troubleshoot circuits and circuit boards.
7. describe future trends in medical instrumentation and patient care technology, including computer systems and integration with network systems.
8. apply basic networking terminology for describing medical device setups.

Code	Title	Credit Hours
<b>Program Requirements</b>		
MTH 140	Intermediate Algebra (or MTH 140S or higher, excluding MTH 161, MTH 161S, MTH 180, and MTH 180S)	3
EE 134	Electric Circuits	6
EE 132	Electronic Devices	5
BE 153	Workplace Learning: Biomedical Electronics Technology	4-6
BE 254	Biomedical Applications	5
IT 101	Cisco Networking Academy I: Introduction to Networks	5
<b>Total Credit Hours</b>		<b>28-30</b>

## Part-Time Academic Plan

**PLEASE NOTE:** If you originally enrolled at STLCC prior to Fall 2024, you may need to view an **archived catalog** (<http://catalog.stlcc.edu/archived-catalogs/>) for your correct program requirements. Please speak with an advisor or the program coordinator for more information.

Code	Title	Hours	Prerequisites	Milestones/Notes
<b>First Year</b>				
<b>Fall</b>				
MTH 140	Intermediate Algebra (or MTH 140S or higher)	3	Satisfactory placement and Reading Proficiency	Excluding MTH 161, MTH 161S, MTH 180, and MTH 180S

EE 134	Electric Circuits	6	MTH 140 (or MTH 140S) with a minimum grade of "C" or equivalent placement test scores or department approval and Reading Proficiency	
	<b>Credit Hours</b>	<b>9</b>		
<b>Spring</b>				
EE 132	Electronic Devices	5	EE 134 with a minimum grade of "C" and Reading Proficiency	
IT 101	Cisco Networking Academy I: Introduction to Networks	5	Reading Proficiency	
	<b>Credit Hours</b>	<b>10</b>		
<b>Second Year</b>				
<b>Fall</b>				
BE 153	Workplace Learning: Biomedical Electronics Technology	4-6	BE 254 with a minimum grade of "C" and Reading Proficiency	Student may need prerequisite override.
BE 254	Biomedical Applications	5	EE 132 with a minimum grade of "C" and Reading Proficiency	Student may need prerequisite override.
	<b>Credit Hours</b>	<b>9-11</b>		
	<b>Total Credit Hours</b>	<b>28-30</b>		

\*Click on the hyperlinked course number to view additional information about the course.

\*\*Students completing a course that has been assigned a MOTR number may transfer that course to any public institution in Missouri. Those who complete CORE 42 requirements will have that verification on their transcript.

\*\*\* It is your responsibility to verify that the courses listed above will transfer to the four-year institution of your choice. Maximize your transfer credits/classes by meeting with an academic advisor.