

Biomedical Equipment Technology

Winona Campus

OVERVIEW

Biomedical equipment technician training from Minnesota State College Southeast will give you the skills and knowledge to maintain, adjust, calibrate, and repair a wide variety of electronic and electromechanical, as well as computerized and networked equipment used in hospitals.

You will also have the skills needed to work on equipment used in practitioners' offices such as CAT scanners, ultrasound equipment, electric wheelchairs, and sophisticated dental, optometric and ophthalmic equipment. The degree offering is built on the foundation of the two-year Electronics program and will be directed by instructors Mike Wadewitz and Marc Kalis.

This up and coming occupation is in high demand as the medical equipment repair field is expected to grow 27% in the next decade, faster than the average of all occupations. The number of job openings is expected to outnumber qualified applicants, due in part to the increased demand for healthcare services and the increasing complexity of the medical equipment used in hospitals and by private practitioners.

To be successful in Biomedical Equipment repair you:

- Must have technical skills and problem solving abilities
- Need good hand/eye coordination and show mechanical aptitude
- Must show great attention to detail, have excellent communication skills and have the ability to work as a team

MAJORS WITHIN

Biomedical Equipment Technology AAS 66 credits
 See back for program plan

PROGRAM OUTCOMES

Program graduates will be able to:

1. Use knowledge and skills to analyze, troubleshoot, measure and/or program systems and devices used in the biomedical equipment industry.
2. Work as a productive and responsible team member.
3. Repair systems and equipment by applying logic and knowledge to solve complex problems associated with biomedical equipment technology.
4. Demonstrate the use of software, programming, and interfacing to troubleshoot micro and personal computers and their applications within the biomedical equipment technology industry.
5. Apply acquired skills and learn new skills by engaging in lifelong learning.
6. Demonstrate an ability to apply knowledge of mathematics, science, and engineering to the analysis of biomedical equipment problems.
7. Demonstrate an ability to communicate effectively.
8. Function with a respect for diversity and knowledge of professional, social, and global issues.



PROGRAM HIGHLIGHTS

Learn to service and maintain medical equipment

Work in computerized and networked electronic and electromechanical environments

Instructors have experience in multiple disciplines

Learn communication skills to work in a high tech environment with other respected professionals in healthcare and medical facilities

Learn how to support medical staff in the use of technology

Job stability and satisfaction

Career growth and development opportunities

CAREER OPPORTUNITIES

Biomedical Electronics Technician
 Biomedical Engineering Technician
 Biomedical Equipment Specialist
 Electromedical-Equipment Repairer
 Medical-Equipment Repairer
 Field Service Technician

Biomedical Equipment Technology

Associate of Applied Science

Proposed Program Plan

Biomedical Equipment Technology - AAS

Course No.	Course Name	Credits
General Education Requirements (can be taken any semester)		
	Course from any MnTC Goal 1 - 10 (see advisor for courses)	3
	Goal 1: Written and Oral Communications	3
	Goal 4: Mathematics	3
	Goal 5: History, Social, and Behavioral Sciences	3
	Goal 6: Humanities and Fine Arts	3
	Total Gen Ed Requirements	15
First Semester		
ELEC1202	Introduction to DC Electricity	2
ELEC1204	Introduction to AC Electricity	2
ELEC1209	DC Theory and Circuits	2
ELEC1212	Digital Electronics I	3
ELEC1214	Electronic Fabrication Technology	2
ELEC1330	Introduction to Instrumentation and Control	2
	Semester total	13
Second Semester		
BMET2221	Introduction to Biomedical Equipment	3
BMET2222	Biomedical Equipment Safety	2
ELEC1220	Electronic Communications	2
ELEC1250	Introduction to Solid State	4
ELEC1500	Networking I	3
	Semester total	14
Third Semester		
BMET2223	Biomedical Equipment I	3
ELEC2211	Digital Electronics II	4
ELEC2227	PC Hardware & OS	4
ELEC2260	Linear Integrated Circuits	4
	Semester total	15
Fourth Semester		
BMET2224	Biomedical Equipment II	3
BMET2225	Clinical Internship	3
ELEC2500	Networking II	3
	Semester total	9
	Required Credits	66