ELECTRONIC TECHNOLOGY

Credentials

Electronic Technology skills certificate.....16 cr.
Electronic Technology certificate ..... 33–34 cr.
Electronic Technology AAS degree ..... 60–62 cr.

Major Description

Are you known for your troubleshooting talent? Put your skills to work in a career as an electronics repairer or electronics engineering technician.

After just two semesters of study here, you can go out in the work world and get a job as an electronics repairer. After four semesters you'll qualify as an electronics engineering technician, able to work side-by-side with engineers to design and test computers, electronic devices and appliances, and medical and industrial equipment.

- Our labs will enhance your basic knowledge of microcontrollers, programmable logic controllers, and digital and analog circuits, while lectures will teach you how to take measurements and report your findings in a clear and concise manner.
- We'll also introduce you to simulation software that significantly streamlines the design process.
- The electronics technology certificate is also required to apply for and enter Schoolcraft's biomedical engineering technology associate degree program.

Job Titles & Median Salaries or Hourly Rates

- Electronics Repairer: $49,170 (national)
- Electronics Engineering Technician: $47,632 (Michigan)

Electronic Technology AAS Degree

This electronics program is designed to give students a strong background in the fundamentals of electricity, electronic devices and basic circuits (digital and linear). The curriculum includes laboratory demonstration of the principles taught in class affording practical experience in fabrication, instrumentation and presentation.

The program is not directly aimed at specific products. With the multiplicity of equipment presently in use and the rapid advance and change in technology, the department stresses the development of a broad background that will enable students to find employment and be able to further their skills in a diversified number of industries.

All courses are not offered each semester. Students should work with an academic advisor or counselor to develop a schedule that will work for them. Students who satisfactorily complete all college and program requirements qualify for an associate in applied science degree.

SAMPLE SCHEDULE OF COURSES

First Year—Fall Semester

ELECT 131	Basic Measurement and Reporting Skills	3
ELECT 137	DC Circuits and Mathematical Modeling	5
ENG 101	English Composition 1	3
Science	Select 1	4–5
BIOL 105	Basic Human Anatomy and Physiology	
CHEM 111	General Chemistry 1	
PHYS 123	Applied Physics	

Total Credits 15–16

First Year—Winter Semester

ELECT 138	AC Circuits and Mathematical Modeling	5
ELECT 139	Diodes and Transistors	3
ELECT 180	LabVIEW Programming CORE 1 and 2	5

Total Credits 13

First Year—Spring/Summer Session

ELECT 215	Operational Amplifiers and Linear Integrated Circuits	4
ELECT 219	Digital Logic Circuits	4

Total Credits 8

Second Year—Fall Semester

ELECT 144	Introduction to Microcontrollers	3
ELECT 218	AC/DC Motors	3
Social Science	Select 1	3
POLS 209	International Relations	
PSYCH 153	Human Relations	
SOC 210	Cultural Diversity	
English	Select 1	3
ENG 102	English Composition 2	
ENG 116	Technical Writing	

Total Credits 12

Second Year—Winter Semester

ELECT 251	Programmable Logic and Industrial Controls	4
Elective*	*Select from the list below*	3–4
Mathematics	Select 1	4
MATH 111	Applications—Utility of Math	
MATH 113	Intermediate Algebra for College Students	
HUM 106	Introduction to Art and Music	1

Total Credits 12–13

PROGRAM TOTAL 60–62 CREDITS

** Number of credits may vary depending on the course selection.*

Electives

BMET 125	Laser Safety Concepts	3
CIS 171	Introduction to Networking	3
CIS 235	Managing and Troubleshooting PCs	3
COMPS 124	Introduction to Personal Computers and Software	3
COMPS 126	Technical Programming	3
ELECT 133	Introduction to Battery Technology	3
ELECT 145	Fluid Power	4
ELECT 228	Electronic Troubleshooting	3
ELECT 252	Programmable Logic System Design	4
MET 102	Introduction to Materials Science	3

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

Electronic Technology Certificate

The certificate for electronics provides the student with a solid foundation for many jobs that require a thorough understanding of electronic fundamentals. Completion of the certificate program also offers the student the opportunity to pursue advanced technical credentials in health care, in manufacturing, or in computer systems.

All courses are not offered each semester. Students should work with an academic advisor or counselor to develop a schedule that will work for them. Students who satisfactorily complete the program requirements qualify for a certificate of program completion.

SAMPLE SCHEDULE OF COURSES

First Year—Fall Semester

ELECT 131	Basic Measurement and Reporting Skills	3
ELECT 137	DC Circuits and Mathematical Modeling	5
ELECT 180	LabVIEW Programming CORE 1 and 2	5
Science	Select 1	4–5
BIOL 105	Basic Human Anatomy and Physiology*	
CHEM 111	General Chemistry 1	
PHYS 123	Applied Physics	

Total Credits 17–18

Winter Semester

ELECT 138	AC Circuits and Mathematical Modeling	5
ELECT 139	Diodes and Transistors	3

Total Credits 8

First Year—Spring/Summer Session

ELECT 215	Operational Amplifiers and Linear Integrated Circuits	4
ELECT 219	Digital Logic Circuits	4

Total Credits 8

PROGRAM TOTAL 33–34 CREDITS

** BIOL 105 is required for the BMET program internship sequence.*

Electronic Technology Skills Certificate

The electronic technology certificate is intended for students wishing to gain the basic skills needed for entry-level jobs in electronics. Completion of the skills certificate permits the student to take electrical measurements, understand DC and AC signals, and apply solid-state troubleshooting techniques used in modern jobs involving electronics.

All courses are not offered each semester. Students should work with an academic advisor or counselor to develop a schedule that will work for them. Students who satisfactorily complete the program requirements qualify for a certificate of program completion. All program required courses must have been completed with a grade of 2.0 or better.

SAMPLE SCHEDULE OF COURSES

First Year—Fall Semester

ELECT 131	Basic Measurement and Reporting Skills	3
ELECT 137	DC Circuits and Mathematical Modeling	5

Total Credits 8

First Year—Winter Semester

ELECT 138	AC Circuits and Mathematical Modeling	5
ELECT 139	Diodes and Transistors	3

Total Credits 8

PROGRAM TOTAL 16 CREDITS