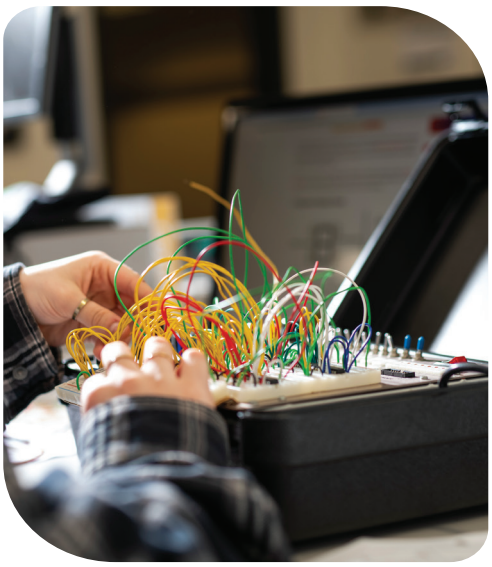
MINNESOTA STATE COLLEGE SOUTHEAST

Electronics Technology

Winona Campus



OVERVIEW

The skilled electronics technician thus has a wide choice of career opportunities. Equipped with knowledge of electric and electronic principles, the graduate may work in design, repair, or installation of industrial, automotive or home electronics, and maintenance of these devices.

An electronic technician is trained to use instruments and equipment in testing, repair and maintenance of electronic systems. The work may include installation, adjustment and correction of malfunctions in computers, communications devices and other electronic equipment.

Entry each term and part-time enrollment are possible, but not all required and elective courses are available every term.

A member of the Electronics Technician Association (ETA)

MAJORS WITHIN

Electronics Technology	AAS	64 credits
Electronics Technology	Diploma	47 credits
Electronics Lab Assistant	Certificate	20 credits
Basic Electronics	Certificate	9 credits - Also offered in Red Wing

Estimated costs for each major including tuition, books and supplies are posted on **southeastmn.edu** under Academics > Academic Programs by Degree.

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 Electronics industries.
2. Repair systems and equipment by applying logic and knowledge to solve complex problems.
3. Demonstrate the use of software, programming, and interfacing to troubleshoot micro and personal computers.
4. Demonstrate an ability to communicate effectively.
5. Demonstrate an ability to apply knowledge of mathematics, science, and engineering to the analysis of electronic problems.
6. Apply acquired skills and learn new skills by engaging in lifelong learning.
7. Work as a productive and responsible team member.
8. Function with a respect for diversity and knowledge or professional, social, and global issues.

PROGRAM HIGHLIGHTS

- Broad spectrum of career opportunities
- Current technology is implemented in the curriculum
- 50% of class work is hands-on
- Our instructors stay current in the electronics field
- Electronic technicians play a critical role in technology

CAREER OPPORTUNITIES

- Electronic System Installation/ Maintenance
- Manufacturing System Installation/ Maintenance
- Electronic Engineering Technician
- Computer Equipment Repair/Maintenance
- Computer Network Installation/ Maintenance
- Wireless Communication Systems Installation/Maintenance
- Technical Field Service and Sales
- Security System Technician
- Residential Electronics Systems Integrator

JOB PLACEMENT

100%

southeastmn.edu

Electronics Technology

Sample Program Plan

Please note that this is a sample program schedule. Your schedule may vary depending upon your needs, goals, and course availability. Please meet with your advisor to plan your schedule each semester.

Electronics Technology - AAS

Course No.	Course Name	Credits
General Education Requirements (can be taken any semester)		
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
Course from any MnTC Goal 1 - 10 (see advisor)		3
Total credit requirments		**15**
First Semester (Fall)		
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 & Control	2
Semester total		**13**
Second Semester (Spring)		
ELEC1220	Electronic Communications	2
ELEC1250	Introduction to Solid State	4
ELEC1251	Solid State Devices	4
NWAT	Networking Elective (see advisor)	3
Semester total		**13**
Third Semester (Fall)		
ELEC2211	Digital Electronics II	4
ELEC2227	PC Hardware & OS	4
ELEC2260	Linear Integrated Circuits	4
Semester total		**12**
Fourth Semester (Spring)		
ELEC2230	Microcontroller Applications	5
NWAT	Networking Elective (see advisor)	3
Technical Elective (see advisor for approved electives)		3
Semester total		**11**
	Total Required Credits - 64	

Electronics Lab Assistant - Certificate

Course No.	Course Name	Credits
General Education Requirements (can be taken any semester)		
Math Requirement		2
Total credit requirments		**2**
First Semester (Fall)		
TECHNICAL ELECTIVES (fall or spring)		5
ELEC1202	Introduction to DC Electricity	2
ELEC1204	Introduction to AC Electricity	2
ELEC1212	Digital Electronics I	3
ELEC1214	Electronic Fabrication Technology	2
		14
Second Semester (Spring)		
ELEC1250	Introduction to Solid State	4
		4
	Total Required Credits - 20	

Electronics Technology - Diploma

Course No.	Course Name	Credits
General Education Requirements (can be taken any semester)		
English/Communications Requirement		2
Math Requirement		2
Total credit requirments		**4**
First Semester (Fall)		
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 & Control	2
Semester total		**13**
Second Semester (Spring)		
ELEC1220	Electronic Communications	2
ELEC1250	Introduction to Solid State	4
ELEC1251	Solid State Devices	4
NWAT	Networking Elective (see advisor)	3
Semester total		**13**
Third Semester (Fall)		
ELEC2211	Digital Electronics II	4
ELEC2227	PC Hardware & OS	4
ELEC2260	Linear Integrated Circuits	4
Semester total		**12**
Fourth Semester (Spring)		
ELEC2230	Microcontroller Applications	5
Semester total		**5**
	Total Required Credits - 47	

Basic Electronics - Certificate

Course No.	Course Name	Credits
First Semester		
ELEC1202	Introduction to DC Electricity	2
ELEC1204	Introduction to AC Electricity	2
ELEC1209	DC Theory & Circuits	2
ELEC1212	Digital Electronics I	3
	Total Required Credits - 9	

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