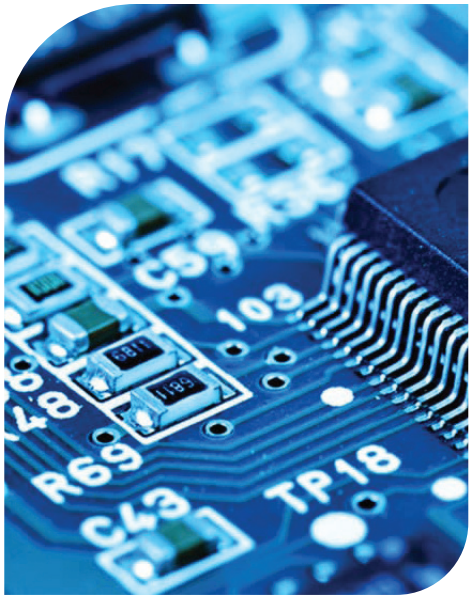
MINNESOTA STATE COLLEGE SOUTHEAST

Computer Engineering Technology

Winona Campus



OVERVIEW

Hardware... Software... System Automation... these components fit together to create the increasingly complex world in which we live.

A degree in Computer Engineering Technology from Minnesota State College Southeast in Winona spans hardware, software, and system automation. This degree is designed to prepare you for a challenging career in programming, data analysis, and system integration.

The two-year program combines the foundations of electrical hardware, the nuances of programming, and the rigors of process control. Courses are taught on campus in Winona and online.

The curriculum includes AC, DC, and digital circuits, database generation, and programming of microcontrollers, programmable logic controllers, and commercial languages such as C++ and JAVA.

This degree gives students the opportunity to go into computer hardware, software, and industrial automation positions that require coding, database analysis, and Internet of Things (IOT) connectivity.

You'll complete the Computer Engineering Technology AAS by working with faculty to design a capstone course that will demonstrate your ability to solve a programming or computer engineering problem. Projects may range from custom purpose robots to automated data processing applications.

MAJORS WITHIN

Computer Engineering Technology AAS 60 credits

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:

- Understand the foundations of electronics, including digital logic, alternating current, and direct current.
- Configure, troubleshoot, and program microcontroller based hardware, including programmable logic controllers.
- Understand programming environments spanning ladder logic, C++, JAVA, SQL, and VB.net.
- Comprehend the interface between electronics hardware, analog and digital inputs, and backend programming, bridging the software/hardware divide.

PROGRAM HIGHLIGHTS

State-of-the-art electronic and industrial automation laboratories

Hands-on electronics and automation curriculum

Remote courses for database and commercial programming language instruction

Opportunities for internships throughout the industry

High demand employment outlook

CAREER OPPORTUNITIES

Computer Engineering Technician
Software Development and Support
Computer Programming
Database Analysis
Industrial Automation

JOB PLACEMENT

N/A

southeastmn.edu

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Computer Engineering Technology - AAS

Sample Full-time 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.

Course No.	Course Name	Credits
First Semester		
Goal 4	Mathematics	3
ELEC1202	Introduction to DC	2
ELEC1204	Introduction to AC	2
ELEC1209	DC Theory & Circuits	2
ELEC1212	Digital Electronics 1	3
COMC1730	Introduction to Programming with .Net	3
Semester total		**15**
Second Semester		
MATH1230	Introduction to Statistics	3
COMC2747	Database Applications Development	4
ENGL1215	College Writing I	3
ELEC2221	Programmable Controllers	3
COMC2740	Intro to Java/C/C++/C#	3
Semester total		**16**
Third Semester		
ECON1210	Survey of Economics	3
ELEC2211	Digital Electronics 2	4
COMC2742	Java/C++/C# Programming 2	3
COMC2722	Database Design w/ SQL	3
NWAT1641	Networking Fundamentals	3
Semester total		**16**
Fourth Semester		
NWAT 2673	Linux Operating Systems	3
ELEC2230	Microcontrollers	5
Goal 6	Humanities & Fine Arts	3
COMC2999	Computer Engineering Technology Capstone	2
Semester total		**13**
Total Required Credits		**60**

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