

**DEPARTMENT OF INDUSTRIAL & ENGINEERING TECHNOLOGY
ASSOCIATE OF APPLIED SCIENCE
COMPUTER TECHNOLOGY MAJOR
MICROCOMPUTER SYSTEMS OPTION**

The Microcomputer Systems option is designed to prepare students with background and skills to design, implement, and support networked systems in both standard and enterprise settings. It builds a solid foundation in the hardware and architecture of telecommunications networks and systems; operating systems and applications; systems design and analysis; networking theory and solutions; types of networks, including fiber optics and wireless; network management and control; network and flow optimization; network security; configuring; and troubleshooting. Upon completing this option, students may easily transition to a Bachelor of Science Degree Industrial Technology and with a Telecommunications and Computer Networking option.

CURRICULUM CHECKLIST

COMPUTER TECHNOLOGY CORE (37 Hours)

___ EN 100 English Composition OR EN 140 Rhetoric & Critical Thinking	3
___ IM 102 Technical Communication	3
___ IM 301 Industrial Safety	3
___ IM 419 Industrial Supervision	3
___ MA 133 Plane Trigonometry	3
___ MA 134 College Algebra	3
___ MN 260 Technical Computer Programming Applications	3
___ PH 120/020 Introductory Physics I	5
___ PH 121/021 Introductory Physics II OR CH 181/081/001 Basic Principles of Chemistry	5
___ PS 103 U. S. Political Systems	3
___ SC 105 Fundamentals of Oral Communication	3

MICROCOMPUTER SYSTEMS OPTION (33 Hours)

___ ET 160 Basic Electricity & Electronics	3
___ ET 245 Logic Circuits (AAS students may take EP305 to substitute)	3
___ IM 317 Industrial Internship OR MI 440 Web Design Electronic Computing	3
___ TN 254 Fiber Optics & Network Communications	3
___ TN 255 Microcomputer Maintenance & Troubleshooting	3
___ TN 275 Network Fundamentals	3
___ TN 375 Network Routing Protocols and Concepts	3
___ TN 395 Server Maintenance and Troubleshooting	3
___ TN 425 Wireless Communications and Mobile Data Networks	3
___ TN 435 Network Security	3
___ TN 563 LAN Switching	3

EXAMPLE PROGRAM OF STUDY
AAS - Computer Technology major - Microcomputer Systems option

FRESHMAN FALL SEMESTER (15 hrs)

EN 100 English Comp
OR EN 140 Rhetoric & Critical Thinking
IM 102 Technical Communication
MA 133 Plane Trigonometry
MA 134 College Algebra
ET 160 Basic Electricity and Electronics

FRESHMAN SPRING SEMESTER (14 hrs)

MN 260 Technical Computer Programming Appl.
PH 120 Introductory Physics I
PS 103 US Political Systems (Political Systems)
IM 301 Industrial Safety

SOPHOMORE FALL SEMESTER (17 hrs)

PH 121 Introductory Physics II
ET245 Logic Circuits
TN254 Fiber Optics & Network Communications
TN 255 Microcomputer Maint. & Troubleshooting
TN275 Network Fundamentals

SOPHOMORE SPRING SEMESTER (12 hrs)

TN375 Network Routing Protocols & Concepts
TN395 Server Maint.& Troubleshooting
TN425 Wireless Communications and
Mobile Data Networks
TN 563 LAN Switching

JUNIOR FALL SEMESTER (12 hrs)

IM 317 Industrial Internship OR
MN 412 Advanced Manufacturing Sys.
IM 419 Industrial Supervision
SC 105 Fundamentals of Oral Communications
TN 435 Network Security

70 Hours

Notes:

- If you need to take developmental courses, the length of time needed to complete the degree will likely increase.
- This proposed rotation is suggested. You will need to meet with your advisor every semester for advising and discussions about your progress and plans.
- Course prerequisites and rotations can change. Even if you fall under an older option of a major, changes in prerequisites apply to all students. For current prerequisites and course rotation, check with the Department of Industrial and Engineering Technology or the Polytechnic Studies Advising Center.
- For course descriptions, see the latest undergraduate bulletin OR www.semo.edu/bulletin.