

# Computer Technology: Microcomputer Systems Option

## Associate of Applied Science (AAS)

# Microcomputer Systems Option

Computer technology is an Associate of Applied Science (AAS) option. AAS degrees are traditionally technically focused with some general education requirements. If your interest is in technically-oriented tasks such as designing and implementing computer networks and telecommunication systems, solving manufacturing process and production problems, programming computer numerical control (CNC) machines for automated machine operations, designing computer animation and graphics, or designing multimedia projects, then one of the computer technology options might be for you. All of these options transition smoothly into bachelor degree options upon completion.

### Microcomputer Systems

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.

### Career Planning

Career preparation is part of the mission of Southeast. In fact, more than 90% of Southeast students participate in internships, clinical opportunities, student teaching, research assistantships, and study abroad.

Professional career counselors are available for all students. The Office of Career Services in Academic Hall 057 can provide students with professional career counseling, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

Demonstrated Career Proficiency is a Requirement of all Southeast Students		
CL001/CL002	First Semester	Complete the FOCUS2 assessment and develop a Career Action Plan.
CL003	Junior Year	Students gain information about career planning and job searching resources.
CL004	Senior Year	Students demonstrate advanced proficiency by identifying a position in their field, developing a cover letter, and tailoring a resume for the position. Materials are critiqued to ensure preparedness for a successful job search.

### Career Opportunities

- Information Technology Specialist
- Network Administrator/Specialist
- Network Manager
- System Administrator
- Telecommunications Specialist
- Technical Specialist

### AAS to BS Options

The following Bachelor of Science degree programs can be easily transitioned into after completion of the AAS degree:

- Technology Management: Telecommunications & Computer Networking Option

Other bachelor degree programs within the Department of Polytechnic Studies might be pursued in conjunction with this AAS degree; however, it may be more difficult. See an advisor for more details.

### Southeast A+ Scholarship

*This program is eligible for the Southeast A+ Scholarship.*

Learn more about the scholarship at [www.semo.edu/aplus](http://www.semo.edu/aplus).

A Bachelor of Science degree program within the Department of Polytechnic Studies can be pursued in conjunction with the AAS degree and utilize the Southeast A+ Scholarship. Depending on the major, some courses are suggested sooner in the program (to keep a student progressing in their BS degree on time) that are not covered by the Southeast A+ Scholarship. This means that a student will have to pay out-of-pocket for such courses (such as UI100). Additionally, some programs can be more difficult to complete while using the Southeast A+ Scholarship because of the nature of the coursework.

**To learn more**  
 Office of Admissions  
 (573) 651-2590  
[admissions@semo.edu](mailto:admissions@semo.edu)  
[www.semo.edu](http://www.semo.edu)

**To explore**  
 the College  
 Science, Technology and  
 Agriculture online, visit  
[www.semo.edu/costa](http://www.semo.edu/costa)

**For advising**  
 Center for Academic Advising - North  
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This is a guide based on the 2016-2017 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use DegreeWorks to monitor their individual progress.

### CURRICULUM CHECKLIST

#### Computer Technology: Microcomputer Systems – 70 hours

**Required Courses:**

- EN 100 English Composition I (3)
- OR**
- EN 140 Rhetoric & Critical Thinking (3)
- IM 102 Technical Communications (3)
- IM 301 Industrial Safety Supervision (3)
- IM 419 Industrial Supervision (3)
- MA 133 Plane Trigonometry (3)
- MA 134 College Algebra (3)
- MN 260 Technical Computer Programming (3)
- OR**
- CS 155 Computer Science I (4)
- PH 120 Introductory Physics I (5)
- PH 121 Introductory Physics II (5)
- PS 103 U.S. Political Systems (3)
- SC 105 Fundamentals of Oral Communications (3)

**Microcomputer Systems option**

- ET 160 Basic Electricity & Electronics (3)
  - ET 245 Logic Circuits (3)
  - TN 255 Microcomputer Maintenance & Troubleshooting (3)
  - TN 275 Introduction to Networks (3)
  - TN 375 Routing and Switching Essentials (3)
  - TN 395 Server Maintenance & Troubleshooting (3)
  - TN 425 Wireless Communication & Mobile Data Networks (3)
  - TN475 Scaling Networks (3)
  - TN 563 Connecting Networks (3)
- Choose 6 hours from:
- CY 201 Introduction to Cybersecurity (3)
  - IM 317 Industrial Internship (3)
  - TN 435 Network Security (3)

### SAMPLE FIVE-SEMESTER PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
<b>FIRST YEAR</b>	EN100 or EN140	3	IM102	3
	ET160	3	MN260 or CS155	3-4
	MA133	3	PH120	5
	MA134	3	PS103	3
	TN255	3	TN375	3
	TN275	3		
	<b>Total</b>	<b>18</b>	<b>Total</b>	<b>17-18</b>
<b>SECOND YEAR</b>	ET245	3	SC105	3
	IM301	3	TN395	3
	PH121	5	TN435	3
	TN425	3	TN563	3
	TN475	3		
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>12</b>
<b>THIRD YEAR</b>	IM317 or CY201	3		
	IM419	3		
	<b>Total</b>	<b>6</b>		

Refer to the Undergraduate Bulletin or DegreeWorks for additional graduation requirements (i.e. minimum GPA and coursework) for your program of study.

Revised  
2/23/2016

**Degree Map 2016-2017**

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