SOUTHEAST MISSOURI STATE UNIVERSITY · 1873®

Technology Management: Computer Network Systems Administration Option

Bachelor of Science (BS)

Computer Network Systems Administration Option

ACCREDITED BY ATMAE
The Association of Technology, Management, and Applied Engineering

Technology management is a field of study designed to prepare technical and/or management-oriented professionals for employment in business, industry, education and government. Technology management is primarily involved with the management operation, and maintenance of complex technological systems while engineering and engineering technology are primarily involved with the design and installation of these systems.

Computer Network Systems Administration students are prepared to design, implement and support networked systems in both standard and enterprise settings. Students gain a solid foundation in the hardware and architecture of telecommunication networks and systems, operating systems and applications, system 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. Computer Network Systems Administration students learn concepts of network design, integration, security, administration, and management of computing and telecommunications technologies.

Becoming Career Ready...

/ Faculty with relevant industry experience work closely with students by providing them with career-ready practical experience and a technology-based curriculum in the state-of-the-art Otto & Della Seabaugh Polytechnic building.

/ Computer Network Systems Administration graduates work as technology professionals and as technical managers area within business, industry, education and government. Examples of job titles include IT manager, IT director, network systems administrator, network engineer and technology director.

/ 100% of Southeast programs offer real-world experience. Computer Network Systems Administration students earn this experience through a senior design capstone course for students to work in teams to solve open-ended industrial projects. Students also gain valuable hands-on experience through required labs that accompany the technology courses work.

/ The path to a successful career starts with you! You can maximize your career development by working closely with Career Services and Southeast faculty – they are here to help you connect your passions, interests and skills to jobs and opportunities in the field. Career Services provides professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities and more.

FASTTRACK WORKFORCE INCENTIVE GRANT

Career Opportunities:

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

Equipment and Computer Programs

We have developed laboratories to provide our students with an opportunity to master a working knowledge of the basic fundamentals to advanced concepts in network applications and systems administration. Courses are accompanied by hands-on laboratories in which students will:

- Design, configure, and set up networked and telecommunications systems, client server programming and network administration.
- Configure network hardware and software on Linux and Microsoft-based microcomputers that are connected to wireless systems, the Internet and a LAN/WAN with switches and routers.
- Perform network protocol analysis and network performance using test equipment and hardware tools such as OptiView, Signal Pro, NS, Qualnet and Opnet.
- Work with multi-user, multi-tasking network operating systems such as UNIX, Linux and Windows Server with a focus on network administration.
- Learn principles of communication systems, communication protocols such as Kermit, HDLC, and performance measurement of wired and wireless systems.
- Learn principles and assembling of computers and installation, maintenance, troubleshooting, and repair of computer peripherals and system expansion, including operating systems, memory, disk drives, printers and displays.
- Develop WWW presence with Web technologies using HTML, scripting languages and develop database connectivity.
- Learn concepts of systematic ongoing processes of network analysis, design, implementation, maintenance and security management.

Special Options with Technology Management

Southeast Missouri State University offers an accelerated master's degree for current Southeast technology management students. For more information, please see the MS: Technology Management degree map.

Southeast also offers a Master of Science in Technology Management.

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.

To learn more
Office of Admissions
(573) 651-2590
admissions@semo.edu
semo.edu

To explore the College of Science, Technology, Engineering and Mathematics online, visit semo.edu/stem

For advising
Center for Academic Advising
semo.edu/advising

COLLEGE OF SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

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Degree Map 2020-2021

This is a guide based on the 2020-2021 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 Degree Works to monitor their individual progress.

CURRICULUM CHECKLIST

TECHNOLOGY MANAGEMENT: COMPUTER NETWORK SYSTEMS ADMINISTRATION OPTION – 85 hours

Required Courses:

___IM300 Technical Communication (3)
___IM301 Industrial Safety (3)
___IM311 Statistical Process Control (3)
___IM419 Industrial Supervision (3)
___IM506 Projects in IET (3)
___MA116 Precalculus A (3)
___MA117 Precalculus B (3)
___MA139 Applied Calculus (3)
___MN220 Engineering Econ Analysis (3)
___MN260 Technical Computer Programming Applications (3)
___PH120/020 Introductory Physics I (5)
___PH121/021 Introductory Physics II (5)
___SW207 Understanding Cultural & Social Diversity (3)
___UI410 Manufacturing Research in a Global Society (3)

Computer Network Systems Administration Option

___ET160 Basic Electricity and Electronics (3)
___ET245 Logic Circuits (3)
___TN255 Microcomputer Maintenance & Troubleshooting (3)
___TN275 Introduction to Networks (3)
___TN375 Routing/Switching Essentials (3)
___TN395 Server Maintenance & Troubleshooting (3)
___TN425 Wireless Communication & Mobile Data Networks (3)
___TN435 Network Security (3
___TN475 Scaling Networks (3)
___TN563 Connecting Networks (3)
___TN565 Network Management (3)
___TN566 IP Telephony (3)

Choose 3 hours:
___CY201 Introduction to Cybersecurity (3)
___IM317 Cooperative Industrial Internship (3)

General Education Requirements – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 6 hours
- Constitution Requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)
- Civics examination

SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	IM300	3
	EN100	3	IM301	3
	ET160	3	MA117	3
	MA116	3	MN260	3
	TN255	3	TN275	3
	Total	**15**	**Total**	**15**
SECOND YEAR	ET245	3	PH121	5
	MA139	3	SW207	3
	PH120	5	TN395	3
	TN375	3	General Education	3
			General Education	3
	Total	**14**	**Total**	**17**
THIRD YEAR	IM311	3	MN220	3
	TN425	3	TN435	3
	General Education	3	TN475	3
	General Education	3	TN563	3
	General Education	3	Elective	3
	Total	**15**	**Total**	**15**
FOURTH YEAR	CY201 or IM317	3	TN565	3
	IM419	3	UI410	3
	IM506	3	General Education	3
	TN566	3	General Education	3
	General Education	3	Elective	2
	Total	**15**	**Total**	**14**

Degree requirements for all students: *a minimum of 120 credit hours, completion of the General Education program, and completion of 39 senior division hours (300-599). Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.*

**Many major courses are on a set rotation and dependent on when prerequisites are completed. The actual semester a course is taken may vary based on the rotation.*

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To learn more
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admissions@semo.edu
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