

Bachelor of Science (BS)

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.



Technology management: telecommunications & computer networking students will...

- Be prepared to design, implement, and support networked systems in both standard and enterprise settings.
- 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.
- Be provided with comprehensive knowledge, skills, and necessary training to pursue careers as information technology professionals.
- Learn concepts of network design, integration, security, administration, and management of computing and telecommunications technologies.
- Learn how to assess and identify user needs and configure and implement systems using current and emerging technologies in the networking and telecommunications field.

Career Planning

A St. Louis Outreach Office, located in Chesterfield, Mo., provides career exploration assistance, resume critiques, interview tips, job search strategies, 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 Services, located in Academic Hall 057, provides professional career advising to guide students in their career development.		

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.
- Practice experiential problem-solving skills through a senior design capstone course for students to work in teams to solve open-ended industrial projects.

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Degree Map

This is a guide based on the 2014-2015 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

TECHNOLOGY MANAGEMENT: TELECOMMUNICATIONS & COMPUTER NETWORKING OPTION

- ET160 Basic Electricity and Electronics
- ET245 Logic Circuits
- IM102 Technical Communication
- IM301 Industrial Safety
- IM311 Statistical Process Control
- IM317 Cooperative Industrial Internship
- IM419 Industrial Supervision
- IM506 Projects in IET
- MA133 Plane Trigonometry
- MA134 College Algebra (Logical Systems)
- MA139 Applied Calculus
- MN220 Engineering Econ Analysis
- MN260 Technical Computer Programming Applications
- PH120/020 Introductory Physics I
- PH121/021 Introductory Physics II
- SW207 Understanding Cult & Soc Diversity
- TN254 Fiber Optics & Networking Communications
- TN255 Microcomputer Maintenance & Troubleshooting
- TN275 Network Fundamentals
- TN375 Network Routing Protocol and Concepts
- TN395 Server Maintenance & Troubleshooting
- TN425 Wireless Comm. & Mobile Data Networks
- TN435 Network Security
- TN563 LAN Switching
- TN565 Network Management
- TN566 IP Telephony
- UI410 Manufacturing Research in a Global Society

University Studies Requirements (not already listed above):

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Behavioral Systems, Living Systems, Development of a Major Civilization, Political Systems, and two IU/UI3XX

SAMPLE FOUR-YEAR PLAN

Technology Management: Telecommunications & Computer Networking Option

Requirements for the 2014-2015 Undergraduate Bulletin

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	IM102	3
	EN100	3	MA133	3
	ET160	3	MN260	3
	MA134	3	TN254	3
	TN255	3	Written Expression	3
Total	15	Total	15	
SECOND YEAR	ET245	3	PH121	5
	MA139	3	TN375	3
	PH120	5	TN395	3
	TN275	3	SW207	3
			Oral Expression	3
Total	14	Total	17	
THIRD YEAR	IM311	3	IM301	3
	TN563	3	MN220	3
	TN425	3	TN435	3
	Literary Expression	3	Behavioral Systems	3
	Living Systems	3	IU/UI3XX	3
Total	15	Total	15	
FOURTH YEAR	IM317	3	TN565	3
	IM419	3	UI410	3
	IM506	3	Artistic Expression	3
	TN566	3	Develop of a Major Civ	3
	Political Systems	3	IU/UI3XX	3
Total	15	Total	15	

Degree requirements for all students: a minimum of 120 credit hours, completion of University Studies program, career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the freshman and senior levels

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

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To learn more
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