

## Master of Science (MS)

The Master of Science in Technology Management program incorporates appropriate theories and practices used in real-world applications for addressing the needs of modern industries.

The program consists of a core section of 6 courses, two research-based courses, and 3-4 option specific elective courses. Students can choose among the following options:

- /Cybersecurity
- /Facilities management
- /Industrial education
- /Industrial training and development
- /Manufacturing systems
- /Telecommunications systems
- /Workplace environment and health safety
- /Technical communication
- /Customized

### Becoming Career Ready...

- /Students learn to understand management and its direct role in industry.
- /Students participate in experiential learning opportunities within industries.
- /Students engage in research-related activities to solve real-world application problems.
- /Students learn production planning, applications of scientific techniques for quality control, and assurance and management of production processes.
- /Students enhance their leadership positions in industry and related enterprises.
- /Students serve as effective leaders, supervisors, and managers in technical enterprises.
- /Students become managers in a technology-based environment.

### Career Planning

- The Technology Management Program is designed to:
- /Develop advanced competencies needed by technical managers, supervisors, and related positions in world-class industries and related enterprises.
  - /Prepare students to serve as effective leaders, supervisors, and managers in technical enterprises.
  - /Broaden the career potential of individuals through the ability to implement systems, increase productivity, and improve product quality.
  - /Develop a broad perspective needed for those employed in, or aspiring to earn, positions of responsibility in industry.

### Flexibility

- /Course options that can be completed 100% online.
- /Already at Southeast? Talk to an advisor about enrolling in the accelerated program to earn graduate and undergraduate credit at the same time.

### Internship and Employment Opportunities of Recent Graduates

- Lean director
- Project QA/QC manager
- Safety supervisor
- Facility managers
- Technical managers
- Engineering managers
- Production supervisors

### Experiential Learning Opportunities for Students

- Proctor & Gamble
- TG Missouri
- Tyco Health Care
- Missouri Department of Transportation
- Southeast Missouri State University
- Facilities Management
- Technology Resource Center
- Missouri Research Corporation

### Admission Requirements

1. Hold a bachelor's degree from an accredited college or university in engineering or technology
2. An undergraduate grade point average of 3.0 on a 4.0 scale. Repeated coursework (backlogs) may also be considered. In addition, the department's graduate faculty reserve the right to require candidates to have at least a 50th percentile composite score on the Graduate Record Examination (GRE).
3. Applicants who do not meet the general and/or program's admission requirements (degree, GPA, or GRE scores) may be considered for probationary admission upon approval by the graduate program coordinator. While under probation, students may enroll in nine credit hours of course work in their program area. The nine hours must be completed with 3.0 GPA or higher.

All application materials must be submitted to the Office of Admissions by the following semester deadlines:

- Fall – August 1 (domestic students);
- July 1 (international students)
- Spring – November 1

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

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

**Graduate Program Coordinator**  
**Brad Deken**  
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## Master of Science (MS)

This is a guide based on the 2020-2021 Graduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on factors such as dual enrollment, remediation, and summer enrollment. Students meet with an academic advisor each semester and use Degree Works to monitor their progress.

### CURRICULUM CHECKLIST

#### 33 Hours Required

##### CORE REQUIREMENTS:

- FM504 Facilities Management (3)
- IM600 Managing Technology Innovation (3)
- IM602 Advanced Quality Concepts (3)
- IM603 Technology Supervision in a Diverse Workplace (3)
- IM605 Innovation for a Lean Enterprise (3)
- IM606 Knowledge Management (3)
- IM691 Understanding Graduate Research (3)

##### CHOOSE ONE TRACK:

###### Thesis Track:

- IM694 Thesis (3)
- GR699 Master's Oral Exam (0)
- 9 hours from one option

###### Applied Project Track:

- IM693 Applied Research Project (3)
- GR698 Master's Final Comp Exam (0)
- 9 hours from one option

###### Class Track:

- IM692 Modeling and Simulation (3)
- GR698 Master's Final Comp Exam (0)
- 12 hours from one option

##### CHOOSE 9-12 HOURS FROM ONE OPTION (depending on which track is chosen):

###### CYBERSECURITY

- CY501 Introduction to Cybersecurity (3)
- CY510 Information Security and Assurance (3)
- CY520 Information Security in Systems Administration (3)
- CY610 Web Application Security (3)
- CY620 Computer Forensics (3)

###### FACILITIES MANAGEMENT

- CM510 Building Information Modeling (3)
- ET570 Energy Management (3)
- EV654 Risk Assessment Applications (3)
- FM554 Facilities Operation and Supervision (3)
- IM506 Projects in Industrial & Engineering Technology (3)

###### INDUSTRIAL EDUCATION/TRAINING & DEVELOPMENT

- IE590 Assessment for Career & Technical Education (3)
- IE592 Selection & Organization of Subject Matter (3)
- IE593 Principles & Practices of Industrial Technical Teaching (3)
- IE595 Teaching Adults in Career & Technical Education (3)
- IE596 Philosophy in Career & Technical Education (3)
- IE597 Coordination of Cooperative Education (3)
- IM520 Technical Training & Development (3)
- IM521 Technical Change & HR Development (3)
- IM522 Technical Leadership in Training & Development (3)
- IM523 Training & Development of Technical Teams (3)

###### MANUFACTURING SYSTEMS

- ET568 Industrial Controls (3)
- ET570 Energy Management (3)
- IM555 Sustainable and Green Manufacturing (3)
- IM617 Manufacturing Resource Analysis (3)
- MN512 Advanced Manufacturing Systems (3)

###### TELECOMMUNICATIONS SYSTEMS

- TN562 Networking I (3)
- TN563 LAN Switching (3)
- TN564 Telecommunications & Networking II (3)
- TN565 Network Management (3)
- TN566 IP Telephony (3)
- TN625 Wireless Communications & Mobile Data Networks (3)
- TN635 Network Security (3)

##### WORKPLACE ENVIRONMENT & HEALTH SAFETY

- EV551 Hazardous Material Assessment (3)
- EV653 Occupational Health (3)
- EV654 Risk Assessment Applications (3)
- EV655 Industrial Hygiene (3)
- EV660 Introduction to Toxicology (3)
- EV661 Business Strategies for Corporate Environmental Management (3)
- EV666 HAZWOPPER (3)

##### CUSTOMIZED

Developed with consent of advisor to meet individual career needs of the student, which may include independent study and/or problems in industrial and engineering technology courses

#### 1. Recommended sequence of required course work:

**First semester:** 3 core courses

**Second semester:** 3 core courses

**Third semester:** IM691 and 2 elective courses

**Fourth semester:**

- Degree path 1: Thesis and 1 elective
- Degree path 2: IM693 and 1 elective
- Degree path 3: IM692 and 2 electives

**NOTE:** If elective courses chosen require prerequisites, it may be necessary to take these in the first year of classes.

#### 2.

#### 3.

#### Why should I study Technology Management at Southeast?

The Master of Science in technology management program at Southeast was designed with the help from industries we serve in the southeast Missouri regions, including St. Louis. It serves technical managers, production supervisors, engineers, technicians, and related professionals who wish to study full time or part time to prepare for or enhance their leadership positions in industry and related enterprises. Upon completing the program, graduates serve as effective leaders, supervisors, and managers in technical enterprises.