

Master of Science (MS)

The Department of Polytechnic Studies offers the MS degree in Technology Management with different option areas. The program consists of a core section (six courses), two research based courses, and 3-4 option specific elective courses. The Master of Science in Technology Management program at Southeast can be completed with the following options:

- Cybersecurity
- Facilities Management
- Industrial Education/Training & Development
- Manufacturing Systems
- Telecommunications Systems
- Workplace Environment & Health Safety
- Customized

Technology Management students will...

The curricula for the graduate program have been designed to incorporate appropriate theories and practices utilized in "real-world" applications for addressing the needs of modern industries. Technology Management students will:

- Understand management and its direct role in industry
- Learn production planning, applications of scientific techniques for quality control, assurance and management of production processes.
- Enhance their leadership positions in industry and related enterprises
- Serve as effective leaders, supervisors, and managers in technical enterprises
- 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, positions of responsibility in industry

Internship and Employment Opportunities of Recent Graduates

Our program is "designed to serve technical managers, production supervisors, engineers, technicians, and related types of individuals who wish to study full-time or part time to enhance their leadership in industry and related enterprises.

Potential careers for graduates of MS Technology Management program includes job titles such as:

- Lean Director
- Project Manager QA/QC Manager
- Safety Supervisor
- Facility Managers
- Technical Managers
- Engineering Managers
- Production Supervisors

The department provides opportunities for its students to participate in experiential learning opportunities with industries in Southeast Missouri and St. Louis where they engage in research related activities to solve "real world" application problems. Examples of industries that has participated in such activities includes but not limited to:

- 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. For consideration, applicants must hold a baccalaureate degree from an accredited college or university in industrial/engineering technology, engineering, industrial/technical education, or related fields with coursework or significant background in engineering economics quality control, and process management. An applicant with another degree, with a portfolio that can verify a record of successful industrial experience as a technical manager, can be admitted after completing the required prerequisite courses.
2. Consideration for regular admission is based on an undergraduate grade point average of at least 3.25 on a 4.0 scale. Students who do not meet the regular admission requirements may be conditionally admitted and allowed to complete only nine graduate semester hours. Upon completion of the nine semester hours at Southeast, the student must have a grade point average of 3.33 on a 4.0 to be considered for full admission to the program. For more information, please check our website: <http://www.semo.edu/iet/academics/ms.html>

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This is a guide based on the 2016-2017 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 DegreeWorks to monitor their progress.

CURRICULUM CHECKLIST**Technology Management Core Courses**

The core group consists of the following courses (all are required):

- FM504 Facilities Management (3)
- IM600 Managing Technology Innovation (3)
- IM602 Advanced Quality Concepts (3)
- IM603 Technology Supervision in Diverse Workplace (3)
- IM605 Innovation for a Lean Enterprise (3)
- IM606 Knowledge Management (3)
- IM691 Methods of Research in Technology Management (3)
- IM692 Modeling and Simulation, GR698 (0) and 12 option hours
OR
- IM693 Applied Research Project, GR699 (0) and 9 option hours
OR
- IM694 Thesis, GR699 (0) and 9 option hours

Choose nine to twelve hours from one option:

3D ANIMATION & GAMING

- GM525 Virtuality in Gaming (3)
- GM580 Motion Capture Technology (3)
- GM585 Computer Special Effects (3)
- GM680 Stereoscopic Imaging (3)

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)

Manufacturing Systems

- ET568 Industrial Controls (3)
- ET570 Energy Management (3)
- IM617 Manufacturing Resource Analysis (3)
- MN512 Advanced Manufacturing Systems (3)
- MN516 Manufacturing Seminar (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)

Options, continued:**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 Corp. Env. Mgmt. (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 & Engineering Technology courses

1. Recommended sequence of required coursework:

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

Degree Requirements

The Master of Science in Technology Management program requires a minimum of 33 semester credit hours consisting of

- 6 core courses

- Graduate research course

- Three to four elective courses based on the chosen focus area

- Applied Research Project/Thesis / graduate paper: depends on the chosen degree path. For more in-depth requirements and a listing of required courses, visit our department website

<http://www.semo.edu/iet/academics/ms.html>

2. Why should I study Technology Management at Southeast?

The MS Technology Management program at Southeast is designed with the help from industries we serve in the Southeast Missouri and St. Louis regions. It is also designed to serve technical managers, production supervisors, engineers, technicians, and related types of individuals 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 will serve as effective leaders, supervisors, and managers in technical enterprises.

The Department of Polytechnic Studies is recognized as a "Center of Excellence in Advanced Manufacturing Technology" and has programs accredited by the National Association of Industrial Technology. The programs are housed in the Otto and Della Seabaugh Polytechnic Building.