Engineering Management

As a student in engineering management you will have the opportunity to prepare for leadership roles in today's complex environment as an engineer, a manager and an educator.

Engineering management is the degree that "bridges the gap" between engineering and business.

Missouri S&T offered the nation's first degree in engineering management. The curriculum integrates engineering and management knowledge while optimizing the use of people, equipment, money and information.

Graduates are capable of designing, implementing, operating and optimizing sophisticated high technology enterprises in manufacturing, government or service sectors of our global economy.

Engineering management may be for you if you're interested in:

- Management of technology: focus on administration and decision making aspects of an organization.
- Industrial engineering: focus on acquiring, analyzing and interpreting data to improve productivity, quality and safety.

Missouri S&T's ABET-accredited program combines basic science and engineering principles with a strong emphasis in design and a solid knowledge of management. The bachelor's program includes basic chemistry, physics, mathematics, and engineering science courses required by all engineering disciplines at Missouri S&T.

These courses are followed by a core coursework complemented by coursework related to a specialized area of study chosen by the student. As a senior you will take a design course to integrate technical and managerial skills you have acquired.

Emphasis Areas in Engineering Management

- Industrial Engineering
- Management of Technology
- General (Customized) Emphasis

Cooperative Education Program

Cooperative education is a structured educational strategy integrating classroom studies with learning through productive work experiences in a field related to a students academic or career goals. It provides progressive experiences in integrating theory and practice. In Engineering Management, students have worked with a wide variety of major companies through our program. Work for a semester or during the summer and build your resume.

Top Hiring Employers

- Ford Motors
- Boeing
- Accenture
- Hallmark
- General Electric
- Ibx
- Sprint
- IBM
- Accenture
- Garmin
- General Motors
- American Express

Entry Level Job Titles

- Quality Assurance Engineer
- Production Supervisor
- Supervisory Trainee
- Packaging Engineer
- Marketing Engineer
- Field Engineer
- Industrial Engineer
- Senior Engineer
- Loss Prevention Engineer
- Manufacturing Engineer

Scholarship Information

Departmental scholarships are available on a competitive basis to all levels of students.

Departmental Contact Information:

Department Chair: Dr. David Enke
573-341-4572 223 Engineering Management Bldg emse.mst.edu
emgt@mst.edu
Faculty

Professors:
- Cihan Dagli, Ph.D., Birmingham
- William Daughton, Ph.D., Missouri-Columbia
- David Enke, Ph.D., Missouri S&T (Chair)
- Kenneth Ragsdell, Ph.D., Texas
- Susan Murray, Ph.D., Texas A&M
- Venkat Allada, Ph.D., Cincinnati
- Henry Wiebe, Ph.D., Arkansas

Associate Professor:
- Stephen Raper, Ph.D., Missouri S&T

Assistant Professors:
- Elizabeth Cudney, Ph.D., Missouri S&T
- Steven Corns, Ph.D., Iowa State
- Abhijit Gosavi, Ph.D., South Florida
- Ivan Guardiola, Ph.D., Texas Tech
- Dincer Konue, Ph.D., Florida
- Zhen Liu, Ph.D., Northwestern
- Suzanna Long, Ph.D., Boston College
- Ruwen Qin, Ph.D., Penn State
- Katie Granthan, Ph.D., Missouri S&T
- Brian Smith, Ph.D., Purdue

Associate Teaching Professor:
- Benjamin Dow, Ph.D., Purdue

Assistant Teaching Professor:
- Joan Schumann, Ph.D., Southern Mississippi

Educational Objectives

Graduates of the Engineering Management Program will exhibit proficiency and excellence in the areas of technology, finance, human relations, communications, and professional behavior. Within these areas of proficiency, graduates will exhibit the explicit skills and knowledge as described below.

Analytical Problem Solving: Graduates are able to analyze and solve complex problems.

Finance: Graduates are responsible and financially aware managers and leaders who utilize basic finance, accounting, engineering economy and risk analysis methods to manage and identify the financial impact of business opportunities.

Human Relations: Graduates are competent leaders who develop and utilize the skills and abilities of teams and individuals within the organization.

Communication: Graduates engage others through effective oral, technical and written communication.

Professional Behavior: Graduates will continually grow in their awareness and understanding of the societal, ethical, cultural, legal and political issues prevalent in an increasingly global society.

Notes

Detailed information on course equivalencies, acceptable credits for elective coursework, grade requirements and prerequisites is available from S&T’s Registrar’s Office at registrar.mst.edu.

All Engineering Management students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade is not required; however, this is the first step to becoming a registered professional engineer.

Bachelor of Science

Engineering Management........................................128 credit hours

Entering freshmen desiring to study Engineering Management are admitted to the Freshman Engineering Program. They may, however, state an Engineering Management preference, which will be used as a consideration for available freshman departmental scholarships. The focus of the Freshmen Engineering program is on enhanced advising and career counseling, with the goal of providing to the student the information necessary to make an informed career decision.

FIRST YEAR

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<thead>
<tr>
<th>Course Code</th>
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<th>Credit</th>
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<tbody>
<tr>
<td>Chem 1310</td>
<td>General Chemistry w/ Lab</td>
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<td>Eng 1120</td>
<td>Exposition</td>
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<td>MechE 1720</td>
<td>Engineering Design</td>
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<tr>
<td>Math 1124</td>
<td>Calculus for Engineers</td>
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<tr>
<td>Math 1215</td>
<td>Calculus for Engineers II</td>
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<td>Phys 1125</td>
<td>Engineering Physics I</td>
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<td>Hist 1200</td>
<td>U.S. History or Pol Sci 1200</td>
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<tr>
<td>Econ 1100</td>
<td>Microeconomics or Macroeconomics</td>
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<td>Elective/Humanities</td>
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SECOND YEAR

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<tr>
<td>Emgt 2100</td>
<td>Mgt of Engineering &amp; Technology</td>
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<tr>
<td>Emgt 1210</td>
<td>Economic Analysis of Engineering Projects</td>
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<tr>
<td>Emgt 2210</td>
<td>Engineering Accounting &amp; Financial Mgt</td>
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<td>Math 2222</td>
<td>Calculus III/Analytic Geometry</td>
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<td>Math 3304</td>
<td>Differential Equations</td>
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<td>Stat 3115</td>
<td>Stat or Stat 2177 (Intro to Prob)</td>
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<td>Phys 2135</td>
<td>Engineering Physics II</td>
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<td>CivE 2200</td>
<td>Engr Mech/Statics</td>
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<td>MechE 2350</td>
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<td>Cmp Sc 1971</td>
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<td>Psych 1010</td>
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THIRD YEAR

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<tr>
<td>Emgt 3510</td>
<td>Marketing Management</td>
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<tr>
<td>Emgt 3210</td>
<td>Operations &amp; Production Management</td>
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<td>Emgt 3320</td>
<td>Project Management</td>
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<td>Emgt 4710</td>
<td>Quality Philosophies &amp; Methods</td>
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<td>Mechanics of Materials</td>
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<td>CivE 2221</td>
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<td>English 3560</td>
<td>Technical Writing</td>
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<td>Sp&amp;MS 1185</td>
<td>Oral Communication</td>
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FOURTH YEAR

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<td>Gen Mgmt Design &amp; Integration</td>
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<td>Emgt 4907</td>
<td>Senior Design</td>
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<td>Emgt Emphasis Course 3</td>
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<td>Elective/Free</td>
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TOTAL CREDIT HOURS: 128