Engineering Management (Capital)

Applicants must submit the following:

- a complete Graduate School application for admission (http://gradschool.psu.edu/prospective-students/how-to-apply/) with the nonrefundable application fee.
- official transcripts from all post-secondary institutions attended (http://gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission/).
- three (3) letters of reference, especially from faculty who can evaluate academic potential.
- a personal statement of technical interest, goals, and experience for those indicating interest in an assistantship and to be eligible for many graduate fellowship opportunities.

The language of instruction at Penn State is English. English proficiency test scores (TOEFL/IELTS) may be required for international applicants. See GCAC-305 Admission Requirements for International Students (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students/) for more information.

Degree Requirements

Master of Engineering Management (M.E.M.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-700 Professional Degree Policies (http://gradschool.psu.edu/graduate-education-policies/).

All graduate students in Engineering Management are required to adhere to the requirements of Graduate Council, listed in the link above. These, however, are minimum requirements and the policies, procedures, and regulations listed below are additional and more specific for graduate students pursuing the Master of Engineering Management. Advisers will call pertinent regulations to the attention of their advisees, but it should be understood that it is the student’s personal responsibility to see that all requirements listed are satisfied.

The Master of Engineering Management (M.E.M.) is a 33-credit graduate program that integrates engineering with business and management principles. The multidisciplinary, broadly based M.E.M. program provides engineers with business and management perspectives to enhance capabilities in management of large projects. Of the 33 credits required for the degree, 30 must be earned in 500-level graduate courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT</td>
<td>Financial Statement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EMCH</td>
<td>Mathematical Methods in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ENGMT</td>
<td>Engineering for Energy and the Environment</td>
<td>3</td>
</tr>
<tr>
<td>FINAN</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>MNGMT</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>MRKT</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>SYSEN</td>
<td>Technical Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

The curriculum requires the completion of two free electives (6 credits) in any of the engineering disciplines. A list of these elective courses is maintained by the graduate program office.

Culminating Experience

All students are required to complete a culminating experience through a two-course capstone course sequence:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BUS</td>
<td>Strategic Management</td>
<td>3</td>
</tr>
<tr>
<td>MFGSE</td>
<td>Design for Manufacturability I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 33

Minor

A graduate minor is available in any approved graduate major or dual-title program. The default requirements for a graduate minor are stated in Graduate Council policies listed under GCAC-600 Research Degree.
Policies (http://gradschool.psu.edu/graduate-education-policies/) and GCAC-700 Professional Degree Policies (http://gradschool.psu.edu/graduate-education-policies/), depending on the type of degree the student is pursuing:

- GCAC-611 Minor - Research Doctorate (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-611-minor-research-doctorate/)
- GCAC-641 Minor - Research Master’s (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-641-minor-research-masters/)
- GCAC-709 Minor - Professional Doctorate (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-709-professional-doctoral-minor/)
- GCAC-741 Minor - Professional Master’s (https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-741-masters-minor-professional/)

Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (http://gradschool.psu.edu/graduate-funding/) section of The Graduate School’s website. Students on graduate assistantships must adhere to the course load limits (http://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants/) set by The Graduate School.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Outcomes

1. **KNOW.** Graduates will be able to demonstrate mastery of core principles in engineering management.

2. **PROBLEM SOLVING.**
   a. Graduates will be able to apply business strategy to solve engineering management problems.
   b. Graduates will be able to apply project management to solve engineering management problems.

3. **COMMUNICATE.** Graduates will be able to effectively communicate project outcomes, such as ideas, requirements, business analyses, findings, and justification for decisions.

4. **CRITICAL THINKING.** Graduates will be able to critically and creatively conceptualize, evaluate, and formulate engineering management problems, as well as perform the analyses required for problem definition.

5. **ETHICS AND PROFESSIONALISM.** Graduates will be able to demonstrate an understanding of professional and ethical responsibility and conduct themselves accordingly.