

# ENGINEERING MANAGEMENT (CAPITAL)

<b>Graduate Program Head</b>	Rafic Bachnak
<b>Program Code</b>	EM
<b>Campus(es)</b>	Harrisburg (M.P.S.)
<b>Degrees Conferred</b>	Master of Professional Studies (M.P.S.)
<b>The Graduate Faculty</b>	View ( <a href="https://secure.gradsch.psu.edu/gpms/index.cfm?searchType=fac&amp;prog=EM">https://secure.gradsch.psu.edu/gpms/index.cfm?searchType=fac&amp;prog=EM</a> )

The Master of Professional Studies (M.P.S.) Engineering Management degree program is a graduate professional degree program that integrates engineering with business and management principles. The program provides engineers with business and management perspectives and enhances their capabilities in the management of major projects, business initiatives, policies, and other activities in both the public and private sectors. Furthermore, it highlights the importance of technology strategy and intellectual properties management, and offers an environment for personal and professional networking that could hold significant future dividend.

The program is offered at Penn State Harrisburg as a partnership between the School of Science, Engineering, and Technology and the School of Business Administration, which is accredited at the undergraduate and graduate levels by AACSB International—the Association to Advance Collegiate Schools of Business International.

## Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (<http://gradschool.psu.edu/prospective-students/how-to-apply>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<http://gradschool.psu.edu/graduate-education-policies>).

Applicants must have undergraduate degrees in engineering or technology from an accredited university and must have completed undergraduate course work in calculus and economics.

An undergraduate cumulative grade-point average of 3.0 or better on a 4.0 scale, and scores from the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) are required for admission. Students demonstrating high potential but failing to meet the minimum GMAT or GRE score requirements may be considered on the basis of professional accomplishments and other criteria that may predict success in the program.

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
- test scores from the Graduate Management Admission Test (GMAT) or the Graduate Record Examination (GRE) [GRE scores are required 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 Professional Studies (M.P.S.)

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 graduates students pursuing the M.P.S. degree in 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 M.P.S. in Engineering Management is a 33-credit graduate program that integrates engineering with business and management principles. The multidisciplinary, broadly based M.P.S. 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.

Code	Title	Credits
<b>Required Courses</b>		
ACCT 501	Financial Statement Analysis	3
EMCH 524A	Mathematical Methods in Engineering	3
ENGMT 511	Engineering for Energy and the Environment	3
FINAN 521	Corporate Finance	3
MNGMT 511	Organizational Behavior	3
MRKT 513	Marketing Management	3
SYSEN 505	Technical Project Management	3
<b>Electives</b>		
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.		6
<b>Culminating Experience</b>		
All students are required to complete a culminating experience through a two-course capstone course sequence:		
BUS 588	Strategic Management	3
MFGSE 550	Design for Manufacturability I	3
Total Credits		33

## 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. **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.
3. **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.
4. **COMMUNICATE.** Graduates will be able to effectively communicate project outcomes, such as ideas, requirements, business analyses, findings, and justification for decisions.
5. **ETHICS AND PROFESSIONALISM.** Graduates will be able to demonstrate an understanding of professional and ethical responsibility and conduct themselves accordingly.

## Contact

<b>Campus</b>	Harrisburg
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<b>Program Website</b>	View ( <a href="https://harrisburg.psu.edu/science-engineering-technology/engineering-science-management/master-professional-studies-engineering-management">https://harrisburg.psu.edu/science-engineering-technology/engineering-science-management/master-professional-studies-engineering-management</a> )