

ENGINEERING MANAGEMENT (GREAT VALLEY)

Graduate Program Head	Raghu Sangwan
Program Code	ENGMT
Campus(es)	Great Valley (M.E.M.) World Campus (M.E.M.)
Degrees Conferred	Master of Engineering Management (M.E.M.)
The Graduate Faculty	View (https://secure.gradsch.psu.edu/gpms/?searchType=fac&prog=ENGMT)

The Master of Engineering Management (MEM) is a 33-credit interdisciplinary graduate professional degree program that aims to prepare students the skills to manage complex, heterogeneous engineering projects, products, and services with the theoretical understanding to become leaders in technical organizations. The program offers experience in the analytical approaches to solving technical and sociotechnical problems, leading technical people and fostering effective teams, and managing technical projects in the presence of uncertainty and risk.

The program is offered at Penn State Great Valley and online through Penn State World Campus.

Admission Requirements

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

The Master of Engineering Management is developed for students with a background in engineering or science. Applicants with a four year undergraduate degree in engineering, mathematics, physics, computer science, or a related discipline will be considered. Applicants must have completed Calculus I equivalent to Penn State University's MATH 140. Test scores from the GMAT or GRE exams are not required, but will be considered by the admissions committee if submitted. Jr/Sr GPA of 3.0 or better on a 4.0 scale is required. Students must have three years or more work experience in an engineering or engineering-related position. Applicants must submit two letters of reference, and a one page personal statement of relevant experience and goals.

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 (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-international-students/>) for more information.

Degree Requirements

Master of Engineering Management

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

All students in the Master of Engineering Management program must complete a minimum of 33 credits at the 400, 500, or 800 level, with a minimum of 18 credits at the 500 or 800 level, and at least 6 credits at the 500 level. Students must maintain an average grade-point average of 3.0 or better in all course work. The program curriculum includes 18 credits of core courses, 12 credits of electives, and 3 credits of capstone experience.

Code	Title	Credits
Required Courses		
Prescribed courses for the degree include the following 18 credits of core courses:		
ENGMT 501	Engineering Management Science	3
ENGMT 510	Economics and Financial Studies for Engineers	3
SYSEN 505	Technical Project Management	3
SYSEN 536	Decision and Risk Analysis in Engineering	3
SYSEN 850	Creativity & Problem Solving I	3
ENGMT 841	Application of Statistics in Quality and Continuous Improvement	3
Electives		
An additional 12 credits of elective courses must be selected from the approved list of elective courses maintained by the graduate program office.		12
Culminating Experience		
ENGMT 539	Engineering Management Strategy	3
Total Credits		33

All students will complete their program of study with the 3-credit capstone course (ENGMT 539) that provides students with an opportunity to apply their knowledge of the engineering management theories, methods, processes, and tools, learned throughout their program, in a culminating and summative experience. The choice of project topic and exact form will be determined by the instructor. A written paper based on the applied project is required and must contain project description, analysis, and interpretation of its findings. Students will be encouraged to upload their capstone work products to be available publicly via ScholarSphere: <https://scholarsphere.psu.edu/>. World Campus Engineering Management students will be encouraged to participate in the World Campus Graduate Capstone Exhibition.

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 (<https://gradschool.psu.edu/graduate-education-policies/>) and GCAC-700 Professional Degree Policies (<https://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

Refer to the Tuition & Funding (<https://gradschool.psu.edu/graduate-funding/>) section of The Graduate School's website. Students in this program are not eligible for graduate assistantships.

Financial aid for students in on-campus programs is in the form of student loans and a limited number of small scholarships, as described on the Penn State Great Valley website (<https://greatvalley.psu.edu/tuition-and-financial-aid/>).

World Campus students in graduate degree programs may be eligible for financial aid. Refer to the Tuition and Financial Aid section (<https://www.worldcampus.psu.edu/tuition-and-financial-aid/>) of the World Campus website for more information.

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.

Engineering Management (ENGMT) Course List (<https://bulletins.psu.edu/university-course-descriptions/graduate/engmt/>)

Learning Outcomes

1. **KNOW.** Demonstrate knowledge of foundational principles of engineering management including technical, social, and economic factors as applied to projects and personnel.
2. **CRITICAL THINKING.** Evaluate the financial aspects of projects and integrate them with different technical and engineering components.
3. **PROBLEM SOLVING.** Understand and estimate risk and its impact on the decision making process.
4. **COMMUNICATE.** Demonstrate the ability to communicate project findings effectively in written, spoken, and visual presentations to project stakeholders and a variety of professional audiences.
5. **TEAMWORK.** Demonstrate the ability to work with multi-disciplinary teams.

Contact

Campus	Great Valley
Graduate Program Head	Raghu Sangwan
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Nil Hande Ergin
Program Contact	MICHELLE WHALEN Penn State Great Valley 30 East Swedesford Road Malvern PA 19355 mmw6441@psu.edu (610) 648-3288
Program Website	View (http://greatvalley.psu.edu/academics/masters-degrees/engineering-management/)
Campus	World Campus
Graduate Program Head	Raghu Sangwan
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)	Nil Hande Ergin
Program Contact	MICHELLE WHALEN Penn State Great Valley 30 East Swedesford Road Malvern PA 19355 mmw6441@psu.edu (610) 648-3288
Program Website	View (http://www.worldcampus.psu.edu/degrees-and-certificates/engineering-management-masters/overview/)