ENGINEERING MANAGEMENT (MS)

Offered at: San Luis Obispo Campus

The M.S. in Engineering Management program is designed to inspire and educate a new generation of technical leaders with analytical knowledge, business insight, advanced communication and project management skills. The program equips students to design and implement data-driven, innovative, and effective solutions for improving processes and systems in industry and society.

Emphasizing learn-by-doing and a project-based engineering education approach. Students typically work with a faculty advisor to research on solving real world problems. The MS Engineering Management program helps students sharpen both technical skills and non-technical skills required for success in their careers.

Requirements for Admission

Students apply via Cal State Apply (https://www.calstate.edu/apply/) and must submit a transcript, personal statement, resume, and three letters of recommendation. GRE is not required.

International Students must meet all the standard eligibility criteria and demonstrate proficiency in English (English Proficiency Exam Requirements)

Prerequisites: Applicants should have completed a four-year college course of study and hold a bachelor's degree in any engineering or related discipline such as the mathematical, physical, or computer science disciplines, from an institution accredited by a regional accrediting association.

Minimum GPA: Students must have a minimum undergraduate grade point average (GPA) of 3.00. Exceptions will be considered if the applicant is in the top 25% of their graduating class.

Application due date: Fall enrollment only. Please see Graduate Student Dates and Deadlines (https://www.calpoly.edu/admissions/graduate-student/dates-and-deadlines/) for application deadlines.

Advancement to Candidacy

Completion of at least 6 units of graduate coursework with cumulative and higher ed GPA or higher and an approved culminating experience proposal.

Culminating Experience

Project: Culminating experience focuses on a significant industrial or applied research project problem in the engineering management field. The project involves student(s), faculty, and possibly a sponsoring representative(s) in a collaborative learning environment and culminates in a comprehensive written report and presentation.

A blended program provides a potentially accelerated route to a graduate degree, with simultaneous conferring of both Bachelor's and Master's degrees. Students in the blended program are provided with a seamless process whereby they can progress from undergraduate to graduate status. Students are required to complete all requirements for both degrees.

Blended Options

For the Blended MS in Engineering Management, acceptable undergraduate degrees are:

- BS Industrial Engineering + MS Engineering Management
- BS Manufacturing Engineering + MS Engineering Management
- BS Mechanical Engineering + MS Engineering Management
- BS Materials Engineering + MS Engineering Management
- BS Biomedical Engineering + MS Engineering Management
- BS Aerospace Engineering + MS Engineering Management
- BS Environmental Engineering + MS Engineering Management
- BS Software Engineering + MS Engineering Management

Units Double Counted

The blended programs allow for the double counting of up to 6 undergraduate course units toward the master's degree requirements. Only specific 4000-5000 level course units may be double counted. Double counted units must be approved by the Graduate Programs Coordinator. Students cannot double count senior project units, as well as units of courses that do not have rigorous assessment methods.

Requirements for Admission for the Blended Program

Students apply directly to the program and not through Cal State Apply; please contact the department graduate coordinator (https://grad.calpoly.edu/about/coordinators.html).

- Prerequisites: must be a current BS student in the above degree programs. Students must have completed all lower division classes and the GWR prior to transition to graduate status.
- Minimum GPA: 3.0
- Timeline for admission: The Blended MS program has admissions fall and spring semesters. Students should apply near the beginning of the semester before their planned undergraduate graduation (e.g., Students scheduled to complete their undergraduate program in Spring would apply early in Fall semester). Please see the MS Engineering Management website (https://ime.calpoly.edu/graduate-programs/) for specific deadlines and more details.
- Application materials: refer to the MS Engineering Management website (https://ime.calpoly.edu/graduate-programs/) for details
  - IME BMS Program Application E-Form (IME Department)
  - Blended Programs Application Approval E-Form (University)
  - One page resume: list in reverse chronological order education, employment, publications (if any), extracurricular activities, and organization/society memberships.
  - Cover Letter including a Statement of Purpose and a summary of your career objectives and work experience with reference to the chosen field of graduate study. Include the names and contact information of three references.
  - Provide proof of completion of all lower-division GEs by attaching a screenshot from your DPR to your application packet.
  - Blended applicants are encouraged to submit GRE scores to strengthen their application and increase the likelihood of admission to the program.

Program Learning Objectives

1. Summarize, synthesize, and evaluate existing methods/solutions of engineering problems.
2. Solve complex technical and operational problems to meet both business and customer needs.
3. Analyze and interpret quantitative and qualitative data to make sound engineering and business decisions.
4. Lead multidisciplinary teams and projects; assess tools and techniques, resources, and organizational systems for the successful management of projects.
5. Estimate and control engineering cost.
6. Communicate engineering ideas/solutions effectively across the entire enterprise.

Code	Title	Units
REQUIRED COURSES		
IME 5507	Graduate Seminar	2
IME 5598	Project	4
Data analysis area		
Select from the following: [1]		3
IME 5503	Applied Statistical Methods in Engineering	
IME 5565	Predictive Data Analytics for Engineers	
Finance area		
Select from the following:		3
IME 5544	Advanced Engineering Economy	
IME 5577	Engineering Entrepreneurship	
Design area		
Select from the following:		3
IME 5527	Design of Experiments for Industrial Applications	
IME 5541	Advanced Operations Research	
IME 5543	Applied Human Factors	
IME 5545	Advanced Simulation	
Management area		
Select from the following: [1]		3
IME 5535	Change Management for Engineering Leaders	
IME 5556	Technological Project Management	
Systems area		
Select from the following: [1]		3
IME 4435	Reliability for Design and Testing	
IME 5510	Model-Based Systems Engineering	
IME 5520	Advanced Information Systems for Operations	

IME 5580	Manufacturing Systems	
Approved Technical Electives		
Select any 4000-5000 level IME courses		9
Total Units		**30**

[1] Consultation with graduate advisor is recommended prior to selecting a course.