



**UNIVERSITY OF THE PACIFIC**

# Engineering Management

The Bachelor of Science program in Engineering Management consists of a minimum of 120 units of academic work and (except for exempt foreign students) a minimum of 32 units of Cooperative Education credit. This program is designed to provide flexibility to students. Students take a full year of upper division engineering courses and then specialize in the area of their choice by choosing engineering electives.

You may choose to complete all the requirements for the degree in 4 years to 5 years depending on your high school preparedness, desired semester workload and motivation. Contact the EMGT department for further details.

## COOPERATIVE EDUCATION PROGRAM (CO-OP)

Practical work experience (cooperative education or CO-OP) is an integral part of engineering management education at University of the Pacific. All students who are U.S. citizens are required to complete 32 units of CO-OP, which entails a seven month work period. Experience gained during CO-OP gives Pacific engineering management graduates a significant advantage when they seek employment after graduation.

## ENGINEERING MANAGEMENT OBJECTIVES

The Engineering Management Program at University of the Pacific seeks to graduate engineers ready to enter professional practice or pursue graduate level studies. The objectives of the Engineering Management Program are to graduate engineers that:

- + Are ready to enter professional practice or pursue graduate level studies
- + Use engineering knowledge as a base for solving problems requiring business and analytical skills
- + Are able to work in a wide array of different industries, positions and projects
- + Seek continual professional development and lifelong learning

## ENGINEERING MANAGEMENT CAREER PATHS:

- + Construction management
- + Technical marketing
- + Manufacturing engineering
- + Global engineering
- + Environmental studies
- + Product development
- + Biotech industries

For more information, contact:

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UNIVERSITY OF THE  
**PACIFIC**

School of Engineering  
and Computer Science

# BACHELOR OF SCIENCE IN ENGINEERING MANAGEMENT - PROGRAM CURRICULUM

## Sample Curriculum for the Bachelor of Science in Engineering Management

1 <sup>ST</sup> YEAR	FALL	ENGR 10 [1] Dean's Seminar Engr. Science elective [3 - 4] MATH 51 [4] Calculus I PACS 1 [4] Pacific Seminar I ECON 53 [4] Microeconomics Total units [16 - 17]
	SPRING	PHYS 53 [5] Physics I MATH 53 [4] Calculus II PACS 2 [4] Pacific Seminar II Math/Science Elective [4] Total units [17]
2 <sup>ND</sup> YEAR	FALL	ENGR 20 [3] Mechanics I (Statics) ENGR 19 [3] Comp. Applications in Engr. MATH 55 [4] Calculus III Engr. Science Elective [3 - 4] GE Elective [4] Total units [17 - 18]
	SPRING	Engr. Discipline Elective [4] BUSI 31 [4] Math/Science Elective [3] MATH 57 [4] Differential Equations ENGR 30 [3] Engineering Ethics (GEIIB) Total units [18]
	SUMMER	EMGT 170 [4] Project Decision Making EMGT/BUSI elective [4] Engr. Discipline Elective [4] GE Elective [3 - 4] Total units [15 - 16]
3 <sup>RD</sup> YEAR	FALL	ENGR 25 [1] Professional Practice Engr. Discipline Elective [3 - 4] MATH 37 Probability and Statistics [4] EMGT/BUSI Elective. [4] Engr. Discipline Elective. [4] Total units [16 - 17]
	SPRING	ENGR 181 [16] Professional Practice (spring of 3rd year)
	SUMMER	ENGR 182 [16] Professional Practice (summer of 3rd year)  Total CO-OP units [32]
4 <sup>TH</sup> YEAR	FALL	Engr. Discipline Elective [4] Engr. Discipline Elective. [4] EMGT 176 Systems Engineering Mgmt. [4] EMGT 162 [3] Total units [15]
	SPRING	EMGT 174 [4] Project Mgmt. Engr. EMGT 195 [4] Engineering Synthesis EMGT 142/142L. [4] PACS 3 [3] Pacific Seminar III Total units [15]

### ENGINEERING SCIENCE AND ENGINEERING MANAGEMENT CORE:

ENGR 010 [1] DEAN'S SEMINAR  
ENGR 019 [3] COMPUTER APPLICATIONS IN ENGINEERING  
ENGR 020 [3] ENGINEERING MECHANICS I (STATICS)  
ENGR 025 [1] PROFESSIONAL PRACTICE SEMINAR

### ENGINEERING SCIENCE ELECTIVES [CHOOSE TWO COURSES]

BUSI 031 [4] FINANCIAL ACCOUNTING  
BUSI/EMGT ELECTIVES [CHOOSE TWO COURSES]  
EMGT 142 [3] DESIGN AND INNOVATION  
EMGT 142L [1] DESIGN AND INNOVATION LAB  
EMGT 162 [3] INTRO TO DATA ANALYTICS FOR ENGINEERS & COMP SCI  
EMGT 170 [4] PROJECT DECISION MAKING  
EMGT 174 [3] ENGINEERING PROJECT MANAGEMENT  
EMGT 176 [4] SYSTEMS ENGINEERING MANAGEMENT  
EMGT 195 [4] ENGINEERING MANAGEMENT SENIOR PROJECT

### PROFESSIONAL PRACTICE (CO-OP)

ENGR 181-183 [1-32]  
32 UNITS OF CO-OP ARE REQUIRED TO GRADUATE  
CO-OP IS OPTIONAL FOR NON - U.S. CITIZENS.

### UNIT BREAKDOWN

MATH/SCIENCE- 33 UNITS  
GE COURSES- 24 UNITS  
ENGINEERING SCIENCE- 13 UNITS  
ENGINEERING MANAGEMENT- 31 UNITS  
ENGINEERING DISCIPLINE- 27 UNITS

### MATHEMATICS & BASIC SCIENCE

MATH 051 [4] CALCULUS I  
MATH 053 [4] CALCULUS II  
MATH 055 [4] CALCULUS III  
MATH 057 [4] APPLIED DIFFERENTIAL EQUATIONS  
MATH 039 [4] PROBABILITY WITH APPLICATIONS TO STATISTICS  
PHYS 053 [5] PHYSICS I  
MATH/SCIENCE ELECTIVE [6-8]

### GENERAL EDUCATION

PACS 001 [4] PACIFIC SEMINAR 1  
PACS 002 [4] PACIFIC SEMINAR 2  
PACS 003 [3] PACIFIC SEMINAR 3  
ECON 053 [4] INTRODUCTORY MICROECONOMICS  
GEN. ED. [3-4] (I-A, I-B, OR I-C)  
GEN. ED. [3-4] (II-A OR II-C)  
ENGR 030 [3] ENGR., ETHICS & SOCIETY (II-B)