

**PROGRESSIVE DEGREE PROGRAM  
COURSE PLAN TEMPLATE**

<b>USC SCHOOL</b>	Viterbi School of Engineering
<b>ACADEMIC DEPARTMENT</b>	Daniel J. Epstein Department of Industrial & Systems Engineering
<b>GRADUATE PROGRAM</b>	Engineering Management
<b>POST CODE</b>	324
<b>TERM EFFECTIVE DATE</b>	Spring 2021

**PROGRAM DESCRIPTION**

A brief description of the graduate program.

The MS in Engineering Management program (MSEMT) is designed for students with undergraduate degrees in engineering or related sciences to prepare them for management responsibilities. As an MSEMT student, you will learn how to lead technology projects as well as manage teams, engineering functions, and companies. In addition, you will gain an understanding of the economic decision making processes. More than just theory, the MSEMT program offers real-world examples provided by instructors who have years of relevant industry experience, covering topics such as technology creation, management of invention, information systems, managerial accounting, and quantitative methods.

**COMMON BACHELOR DEGREE PROGRAM PATHWAYS**

A list of common bachelor's degrees that undergraduate students pursue in advance of pursuing a progressive degree option with this graduate program. Some programs are restricted to certain majors while others are open to all students.

Engineering

**PREPARATORY UNDERGRADUATE COURSES**

A list of courses at the undergraduate level that prepare students for the graduate program. Required coursework is listed first, followed by recommended courses. If not applicable, this section will be blank.

Dept. Prefix - Course #	Course Title	Required or Recommended	Units
	Calculus I, Calculus II, Calculus III	Required	
	Linear Algebra	Required	

**UNDERGRADUATE COURSES USED TO REDUCE GRADUATE LEVEL UNITS**

A list of undergraduate level courses that may be used to reduce the number of graduate level units required for the graduate program. If there are none, that is specified instead.

Dept. Prefix - Course #	Course Title	Units
	NONE	

**PROGRESSIVE DEGREE PROGRAM  
COURSE PLAN TEMPLATE**

**CORE GRADUATE PROGRAM REQUIREMENTS (# units required)**

A list of all required graduate courses for the graduate program. None of these courses may be used toward satisfying undergraduate degree requirements.

*If special exceptions for any of these courses are made by the academic department, the course # is marked with an asterisk (\*) and the exception is explained in the "Department Notes" section at the end of this course plan template.*

<b>Dept. Prefix - Course #</b>	<b>Course Title</b>	<b>Units</b>
ISE 500	Statistics for Engineering Manager	3
ISE 515	Engineering Project Management	3
ISE 544	Leading and Managing Engineering Teams	3
ISE 561	Economic Analysis of Engineering Projects	3
<b>Analytics Choose One:</b>		<b>3-4</b>
DSCI 552	Machine Learning for Data Science	
ISE 529	Predictive Analytics	
ISE 530	Optimization Methods for Analytics	
ISE 534	Data Analytics Consulting	
ISE 562	Decision Analysis	
<b>Technology Choose One:</b>		<b>3-4</b>
CE 576	Invention & Technology Development	
ISE 545	Technology Development & Implementation	
ISE 585	Strategic Management of Technology	
<b>Select ONE Course From ONE Track (ONLY)</b>		<b>3-4</b>
<b>Management Track</b>		
CE 502	Construction Accounting, Finance & Strategy	
ISE 506	Lean Operations	
ISE 527	Quality Management of Technology	
ISE 585	Strategic Management of Technology	
MOR 557	Strategy & Organization Consulting	
<b>Analytics Track</b>		
DSC 552	Machine Learning for Data Science	
ISE 529	Predictive Analytics	
ISE 530	Optimization Methods for Analytics	
ISE 533	Integrative Analytics	
ISE 534	Data Analytics Consulting	
ISE 543	Enterprise Business Intelligence & Systems Analytics	
ISE 562	Decision Analysis	

**PROGRESSIVE DEGREE PROGRAM  
COURSE PLAN TEMPLATE**

<b>Innovation &amp; Technology Track</b>		
BAEP 556	Technology Feasibility	
BAEP 557	Technology Commercialization	
CE 576	Invention & Technology Development	
ISE 545	Technology Development & Implementation	
ISE 585	Strategic Management of Technology	
<b>Supply Chain &amp; Operations Track</b>		
DSO 581	Supply Chain Management	
DSO 583	Operations Consulting	
ISE 513	Inventory Systems	
ISE 514	Advanced Production Planning & Scheduling	
ISE 583	Enterprise Wide Information Systems	
<b>Custom Track</b>	Ask Advisor	

**PRE-APPROVED ELECTIVE COURSEWORK**

Elective coursework is approved at the discretion of the academic department. Note the following details about the total number and units required of elective coursework.

3	<b>TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE</b>
0	<b>TOTAL ELECTIVE UNITS REQUIRED FOR THE PROGRESSIVE GRADUATE DEGREE</b>

**TOTAL UNIT COUNTS AND REQUIRED GRADUATE UNITS**

30-32	<b>TOTAL UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE</b>
9	<b>TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)</b>
21-23	<b>MINIMUM NUMBER OF GRADUATE UNITS THAT MUST BE AT THE 500 LEVEL OR ABOVE</b>

**NOTES FROM THE DEPARTMENT**

This section highlights any unique considerations, exceptions, or requirements for the graduate program. If a program has specific restrictions (courses, majors, etc.), they are detailed below.

Courses cannot be double-counted, and you must have least 18 ISE units.

Kelly Goulis

April 7, 2021

**Authorizing Dean's Name**

**Date Approved**

Senior Associate Dean, Viterbi School of Engineering

**Authorizing Dean's Title**