

**PROGRESSIVE DEGREE PROGRAM
COURSE PLAN TEMPLATE**

Viterbi School of Engineering

USC SCHOOL

Daniel J. Epstein Department of Industrial &

ACADEMIC DEPARTMENT GRADUATE

Systems Engineering MS HSME (Health

PROGRAM POST CODE

Systems Management Engineering) 1360

TERM EFFECTIVE DATE PROGRAM

Fall 2025

DESCRIPTION

A brief description of the graduate program.

The Master of Science in Health Systems Management Engineering prepares students for leadership positions in the healthcare industry. Hospitals and the healthcare system are in desperate need of redesign from a cost, quality and productivity standpoint. Employers are seeking the skills offered in this degree. Jobs are often in management, consulting, performance improvement or technology. Healthcare is the largest industry and needs people able to help improve operations. You will learn how healthcare works and how to make it better for everyone by doing projects at hospitals and clinics. Courses are from the Daniel J. Epstein Department of Industrial and Systems Engineering and the Keck School of Medicine.

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	Human Biology
Applied Social Sciences	Health and Human Sciences
Biological Science	Global Health
Health Promotion and Disease Prevention	

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	Recommended	
ISE-225	Engineering Probability, Statistics	Required	

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**PROGRESSIVE DEGREE PROGRAM
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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	

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.*

Dept. Prefix - Course #	Course Title	Units
ISE 508	Healthcare Operations Improvement	4
ISE 509	Practicum in Health Care Systems	4
PM 504	Quality in Health Care	4
Select two courses:		8
ISE 503	Health Analytics	4
ISE 504	Management of Change in Health Care Systems	4
ISE 505	Modeling for Health Policy and Medical Decision Making	4
ISE 506	Lean Operations	4
ISE 515	Engineering Project Management	4

ISE 544	Leading and Managing Engineering Teams	4
ISE 561	Economic Analysis of Engineering Projects	4
ISE 564	Organizational Performance Analysis	4
ISE 570	Human Factors in Engineering	4
ISE 580	Performance Analysis with Simulation	4
PM 508	Health Service Delivery in the U.S.	4
	Total Units	20

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PROGRESSIVE DEGREE PROGRAM COURSE PLAN TEMPLATE

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.

4

TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE

0

TOTAL ELECTIVE UNITS REQUIRED FOR THE PROGRESSIVE GRADUATE DEGREE

TOTAL UNIT COUNTS AND REQUIRED GRADUATE UNITS

28

TOTAL UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE

8

TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)

MINIMUM NUMBER OF GRADUATE UNITS THAT MUST BE AT THE 500 LEVEL OR ABOVE 20

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.

Kelly Goulis

7/31/2025 | 5:18:03 PM PDT

Authorizing Dean's Name Date Approved

Senior Associate Dean, Viterbi School of Engineering

Authorizing Dean's Title

Last Revised 7/28/2025

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**PROGRESSIVE DEGREE PROGRAM
COURSE PLAN TEMPLATE**

**Masters Degree – Health Systems Management Engineering
Progressive Degree Option**

The Master of Science in Health Systems Management Engineering prepares students for leadership positions in the healthcare industry. Hospitals and the healthcare system are in desperate need of redesign from a cost, quality and productivity standpoint. Employers are seeking the skills offered in this degree. Jobs are often in management, consulting, performance improvement or technology. Healthcare is the largest industry and needs people able to help improve operations. You will learn how healthcare works and how to make it better for everyone by doing projects at hospitals and clinics. Courses are from three schools; the Daniel J. Epstein Department of Industrial and Systems Engineering, the Keck School of Medicine of USC and the USC Sol Price School of Public Policy.

Required Courses – (12 units)

ISE 508 Health Care Operations Improvement (4)
ISE 509 Practicum in Health Care Systems (4)
PM 504 Quality in Health Care (4)

Select two courses – (8 units)

ISE 503 Health Analytics (4)
ISE 504 Management of Change in Health Care Systems (4)

ISE 505 Modeling for Health Policy and Medical Decision Making (4)
ISE 506 Lean Operations (4)
ISE 515 Engineering Project Management (4)
ISE 544 Leading and Managing Engineering Teams (4)
ISE 561 Economic Analysis of Engineering Projects (4)
ISE 564 Organizational Performance Analysis (4)
ISE 570 Human Factors in Engineering (4)
ISE 580 Performance Analysis with Simulation (4)
PM 508 Health Service Delivery in the U.S. (4)

***Total Units Required for the Health Systems Management Engineering PDP degree: 20**

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