

**PROGRESSIVE DEGREE PROGRAM
COURSE PLAN TEMPLATE**

USC SCHOOL	Viterbi School of Engineering
ACADEMIC DEPARTMENT	Systems Architecting and Engineering
GRADUATE PROGRAM	MS.Systems Architecting and Engineering
POST CODE	1165
TERM EFFECTIVE DATE	Spring 2025

PROGRAM DESCRIPTION

This program is recommended for graduate engineers and engineering managers responsible for the conception implementation and management of complex systems. Emphasis is on creative processes and methods by which complex systems are conceived, planned, designed, built, tested and certified. The architecture experience can be applied to defense, space, aircraft, and automotive systems.

COMMON BACHELOR’S 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.

ASTE, AE, ME, EE, Math, Physics, engineering undergraduate are eligible.	These majors should have an engineering background.
Interested non-engineering majors can become eligible if they have engineering, management experience, and/or selected math and physics knowledge.	

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
ISE 460	Engineering Economy	3	

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

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
SAE 560 OR ISE 460	Economic Considerations for Systems Engineering or Engineering Economy	3
SAE 541	Systems Engineering Theory and Practice	3
SAE 542		3

	Advanced Topics in Systems Engineering	
SAE 547 OR SAE 548	Model-Based Systems Architecting and Engineering or Model-Based Systems Architecting and Engineer- ing	3
SAE 549	Systems Architecting	3
SAE 500 ELECTIVE	SAE 500 ELECTIVE	3
SAE 500 ELECTIVE	SAE 500 ELECTIVE	3

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
12	TOTAL ELECTIVE UNITS REQUIRED FOR THE PROGRESSIVE GRADUATE DEGREE

TOTAL UNIT COUNTS AND REQUIRED GRADUATE UNITS

27	TOTAL UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE
0	TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)
21	MINIMUM NUMBER OF GRADUATE UNITS THAT MUST BE AT THE 500 LEVEL OR ABOVE

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.

Tech specialization area requirement (2 courses) are waived for MS SAE PDP program.

Students can take technical management area for undergrad program credit and receive subject credit for MS SAE PDP program and bring down the 21 unit requirement to 18 units.

Kelly Goulis	4/18/2025 1:30:50 PM PDT
Authorizing Dean's Name	Date Approved
Senior Associate Dean, Viterbi School of Engineering	
Authorizing Dean's Title	