

**PROGRESSIVE DEGREE PROGRAM
COURSE PLAN TEMPLATE**

USC SCHOOL	Viterbi School of Engineering
ACADEMIC DEPARTMENT	Sony Astani Civil and Environmental Engineering
GRADUATE PROGRAM	Civil Engineering
POST CODE	601
TERM EFFECTIVE DATE	Spring 2021

PROGRAM DESCRIPTION

A brief description of the graduate program.

The Master of Science in Civil Engineering is awarded in strict conformity with the general requirements of the USC Viterbi School of Engineering. A student may receive the Master of Science in Civil Engineering with a special option by specializing in one of the following courses of study: construction engineering; structural engineering; and transportation engineering. Students can choose the option of completing a thesis must include in their program 4 units of CE 594a and CE 594b. Total units for the degree is 28.

A general Master of Science in Civil Engineering without special designation is also given. The Master of Science in Civil Engineering (MSCE) with a General Option offers a broad education covering several specialty areas of Civil Engineering, including: general, earthquake engineering, structural mechanics, water resources or ocean and coastal engineering.

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.

BS Civil Engineering	
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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
CE 215	Statics and Dynamics	Required	4
CE 309	Fluid Mechanics	Required	4
CE 358	Elementary Theory of Structures	Required	4

UNDERGRADUATE COURSES USED TO REDUCE GRADUATE LEVEL UNITS

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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
	NONE	

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.

N/A

TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE

N/A

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

9

TOTAL GRADUATE UNITS THAT MAY BE WAIVED (IF ANY)

19

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

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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.

PDP students will take a minimum of 3 units from each specialty area. Students may not exceed 8 units in any specialty area.

Approved Specialty Area Courses

Environmental Engineering & Water Resources

CE 451: Water Resources & Coastal Engineering

CE 465: Water Supply & Sewage System Design

CE 476: Design of Hydraulic Systems

CE 510: Groundwater Management

CE 516: Geohydrology

CE 520a: Ocean and Coastal Engineering

ENE 505: Energy and the Environment

ENE 535: Applied Air Quality Management

Construction and Transportation

CE 462: Construction Methods and Equipment

CE 471: Principles of Transportation Engineering

CE 501: Construction Practices

CE 569: Project Controls

CE 573: Advanced Technologies in AEC Practices

CE 579: Introduction to Transportation Planning Law Transportation Planning Law

CE 583: Design of Transportation Facilities

CE 585: Traffic Engineering and Control

Geotechnical Engineering

CE 482: Subsurface Foundation Design

CE 534: Design of Earth Structures

Structural Engineering

CE 537: Advanced Reinforced Concrete

CE 539: Advanced Steel Structures

ELECTIVES: Additional courses (up to 8 units be selected from Civil Engineering courses or disciplines related to Civil Engineering with the consent of an adviser.

Kelly Goulis

Authorizing Dean's Name

5/14/2021

Date Approved

Senior Associate Dean, Viterbi School of Engineering

Authorizing Dean's Title