

**PROGRESSIVE DEGREE PROGRAM
COURSE PLAN TEMPLATE**

USC SCHOOL	Viterbi School of Engineering
ACADEMIC DEPARTMENT	Computer Science
GRADUATE PROGRAM	M.S. Computer Science
POSTCODE	674
TERM EFFECTIVE DATE	Fall 2021

PROGRAM DESCRIPTION

A brief description of the graduate program.

The Master of Science in Computer Science provides intensive preparation in the concepts and techniques related to the design, programming, and application of computing systems. Students are provided a deep understanding of both fundamentals and important current issues in computer science and computer engineering so that they may either obtain productive employment or pursue advanced degrees. The program is open to students with a significant undergraduate computer science background.

COMMON BACHELOR'S DEGREE PROGRAM PATHWAYS

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

CSCI, CSBA, CECS-Computing Systems, CSGM, CSGA, PHCS are directly eligible.	Directly eligible except CECS-Embedded Systems must take CSCI 201 as a core requirement.
Non-majors who complete the CSCI Minor can become eligible with specific modifications to the minor.	Minors must take both CSCI 201 AND CSCI 270; and include CSCI 356 and CSCI 350 as 2 of their 3 technical elective courses.

PREPARATORY UNDERGRADUATE COURSES

A list of courses at the undergraduate level that prepares 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
CSCI 102	Fundamentals of Computation	Required	2
CSCI 103	Introduction to Programming	Required	4
CSCI 104	Data Structures and Object Oriented Design	Required	4
CSCI 170	Discrete Methods in Computer Science	Required	4
CSCI 201	Principles of Software Development	Required	4
CSCI 270	Introduction to Algorithms and Theory of Computing	Required	4
CSCI 356	Introduction to Computer Systems	Required for CSCI minors	4
OR			
EE 354	Introduction to Digital Circuits	Required for CECS	4
CSCI 350	Introduction to Operating Systems	Required for CSCI minors	4

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UNDERGRADUATE COURSES USED TO REDUCE GRADUATE-LEVEL UNITS

A list of undergraduate-level courses 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 – graduate unit waiver is based on a substantial undergraduate background in computer science.	

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.* **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 for elective coursework.

24

TOTAL ELECTIVE UNITS REQUIRED FOR THE TRADITIONAL GRADUATE DEGREE

16

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)

20

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.

*CSCI 570 may be applied in the CS undergraduate degrees as a replacement for CSCI 270 or as a Technical Elective. If this core M.S. course is used in the undergraduate degree, the student must replace it with a CSCI 500/600-level 4-unit elective. High achieving students also have the option to replace CSCI 570 with CSCI 670 Advanced Analysis of Algorithms in the M.S. degree.

Elective courses can come from any CSCI 500/600-level 4-unit course. Cross-listed courses are not eligible; these electives must be taught under the CSCI prefix. However, we will allow one (1) approved 500-level non-CSCI course from the approved list on our website (DSCI, EE, ISE, and MATH courses may be eligible). See the list at: <https://www.cs.usc.edu/students/ms-students/approved-non-cs-courses/>.

Research, colloquium, thesis, and internship units cannot be applied toward the required 20 units of coursework for the progressive M.S. They would be counted as additional units beyond the 20-unit minimum.

Kelly Goulis

Authorizing Dean's Name

October 5, 2021

Date Approved

Senior Associate Dean, Viterbi School of Engineering

Authorizing Dean's Title