

## Bachelor of Science in Computer Science

The undergraduate program in computer science is an interdisciplinary program leading to the Bachelor of Science in computer science. The program is designed to provide both an academic and professional orientation.

General admission requirements for the undergraduate program are the same as those of the university and the USC Viterbi School of Engineering and include 3 to 5 units of mathematics and one unit of science (biology, chemistry or physics) together with satisfactory scores on the Scholastic Aptitude Test and Achievement Tests. The requirement for the degree is 128 units. A cumulative scholarship average of C (2.0) is required for all courses taken at USC as well as for all computer science courses taken in the program. Computer science is a department in the USC Viterbi School of Engineering; however, the Bachelor of Science degree with a major in computer science is awarded through the USC College. Candidates must complete general education requirements; see [here](#) and [here](#).

<b>Composition/Writing requirement</b>		<b>Units</b>
WRIT 140*	Writing and Critical Reasoning	4
WRIT 340**	Advanced Writing	3
<b>General Education (see <a href="#">here</a>)</b>		<b>Units</b>
General education* +		20
<b>pre-Major requirements</b>		<b>Units</b>
<i>Math Requirement</i>		
MATH 125	Calculus I	4
MATH 126	Calculus II	4
MATH 225	Linear Algebra and Differential Equations	4
MATH 226	Calculus III	4
EE 364	Introduction to Probability and Statistics for Electrical Engineering and Computer Science	3
<i>Basic Science</i>		
One of the following two course sequences:		
BISC 120L*** and BISC 220L, or		
CHEM 105aLbL***, or		
PHYS 151L***	and PHYS 152L	8
<i>Other Requirements</i>		
Science elective****		4
Foreign language		12
<b>Major Requirements</b>		<b>Units</b>
<b>ENGR 102 Engineering Freshmen Academy</b>		<b>2</b>
<i>Computer Science</i>		
CSCI 101L	Fundamentals of Computer Programming	3
CSCI 102L	Data Structures	3
CSCI 200	Object Oriented Programming	3
CSCI 201L	Principles of Software Development	3

CSCI 271	Discrete Methods in Computer Science	3
CSCI 303	Design and Analysis of Algorithms	3
CSCI 377	Introduction to Software Engineering	3
CSCI 402x	Operating Systems	3
CSCI 477ab	Design and Construction of Large Software Systems	2-2
<i>Electrical Engineering</i>		
EE 101	Introduction to Digital Logic	3
EE 106Lx	Introduction to Computer Engineering/Computer Science	2
EE 201L	Introduction to Digital Circuits	4
EE 357	Basic Organization of Computer Systems	3
	Business/Economics elective	3-4
Free electives		0-1
Technical electives		12
Total units:		128

\*GE Category VI is taken concurrently with WRIT 140.

\*\*WRIT 340 Advanced Writing (Communication for Engineers) is strongly recommended for CSCI majors.

\*\*\*Satisfies general education requirement.

\*\*\*\*Any course in physics, biology or chemistry beyond the basic science requirement or in another scientific discipline. See department for approval.

+The university allows engineering students to replace GE Category IV with a second course in Categories I, II or VI.

#### **Foreign Language Requirement**

Three semesters of a single language and passing the skill level examination in that language or passing the skill level examination in a foreign language.

#### **Technical Electives (four courses)**

Applicable courses include: CSCI 300, CSCI 351, , CSCI 445, CSCI 459, CSCI 460, CSCI 464, CSCI 480, CSCI 485, CSCI 490x, CSCI 499; EE 450, EE 454L, EE 459L, EE 465, EE 477L, EE 490x, EE 499; MATH 458. Other courses may be applicable; please see an advisor for approval.

#### **Engineering Economy/Business Elective (1 course)**

Applicable courses include: BUAD 301, BAEP 450x, ISE 460