

Computer Science, Information Systems and Engineering

B.S. in Computer Science

Program Description

The Bachelor of Science in Computer Science degree builds students' understanding and expertise in computer hardware, operating systems and programming languages.

Delivery Mode

Traditional (on campus)

Accreditation

This program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering Technology (ABET), www.abet.org.

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	16
CSC 120 Problem Solving and Programming Constructs	3
ENG 101 English Composition I	3
MAT 281 Calculus I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	15
CSC 124 Computer Programming	3
ENG 217 Science and Technical Writing	3
MAT 195 Discrete Mathematical Structures	3
MAT 282 Calculus II	3
General Education Course	3
Sophomore Year	
Third Semester	15
CSC 216 Logic and Switching Theory	3
CSC 265 Object-Oriented Programming	3
Public Speaking Course	3
Free Elective	3

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Course	Credits
General Education Course	3
Fourth Semester	16
CSC 323 Assembly Language Programming	3
CSC 328 Data Structures	3
CSC 352 Global, Economic and Social Ethical Issues in Computing	3
MAT 341 Linear Algebra I	3
Laboratory Science I	4
Junior Year	
Fifth Semester	17
CSC 360 Analysis of Algorithms	3
CSC 378 Computer Architecture	3
CET 440 Computer Networking	4
CS Elective Course	3
Laboratory Science II	4
Sixth Semester	15
CET 350 Technical Computing Using Java	3
CSC 400 Operating Systems	3
CSC 455 Structure of Programming Languages	3
MAT 215 Statistics	3
Free Elective	3
Senior Year	
Seventh Semester	12
CSC 475 Theory of Languages	3
CSC 490 Senior Project I	3
CS Elective	3
Free Elective	3

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Course	Credits
Eighth Semester	14
CSC 460 Language Translation	3
CSC 492 Senior Project II	3
CS Elective	3
Free Elective	5
Total	120

Select one course from the following:

- **CSC 322** Data Base Application Development
- **CSC 420** Artificial Intelligence
- **CSC 424** Numerical Analysis
- **CSC 485** Special Topics in Computer Science

Select two courses from the following:

- **CSC 304** COBOL
- **CSC 306** FORTRAN
- **CSC 308** Python
- **CSC 419** Internship (a maximum of 3 credits can be used from Internship toward the program)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/computer-science/index.aspx>