



# Computer Science, B.S. *major*

Required Credits: 60

Required GPA: 2.25

## I REQUIRED CORE COURSES

COMPLETE THE FOLLOWING COURSES:

- CS 1309 Problem Solving and Computation (3 credits)
- CS 2321 Computer Science I (4 credits)
- CS 2322 Computer Science II (4 credits)
- CS 2810 Computer Organization and Assembly Language Programming (3 credits)
- CS 3528 Data Structures and Algorithms (4 credits)
- CS 4390 Social, Ethical, and Professional Issues in Computing (2 credits)

## II REQUIRED ELECTIVES

Select 21 credits from among the following courses, with at least 3 courses from Section A and 3 courses from Section B. Note: Courses may have prerequisites either not included or not required in this major.

### 1. Core Computer Science

- CS 3507 Introduction to Databases (3 credits)
- CS 3560 Data Communications and Networks (3 credits)
- CS 3718 Computer Graphics (3 credits)
- CS 4298 Compiler Construction (3 credits)
- CS 4627 Theory of Computation (3 credits)
- CS 4840 Operating Systems (3 credits)
- MATH 3720 Numerical Methods (3 credits)

### 2. Application Development Techniques

- CS 3270 Advanced Web Programming (3 credits)
- CS 3350 Event-Driven Programming in a Windows Environment (3 credits)
- CS 3360 Object-Oriented Software Development (3 credits)
- CS 3370 Mobile Application Development (3 credits)
- CS 3380 Game Development (3 credits)
- CS 4360 Software Engineering (3 credits)

## III REQUIRED OUTSIDE COURSES

- MATH 1470 Precalculus (5 credits)  
*or* MATH 2471 Calculus I (5 credits)
- MATH 2210 Discrete Mathematics (4 credits)
- MATH 3310 Linear Algebra (4 credits)  
*or* STAT 2610 Applied Statistics (4 credits)  
*or* STAT 3631 Probability And Statistics I (4 credits)
- SPCM 1100 Public Speaking (3 credits)

Select one of the following courses:

- ENGL 2150 Technical Writing (3 credits)
- ENGL 3150 Writing In The Disciplines (3 credits)
- ENGL 3155 Professional Writing (3 credits)

## SUGGESTED SEMESTER SCHEDULE FOR COMPUTER SCIENCE MAJOR

The following schedule identifies only courses that apply to the Computer Science major. Students should expect to complete most liberal education

requirements in their first three years. To complete requirements for graduation in four years (8 semesters), a Computer Science major must take CS 1309 in one of the first two semesters.

### Freshman

CS 1309 Problem Solving and Computation

CS 2321 Computer Science I

#MATH 1170 College Algebra

MATH 1470 Precalculus

*or* MATH 2471 Calculus I

SPCM 1100 Public Speaking

### Sophomore

CS 2322 Computer Science II

CS 2810 Computer Organization and Assembly Language Programming

MATH 2210 Discrete Mathematics

MATH 3310 Linear Algebra

*or* STAT 2610 Applied Statistics

*or* STAT 3631 Probability and Statistics I

+ENGL 2150 Technical Writing

### Junior

CS 3528 Data Structures and Algorithms

Computer Science Electives

### Senior

CS 4390 Social, Ethical, and Professional Issues in Computing

Computer Science Electives

# Mathematics requirements for the Computer Science major begin with MATH 1470 Precalculus, but some students will be initially placed into MATH 1170 College Algebra.

+ May be any of the following courses: ENGL 2150, ENGL 3150, ENGL 3155.