

# Computer Science Major, Science Emphasis Plan

The following suggested four-year plan is for students working toward a Bachelor of Science or Bachelor of Arts degree in Computer Science with a Science Emphasis. Students should consult with their advisor to develop a plan of study tailored to their individual needs and interests.

## Freshman Year (30-31 credits)

### Fall Semester (16 credits)

CS 1400 Introduction to Computer Science—CS 1	3
CS 1405 Introduction to Computer Science—CS 1 Lab	1
ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
MATH 1210 (QL) Calculus I	4
USU 1010 University Connections	2
One University Studies breadth course	3

### Spring Semester (14-15 credits)

CS 1410 (QI) Introduction to Computer Science—CS 2	3
MATH 1220 (QL) Calculus II	4
Science Sequence I course	4-5
One University Studies breadth course	3

## Sophomore Year (29-30 credits)

### Fall Semester (16-17 credits)

CS 2420 (QI) Algorithms and Data Structures—CS 3	3
CS 2810 Computer Systems Organization and Architecture I	3
MATH 2210 (QI) Multivariable Calculus	3
ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
Science Sequence II course	4-5

### Spring Semester (13 credits)

CS 2450 (CI) Introduction to Software Engineering I	3
CS 3000 Undergraduate Seminar	1
CS 3410 (QI) Computational Science: JAVA/Internet (3 cr) or	
CS 3420 (QI) Computational Science: C# and .NET (3 cr) or	
CS 3430 (QI) Computational Science: Python and Perl Programming (3 cr)	3
CS 3810 Computer Systems Organization and Architecture II	3
MATH 3310 Discrete Mathematics	3

## Junior Year (31 credits)

### Fall Semester (16 credits)

CS 3450 Introduction to Software Engineering II	3
CS 4700 Programming Languages	3
MATH 2250 (QI) Linear Algebra and Differential Equations	4
Two University Studies breadth courses	6

### Spring Semester (15 credits)

CS 3100 Operating Systems and Concurrency	3
CS 5050 Advanced Algorithms	3
MATH 5710 Introduction to Probability (3 cr) or	
STAT 3000 (QI) Statistics for Scientists (3 cr)	3
SPCH 1020 (BHU/CI) Public Speaking (3 cr) or	
ENGL 3080 (CI) Introduction to Technical Communication (3 cr)	3
One University Studies depth course	3

## Senior Year (29-30 credits)

### Fall Semester (14-15 credits)

CS 5070 Computer Science Capstone I	1
CS 5000-level elective courses	7
One University Studies depth course	3
Advisor-approved elective course	3-4

### Spring Semester (15 credits)

CS 5071 Computer Science Capstone II	3
CS 3000-or-above-level elective course	3
CS 5000-level elective course	3
Advisor-approved elective courses	6