Computer Science B.S. Degree
2016-2017 Curriculum Chart

CMPS 12A/L
Intro to Prog. (Accelerated)

CMPS 11
Intermediate Programming

CMPS 5J
Intro to Prog: Java

CMPE 13/L
Computer Systems and C Programming

CMPS 12B/M
Data Structures

**CMPS 13H/L
Intro to Prog. & Data Structures (Honors)

* Students may take CMPS 13/L in lieu of another introductory programming class + data structures.

Complete either: 2 Phys + Labs or 2 Chem + Labs.

♦ PHYS 5B/M or 6B/M
Waves & Optics
or
♦ PHYS 5C/N or 6C/N
Electricity & Magnetism

♦ PHYS 5A/L or 6A/L
Intro to Physics I Mechanics

CHEM 1A
General Chemistry

CHEM 1B/1M
General Chemistry

CHEM 1C/N
General Chemistry

CMPE 107
Probability and Statistics
or
AMS 131
Intro to Probability Theory

CMPE 101
Abstract Data Types

CMPS 12B/M or CMPS 13H/L, CMPE 16, MATH 19B, 23A

MATH 19A or 20A
Calculus

MATH 19B or 20B
Calculus

MATH 23A
Multivariable Calculus

AMS 10
Engr Math Methods I
or
*MATH 21
Linear Algebra

CMPE 16
Discrete Math

CMPE 104A
Compiler Design I

CMPS 111
Operating Systems

CMPS 102
Analysis of Algorithms

CMPS 104
Intermediate Programming

CMPS 130
Computational Models

CMPE 110
Computer Architecture

CMPE 110
Computer Architecture

CMPE 12/L
Computer Systems & Assembly Language

CMPE 107
Probability and Statistics
or
AMS 131
Intro to Probability Theory

CMPE 101
Abstract Data Types

Additional Electives: Four upper-division computer science or computer engineering courses with course number 190 or below, or CMPE 195. One of these courses may be replaced by one of the upper-division mathematics courses listed on the back

Upper Division
ELECTIVE (Capstone)

Upper Division
ELECTIVE (DC)

Upper Division
ELECTIVE

Upper Division
ELECTIVE

Comprehensive Requirement - Students have two options to fulfill the Computer Science exit requirement:
1. Pass one of the Capstone Courses (which can also fulfill an elective requirement, see ♠ on back for courses)
2. Successfully complete a Senior Thesis.

Upper Division
ELECTIVE

Upper Division
ELECTIVE

http://ua.soe.ucsc.edu • advising@soe.ucsc.edu • (831) 459-5840 • 07/06/2016
# Computer Science B.S. Degree
## 2016-2017 Curriculum Chart

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<th>Math Electives List</th>
<th>Capstone Courses</th>
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<tr>
<td>AMS 114</td>
<td>CMPS 104B ♠</td>
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<tr>
<td>AMS 147</td>
<td>CMPS 117 ♠</td>
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<tr>
<td>MATH 115</td>
<td>CMPS 161/L ♠</td>
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<tr>
<td>MATH 117</td>
<td>CMPS 162/L ♠</td>
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<tr>
<td>MATH 126</td>
<td>CMPS 181 ♠</td>
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<td>MATH 148</td>
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**Math Electives List**

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<th>Course</th>
<th>Notes</th>
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<td>AMS 114</td>
<td>All students admitted to a School of Engineering major, or seeking admission to a major, must take all courses required for that major for a letter grade.</td>
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<tr>
<td>AMS 147</td>
<td>Courses in which you receive a grade of C-, D+, D, or D- earn credit toward graduation, but cannot be used to satisfy a major requirement or a general education requirement, and cannot satisfy a prerequisite for another course.</td>
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<td>MATH 115</td>
<td>Shaded boxes represent major qualification courses. Major qualification requirements for this major can be found at: <a href="https://ua.soe.ucsc.edu/major-qualification">https://ua.soe.ucsc.edu/major-qualification</a></td>
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<td>MATH 117</td>
<td>Many graduate courses can also be used to satisfy electives; however, students will need instructor and department approval.</td>
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<td>MATH 126</td>
<td>Students may not receive credit for both AMS 131 and CMPE 107.</td>
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<tr>
<td>MATH 148</td>
<td>At most, only one elective may be substituted by a course from the Math Electives list.</td>
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<td>The School of Engineering has different major declaration deadlines than the UCSC Academic/Administrative calendar. Our deadlines and process can be found on: <a href="http://ua.soe.ucsc.edu/declare">http://ua.soe.ucsc.edu/declare</a></td>
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<td><strong>Course prerequisites.</strong></td>
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<td>♦ Enrollment restricted to majors in Computer Engineering, Electrical Engineering, Bioengineering, Bioinformatics, Robotics Engineering, or Network and Digital Technology, or by permission of instructor.</td>
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<td>♠ Course satisfies the Computer Science Comprehensive Requirement and an elective requirement.</td>
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<td>Ω Only one course (Math 23A or AMS 10/Math 21) is required as a pre-requisite for CMPS 101 but both Math 23A and either AMS 10 or Math 21 must be taken to fulfill the major requirements.</td>
</tr>
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</table>

**Notes:**

- All students admitted to a School of Engineering major, or seeking admission to a major, must take all courses required for that major for a letter grade.
- Courses in which you receive a grade of C-, D+, D, or D- earn credit toward graduation, but cannot be used to satisfy a major requirement or a general education requirement, and cannot satisfy a prerequisite for another course.
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- Many graduate courses can also be used to satisfy electives; however, students will need instructor and department approval.
- Students may not receive credit for both AMS 131 and CMPE 107.
- At most, only one elective may be substituted by a course from the Math Electives list.
- The School of Engineering has different major declaration deadlines than the UCSC Academic/Administrative calendar. Our deadlines and process can be found on: [http://ua.soe.ucsc.edu/declare](http://ua.soe.ucsc.edu/declare)

**Student Name:**

**Staff Advisor:**

**Faculty Advisor:**