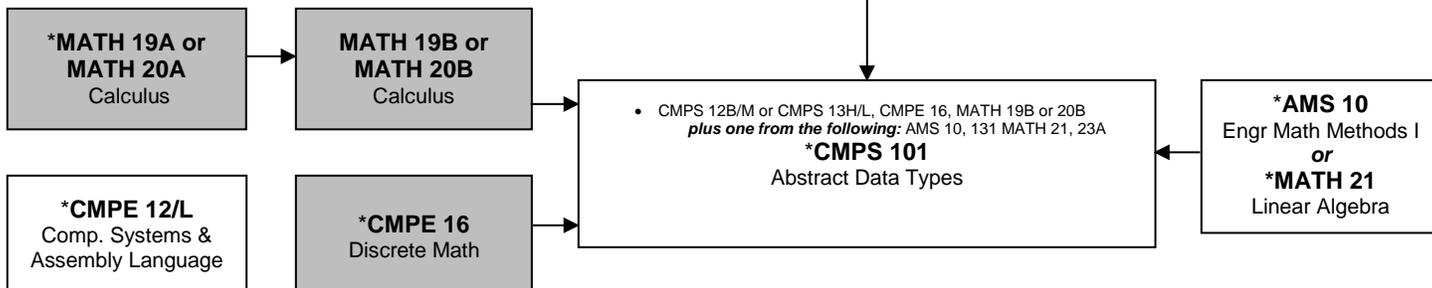
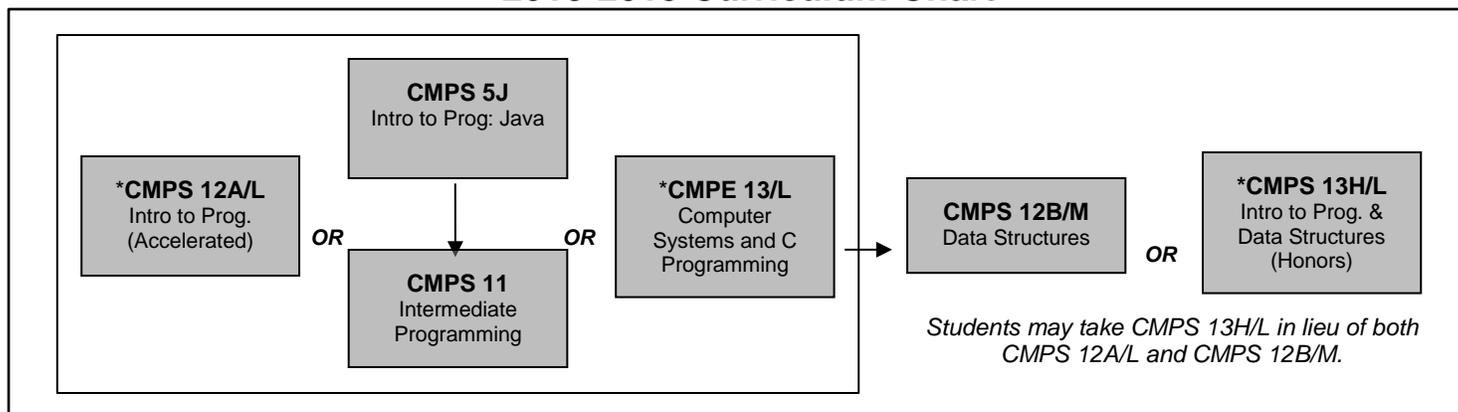
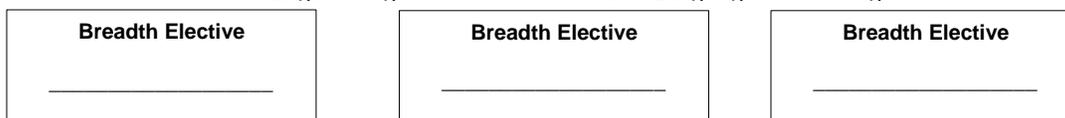


Computer Science B.A. Degree 2018-2019 Curriculum Chart



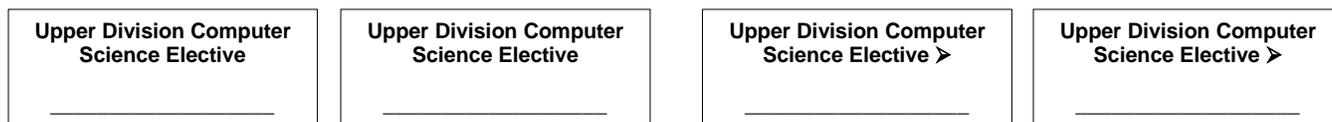
1. Students must complete *three* courses from this Breadth list:

- | | | |
|---|--------------------------------------|------------------------------|
| CMPE 110 Computer Architecture | CMPS 122 Computer Security | CMPS 160/L Computer Graphics |
| CMPS 102 Introduction to Analysis of Algorithms | CMPS 128 Distributed Systems | CMPS 180 Database Systems |
| CMPS 104A Compiler Design | CMPS 130 Computational Models | |
| CMPS 111 Operating Systems | CMPS 140 Artificial Intelligence | |
| CMPS 112 Comparative Programming Languages | CMPS 142 Machine Learning | |
| CMPS 115 Introduction to Software Engineering | CMPS 143 Natural Language Processing | |



2. Students must complete *four* additional 5-credit (or more) upper division Computer Science elective courses selected from all upper division CMPS courses except those numbers 191-194 and 196-199.

➤ Students may substitute *two* of these upper division Computer Science electives with courses from the list on the back of the chart.



Disciplinary Communication

*Students of every major must satisfy that major's upper-division Disciplinary Communication (DC) Requirement. The DC Requirement for the Computer Science B.A is satisfied by completing one of the following courses. **The DC course can also satisfy an upper division elective.***

- CMPS 115 Introduction to Software Engineering
(CMPS 115 can satisfy DC and Breadth Elective)
- CMPS 132W** Computability and Computational Complexity
- CMPS 185 Technical Writing and Communication in CS
- CMPS 195 Senior Thesis
- ♦CMPE 185 Technical Writing for CE

Capstone Courses

Many Capstone course options require additional prerequisites not already required in major requirements. Advance planning is crucial.

- CMPS 104B Fundamentals of Compiler Design II
- CMPS 117 Software Design Project II
- CMPS 161/L Introduction to Data Visualization
- CMPS 162/L Advanced Computer Graphics and Animation
- CMPS 165 Data Programming for Visualization
- CMPS 181 Database Systems II
- CMPS 183 Web Applications
- CMPS 184 Data Wrangling and Web Scraping
- CMPS 172 Game Design Studio III

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 capstone list above)
2. Successfully complete a Senior Thesis.

- Course prerequisites.
- * Check catalog/SOE course descriptions for additional prerequisites.
- ** In order for these courses to satisfy the DC requirement, the W section must be completed.
- ♦ CMPE 185 enrollment restricted to majors in Computer Engineering, Electrical Engineering, Bioengineering, Bioinformatics,

Computer Science B.A. Degree 2018-2019 Curriculum Chart

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Upper Division Elective List

- ◆ Any 5-credit upper division course offered by the Baskin School of Engineering except those numbered 191 through 194 and 196 through 199. (CMPE, CPM, and AMS courses strongly recommended.)
- ◆ Any 5-credit upper division course from the Division of Physical and Biological Sciences except those numbered 190 and above. (MATH, PHYS, CHEM and BIOL courses strongly recommended.)
- ◆ ART 118 Computer Art: Theories, Methods, and Practices
- ◆ ART 120/121 Advanced Projects in Computer Art I/II
- ◆ ECON 100M Intermediate Microeconomics, Math Intensive
- ◆ ECON 100N Intermediate Macroeconomics, Math Intensive
- ◆ ECON 101 Managerial Economics
- ◆ ENVS 115A/L Geographic Information Systems
- ◆ FILM 170A Fundamentals of Introduction to Digital Media Production
- ◆ FILM 177 Digital Media Workshop: Computer as Medium
- ◆ LING 112/113/114 Syntax I/II/III
- ◆ LING 116/118 Semantics II/III
- ◆ LING 125 Foundations of Linguistic Theory
- ◆ MUSC 123 Electronic Sound Synthesis
- ◆ MUSC 124 Intermediate Electronic Sound Synthesis
- ◆ MUSC 125 Advanced Electronic Sound Synthesis

- 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.
- Shaded boxes represent foundation courses. Major qualification requirements for this major can be found at: <https://ua.soe.ucsc.edu/major-qualification>
- Many graduate courses can also be used to satisfy electives; however, students will need instructor and department approval.
- 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-your-major>

Student Name:

Staff Advisor Signature: