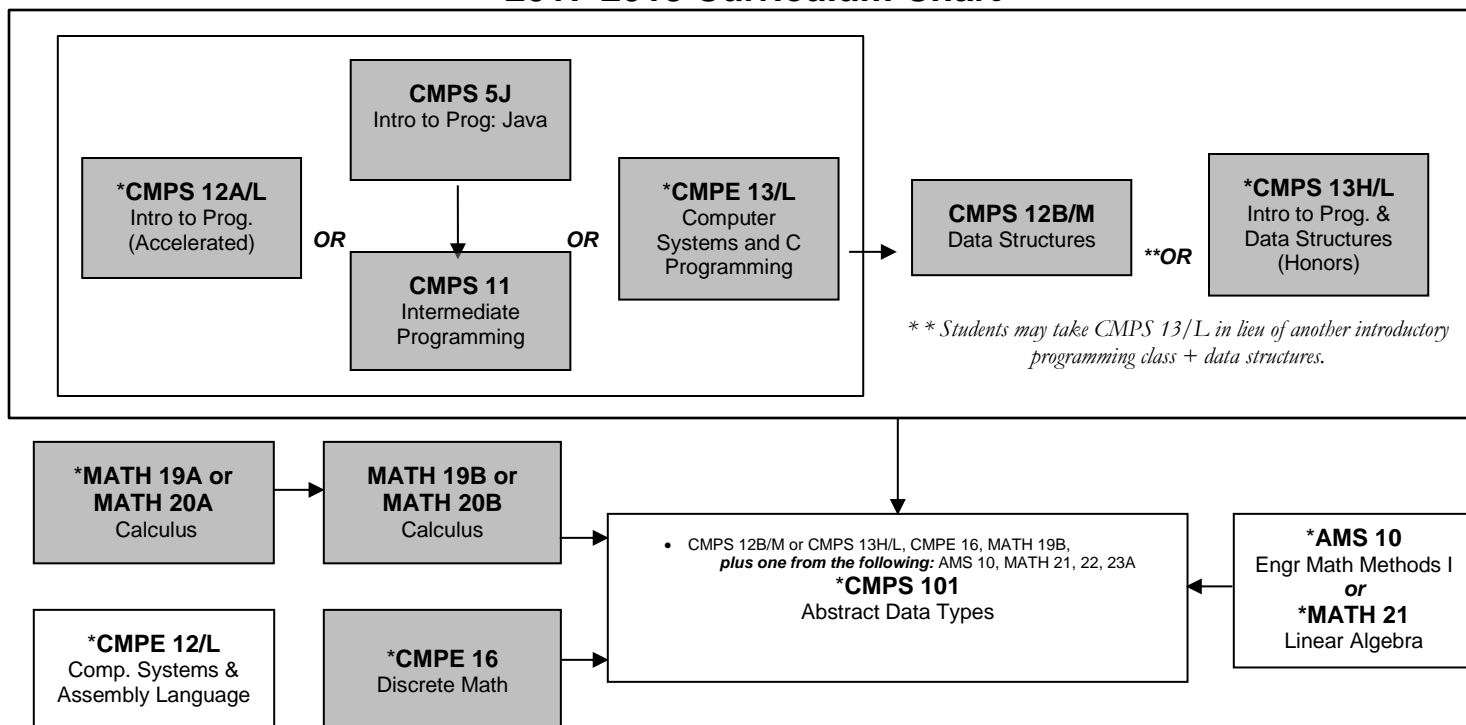


Computer Science B.A. Degree 2017-2018 Curriculum Chart



1. Students must complete *three* courses from this 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 following 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, CMPM, 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

FDM 170A Fundamentals of Introduction to Digital Media Production
FDM 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

MUS 123 Electronic Sound Synthesis
MUS 124 Intermediate Electronic Sound Synthesis
MUS 125 Advanced Electronic Sound Synthesis

At least 50% of the upper division elective courses must be completed at UCSC.

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 list course or UD elective and DC)
- CMPS 132W** Computability and Computational Complexity
- CMPS 180W** Database Systems
- 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
- CMPM 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.

Computer Science B.A. Degree 2017-2018 Curriculum Chart

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

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.
- Shaded boxes represent foundation courses. Major qualification requirements for this major can be found at:
<https://ua.soe.ucsc.edu/major-qualification>
- Most upper division Computer Science courses are restricted to enrollment by declared Computer Science majors during first-pass or priority enrollment.
- 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>**
- 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, Robotics Engineering, or Network and Digital Technology, or by permission of instructor.

Student Name:

Staff Advisor Signature: