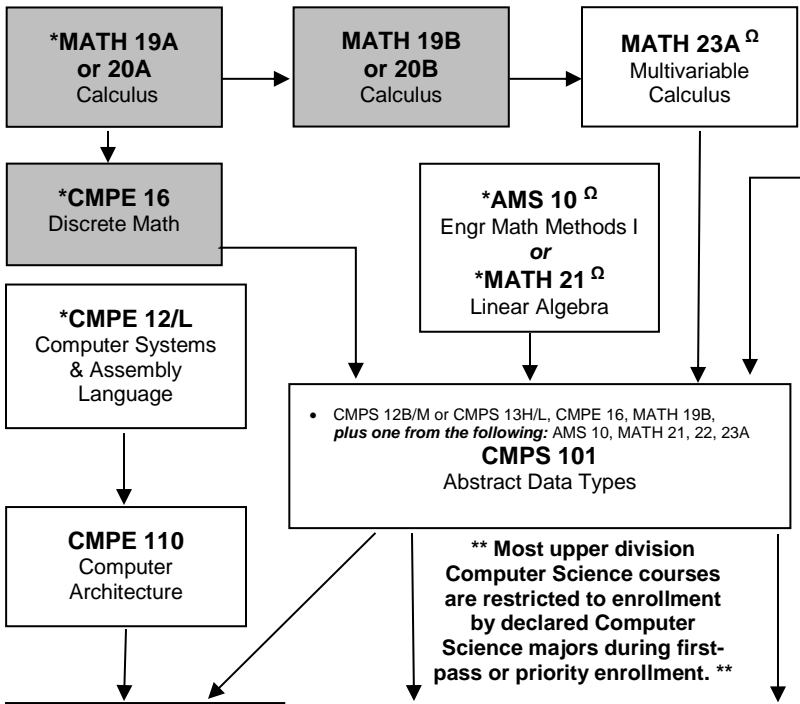
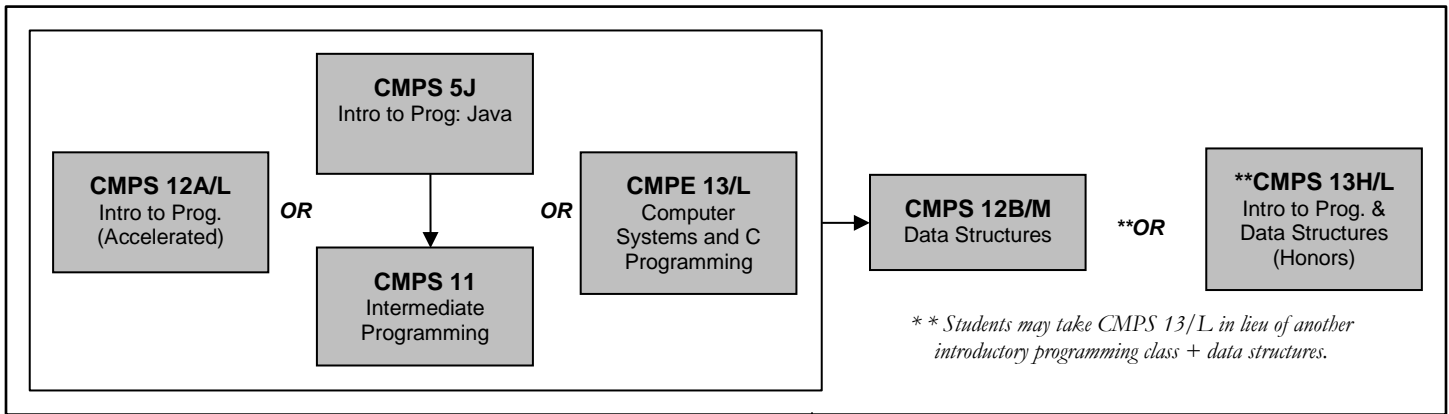


# Computer Science B.S. Degree 2017-2018 Curriculum Chart

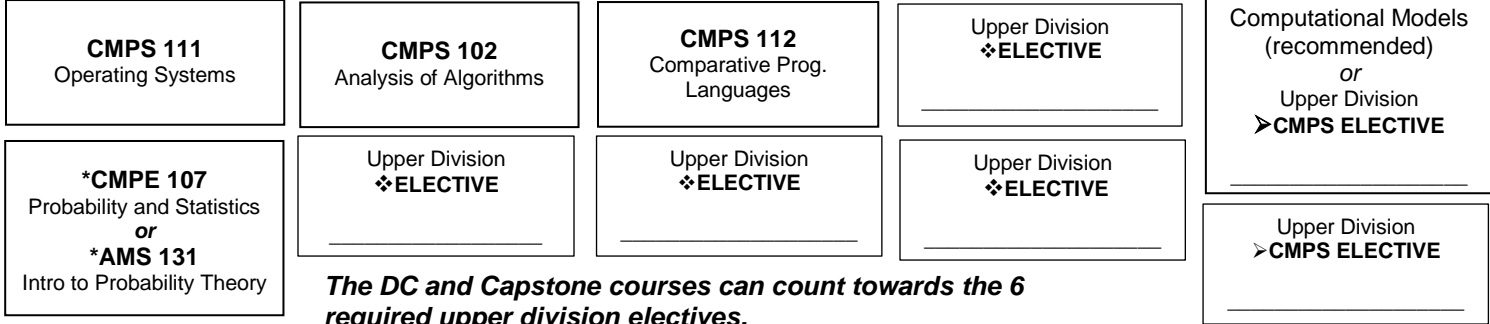


**Disciplinary Communication Requirement (DC)**  
Students of every major must satisfy that major's upper-division Disciplinary Communication (DC) Requirement. The DC Requirement for the Computer Science B.S. is satisfied by completing one of the following courses:

- CMPS 115 Introduction to Software Engineering
- CMPS 132W\*\* Computability and Computational Complexity
- CMPS 180W\*\* Database Systems
- CMPS 185 Technical Writing and Communication in CS
- Ψ CMPS 195 Senior Thesis
- ♣CMPE 185 Technical Writing for CE

**Capstone Elective 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



**The DC and Capstone courses can count towards the 6 required upper division electives.**

➤ **CMPS Upper Division Electives:** 5 credit (or more than 5 credit) upper-division computer science (CMPS) courses with course number 190 or below, or CMPS 195.  
 Ψ **CMPS 195** can satisfy both the DC and Capstone requirement, and 1 upper division elective.

❖ **Upper Division Electives:** 5 credit (or more than 5 credit) upper-division computer science (CMPS) or computer engineering (CMPE) courses with course number 190 or below, or CMPS 195, or courses from the Computational Media electives on the back of this chart. Up to two of these electives may be replaced by upper-division mathematics electives listed on the back.

**Comprehensive Requirement** - Students have two options to fulfill the Computer Science exit requirement:

1. Pass one of the Capstone Courses \_\_\_\_\_
2. Successfully complete a Senior Thesis.

**Disciplinary Communication Requirement** – Students have two options to fulfill the DC requirement:

1. Pass one of the Disciplinary Communication Courses \_\_\_\_\_
2. Successfully complete a Senior Thesis

# Computer Science B.S. Degree 2017-2018 Curriculum Chart

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

Fall _____	Winter _____	Spring _____	Summer _____

<u>Mathematics Electives List</u>
<p><b>AMS 114</b> Introduction to Dynamical Systems  <b>AMS 132</b> Classical and Bayesian Inference  <b>AMS 147</b> Computational Methods and Applications  <b>MATH 115</b> Graph Theory  <b>MATH 116</b> Combinatorics  <b>MATH 117</b> Advanced Linear Algebra  <b>MATH 134</b> Cryptography  <b>MATH 148</b> Numerical Analysis  <b>MATH 160</b> Mathematical Logic I  <b>MATH 161</b> Mathematical Logic II</p>

<u>Computational Media Electives List</u>
<p><b>CMPM 120</b> Game Development Experience  <b>CMPM 131</b> User Experience for Interactive Media  <b>CMPM 146</b> Game AI  <b>CMPM 164/L</b> Game Engines Lab  <b>CMPM 171</b> Game Design Studio II  <b>CMPM 172</b> Game Design Studio III</p>

**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 major qualification courses. The full 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.
- Students may not receive credit for both AMS 131 and CMPE 107.
- 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 has additional prerequisites. Please consult UCSC General Catalog course descriptions.
- \*\* In order for these courses to satisfy the DC requirement, the W section must be completed.
- ◆ Enrollment restricted to majors in Computer Engineering, Electrical Engineering, Bioengineering, Bioinformatics, Robotics Engineering, or Network and Digital Technology, or by permission of instructor.
- 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.

Student Name:

Staff Advisor Signature: