

COMPUTATIONAL & SYSTEMS BIOLOGY (CaSB) MAJOR CURRICULUM *(effective FALL 2019 and forward)*

Lower Division Requirements:

Life Sciences 7A, 7B, 7C
Chemistry 14A, 14B, 14BL OR 20A, 20B, 20L
Physics 5A, 5B, 5C OR 1A, 1B, 1C
Calculus & Statistics Series Option #1: Mathematics 31A, 31B, 33A, 33B, Statistics 10
Calculus & Statistics Series Option #2: Life Sciences 30A, 30B, C&S BIO M32 (or Mathematics 32T), 33A 33B, Life Sciences 40
Computer Science (CS) 31 OR Program in Computing (PIC) 10A
NOTE: Students following the Bioinformatics must also complete Computer Science (CS) 32 OR Program in Computing (PIC) 10B OR Program in Computing (PIC) 16, but do not have to completed prior to admission into the major. Students following the Biological Data Sciences concentration must also complete Computer Science (CS) 32, but does not have to completed prior to admission into the major. Students following the Bioinformatics, Biomedical Systems, or Systems Biology concentrations must also complete Mathematics 32A.

Methodology Core Upper Division Requirements: (6 courses total)

Gateway I – Intro & Survey (C&S BIOL/CS/BIOENGR M184)
Gateway II – Research Topics (C&S BIOL/CS M185)
PROBABILITY: STATS 100A OR MATH 170A OR EE 131A
STATISTICS: STATS 100B OR BIOSTATS 100A
CAPSTONE I: C&S BIO 150
CAPSTONE II: C&S BIOL/CS/BIOENGR M187

Concentrations: (5 Upper Division Courses each; one concentration must be declared)

Bioinformatics	<ul style="list-style-type: none"> ▪ CS CM121 AND CS CM124 ▪ MCDB M140 OR 144 ▪ MCDB M172 OR PHYSCI 125 ▪ One additional course from list of electives in CaSB handbook
Biological Data Sciences	<ul style="list-style-type: none"> ▪ CS CM121 ▪ CS 180 ▪ CS M146 OR STATS 161 OR STATS 101C ▪ Two additional courses from list of electives in CaSB handbook
Biomedical Systems	<ul style="list-style-type: none"> ▪ BIOENGR CM102 AND CM103 ▪ EE 133A OR MATH 151A ▪ C&S BIO M186 ▪ One additional course from list of electives in CaSB handbook
Neurosystems	<ul style="list-style-type: none"> ▪ NEUROSCI M101A AND M101B ▪ NEUROSCI 102 OR EE 113 OR MATH 155 ▪ C&S BIO M186 ▪ One additional course from list of electives in CaSB handbook
Systems Biology	<ul style="list-style-type: none"> ▪ EEB 170 OR PHYSCI 166 ▪ MCDB 100 OR 144 ▪ MCDB 172 OR PHYSCI 125 ▪ C&S BIO M186 ▪ One additional course from list of electives in CaSB handbook

Admission to the Pre-major:

- Current UCLA students who were admitted as Freshmen or Transfer Students* can request to declare the pre-major once they have met the following requirements:
 - Completed one quarter at UCLA
 - Are in good academic standing
 - Have a cumulative GPA of a 2.0 or better
 - Have established a minimum pre-major GPA of a 2.7 by taking one pre-major courses at UCLA for a letter grade
- All requests to declare the pre-major must be sent via email to casb@lifesci.ucla.edu. Please include the following information in your email:
 - Full name
 - UID
 - Formal statement requesting to declare the Pre-Major
 - Approval to be added to the CaSB Undergraduate listserv
- **NOTE:**
 - Please allow 7 – 10 business days for review. If a student does not meet the requirements to declare the pre-major, there will not be an option to petition the decision.
 - Transfer students: must have been admitted to UCLA under the Division of Life Sciences.
 - All courses for the pre-major must be completed with a grade of C or better.
 - Pre-major courses CS 32 or PIC 10B or PIC 16 are required for students following the Computers and Biosystems and for the Bioinformatics Concentrations Concentration, but do not have to be completed prior to admission into the Major.
 - Students are allowed to repeat up to two pre-major courses. Those who do not pass a course a second time are dismissed from the program.

Admission to the Major:

- Once students have completed all of the Pre-Major coursework, they will be required to apply by submitting an application to be entered into the major.
- Students must submit the completed application to the casb@lifesci.ucla.edu. Please allow 7 – 10 business days for review. If a student does not meet all of the requirements to officially be entered into the major, they will need to attach a statement addressing the circumstances leading to not being able to meet the minimum requirements. Students will be notified via email of the decision.
- Students will need to have the following completed the following upon submitting their application:
 - Minimum 2.7 GPA in all pre-major courses
 - Minimum 2.7 GPA in all pre-major math courses
 - Minimum grade of C or better in all pre-major courses
 - Have a cumulative GPA of a 2.0 or better
 - Completion of all pre-major courses

Honors Program:

- Students with a grade-point average of 3.5 or better in required major courses and a 3.0 cumulative GPA may apply for admission to the honors program. Honors or highest honors may be granted at the discretion of the faculty sponsor and the faculty committee to students demonstrating exceptional ability on the senior research thesis.

IT IS YOUR RESPONSIBILITY TO BE AWARE OF THE REQUIREMENTS LISTED ON YOUR DEGREE AUDIT REPORT (DAR) AND TO VERIFY THAT IT IS UP TO DATE.

FOR FURTHER ASSISTANCE, PLEASE GO TO THE UNDERGRADUATE ADVISING OFFICE: 102 HERSHEY HALL

casb@lifesci.ucla.edu