COMPUTATIONAL BIOLOGY (COMP BIO) MAJOR CURRICULUM *(effective FALL 2025 and forward)*

LOWER DIVISION REQUIREMENTS:

C&S BIO 10
Chemistry 14A, 14B *OR Chemistry* 20A, 20B, 20L
Computer Science (COM SCI) 31 *OR* Program in Computing (COMPTNG) 10A
Life Sciences 7A, 7B, 7C
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, Mathematics 33A, 33B, Life Sciences 40
Physics 5A, 5B, 5C *OR* 1A, 1B, 1C,
ADDITIONAL PREP: **Bioinformatics Track:** must also complete Computer Science 32 *OR* Program in Computing 10B and 10C; **AND** STATS 100A, but these do not have to completed prior to admission into the major. **Biological Data Sciences Track:** must also complete Computer Science 32, but this does not have to completed into the major. MATH 61, MATH 115A, and/or STATS 100A are also recommended pre-reqs for this track depending on chosen track courses. **Dynamical Modeling Track:** MATH 32A is a recommended pre-req depending on chosen track courses. **All Tracks:** LIFESCI 23L and/or CHEM 14C/30A are recommended pre-reqs depending on chosen Life Science courses. ****NOTE: Additional pre-reqs (beyond the required and recommended courses above) may be required for certain track courses. Students should check pre-reqs on the Schedule of Classes.****

METHODOLOGY CORE UPPER DIVISION REQUIREMENTS: (6 courses total)

CORE I – Intro & Survey – C&S BIO/COM SCI/BIOENGR M184 **OR** C&S BIO 183
CORE II – Research Topics – C&S BIO 185
CORE III – Data Science and Statistics for Life Scientists – C&S BIO 100
Biological Modeling – C&S BIO M150
Capstone Series *(2 courses, pick one series)* – **Option #1:** C&S BIO 199 and M187; **Option #2:** C&S BIO 198A and 198B**; **Option #3:** C&S BIO 195 and M187

**Students admitted to the *major* prior to Fall 2020 are required to complete just one course: C&S BIO M187

TRACK REQUIREMENTS: Five(5) upper division(UD) courses; one track must be declared when admitted to the major
Anything highlighted in green REQUIRES Chem 14C
Courses that require STATS 100A
IMPORTANT NOTE: Courses listed in a track category are courses a student can enroll in to satisfy the requirement. However, enrollment in courses is not guaranteed. CaSB does not offer enrollment assistance for any courses listed outside of the CaSB IDP. If CaSB offers enrollment assistance for any course, an announcement will be made via Bruin Learn. Otherwise, a student must abide by the enrollment rules set by the home department.

Bioinformatics Track	*1 UD COM SCI Course from* COM SCI C121; COM SCI C122; COM SCI C124 *2 Additional UD Courses from* C&S BIO M130; COM SCI C121; COM SCI C122; COM SCI C124; EE BIOL C135; MCD BIO CM156; MCD BIO 187AL; PHYSCI 125; STATS M254 *2 UD LIFE SCI Courses from the list of Life Science courses (see below)*
Biological Data Sciences Track	*3 UD Courses from* C&S BIO M130; COM SCI C124 OR COM SCI M226; COM SCI M146 OR STATS C161 OR MATH 156; COM SCI 161; COM SCI 168; COM SCI 180 OR MATH 182; EC ENGR C143A; EC ENGR C147; MATH 155; MATH 164; STATS 101A; STATS 101C **At most two courses may be from Mathematics** *2 UD LIFE SCI Courses from the list of Life Science courses (see below)*

Dynamical Modeling Track	***3 UD Courses from*** C&S BIO M130; C&S BIO M186 OR COM SCI M182; EC ENGR 102; EC ENGR 113; EE BIOL C119A; EE BIOL C119B; MATH 134 OR MATH 135; MATH 136; MATH 142; MATH 146; MATH 168; MATH 171 **At most two courses may be from Mathematics** ***2 UD LIFE SCI Courses from the list of Life Science courses (see below)***

Life Science Courses (select any two; courses can be from different areas)	
Biochemistry	CHEM 153A; CHEM 153B
Ecology	EE BIOL 100; EE BIOL 116; EE BIOL 120; EE BIOL 129; EE BIOL 161; EE BIOL C172; EE BIOL C174

Epidemiology	EPIDEM 100; MIMG 101; MIMG 102; MIMG 168; MIMG C185A
Genetics & Molecular Biology	MCD Bio 100; LIFESCI 107; MCD BIO 138; MCD BIO 140; MCD BIO 144; MCD BIO 165A
Neurosystems	NEUROSC M101A OR PSYCH 115; NEUROSC M101B; NEUROSC 102; NEURO 205; NEURO 260; PHYSCI C144;PHYSICS C186; PSYCH 119M
Physiology	BIOENGR C102; BIOMATH 206; EE BIOL 170 OR PHYSCI 166; PHYSCI 149

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 at least one pre-major course at UCLA for a letter grade
  - *Transfer students: must have been admitted to UCLA under the Division of Life Sciences.
- All requests to declare the pre-major must be sent to the COMP BIO department via Message Center. Please include the following information in your email:
  - Full name
  - UID
  - Formal statement requesting to declare the pre-major
- NOTE:
  - Please allow 10 – 15 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.
  - All courses for the pre-major must be completed with a grade of C or better.
  - Students are allowed to repeat up to two pre-major courses. Those who receive 3 grades of a C- or below in pre-major courses (either different courses or multiple repeats of the same course) are dismissed from the program.

Admission to the Major:
- Once students have completed all of the pre-major coursework, they must submit an application to be entered into the major.
- Students must submit the completed application to the COMP BIO Department via Message Center. Please allow 10-15 business days for review. If a student does not meet all of the minimum grade/GPA requirements to officially be entered into the major, they will need to petition by attaching a written statement addressing the circumstances that led to not being able to meet the minimum grade/GPA requirements. If you have not completed a pre-major requirement(I.E. any of the Physics courses), please do not reach out requesting to be added to the major. Students will be notified via Message Center of the decision.
- Effective Fall 2020, students will need to meet the following eligibility requirements to be admitted to the major:
  - Minimum 2.7 GPA in all pre-major courses **AND** 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 with a C or better

Departmental Honors:
- Students with a grade-point average of 3.5 or better in required major courses and a 3.0 cumulative GPA may apply for departmental honors. 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. REVISED 04/16/24

FOR FURTHER ASSISTANCE, PLEASE CONTACT THE COMP BIO DEPARTMENT VIA MESSAGE CENTER