

MOLECULAR & CELLULAR BIOLOGY MAJOR, B.S. – 2024-2025
BIOCHEMISTRY-MOLECULAR BIOLOGY EMPHASIS

To be admitted to full major status, students must fulfill the pre-biology course and grade-point average requirements as described in the General Catalog and Pre-Biological Sciences Major Sheet. At minimum, they must complete twelve designated courses from the Preparation for the Major with a 2.0 or higher UC grade-point average. Grades earned must meet grade prerequisites for the full major.

Notes: Hyphens indicate an entire sequence or combination must be completed as shown to fulfill an area requirement.

A single course can satisfy only one requirement.

PREPARATION FOR THE MAJOR**UNITS TO COMPLETE**

Chemistry 1A-B-C and 2AL-BL (or 1A-AL-B-BL-C-CL or 2A-AC-B-BC-C-CC)	15
MCDB 1A-B, EEMB 2-3, and MCDB 1LL and EEMB 2LL	17
Chemistry 6AL and 109A-B-C or 109AH-BH-CH.....	15
Mathematics 3A-B and 4A and 6A	16
Physics 6A-AL-B-BL-C-CL	12

UPPER-DIVISION MAJOR

48 upper division units required, distributed as follows 48

NOTE: *Courses with an asterisk (*) are listed in more than one area, but they may be applied to only one area.*

I. A. Genetics: MCDB 101A-B	8
B. Biochemistry: MCDB 108A-B	8
C. Biochemistry-Computational & Systems Biology: MCDB 108C	4
D. One Cell Biology course: MCDB 103, 126B, 131, or 135	4
II. 1. Physical Chemistry: Chemistry 112A (recommended) <u>or</u> 113A; <u>and</u> MCDB 123	8
2A. Biochemistry-Molecular Biology Lab: MCDB 109L* <u>or</u> 140L* (should not be taken concurrently)	4
2B. One Laboratory or course-lab sequence from: MCDB 101L, 103L, 109L*, 112-112L, 126-126AL, 126B-126BL, 133-133L, 140L*, 3 units of either 197 or 199	3-8
III. Additional units within MCDB or from the following to bring the total upper-division units in the major to 48: Chemistry 141, 143, 145, 147, 161, 162A, 162B; Psychology 162	4-9
<i>Courses outside of MCDB will likely require additional prereqs within their own departments.</i>	

NOTES: The following courses do not count toward upper-division major credit: MCDB 110, 183, 184, 194D, 194KF, 194MR.

In addition, no more than 8 units of the following courses combined will apply to the major: MCDB 185-199.

Students cannot double major with the Bio B.A. or B.S. nor have more than one emphasis within MCDB.

MAJOR REGULATIONS

PREREQUISITES	Check the General Catalog for the prerequisites to all listed courses.
P/NP GRADING OPTION	Not allowed for major courses (prep or UD), including courses applied to the major from other departments, except up to 8 units of courses that do not allow letter grades.
SUBSTITUTIONS	In the major requirements permissible only by petition to the department chair and dean.
G.P.A REQUIREMENTS	At least 2.0 overall UC average in all upper-division major courses and all courses (Prep and UD) for the major.
DOUBLE MAJORS	With the approval of each department chairperson, up to a total of 8 units may be applied simultaneously to both UD majors.