

**MOLECULAR & CELLULAR BIOLOGY MAJOR, B.S. – 2024-2025**  
**MICROBIOLOGY 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 or 34A-B .....	8
One of the following: PSTAT 5A or PSTAT 5LS or Math 4A .....	4 or 5
Physics 6A-AL-B-BL-C-CL .....	12

**UPPER-DIVISION MAJOR**

48 upper division units required, distributed as follows ..... 48

**NOTE:** A minimum of 42 upper division units must be completed through courses within the MCDB Department.

- 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, or 135 ..... 4
- II. 1. Microbiology: MCDB 131-131L ..... 6
- 2. Three courses from the following, including at least two MCDB courses: MCDB 132\*, 133\*, 134 (recommended)  
     or 136H, 138 (or W 138); EEMB 111, 144, 145, 150A ..... 9-13
- 3. One lab from: MCDB 132L, 133L ..... 3-4
- III. Additional units from the following to bring the total in the UD major to 48: MCDB 101AH, 101BH, 101L, 111  
 (or W 111), 111H, 133H, 134H, 135, 135H, 140L, 170, 170H, 172, 172H, 194BG, 197, 198, 199 (a maximum of  
 6 units of MCDB 194BG, 197, 198, and 199 combined can be applied); EEMB 111H, 144L ..... 1-7

**NOTES:** \*Students must complete either MCDB 132 or 133 and are encouraged to take both.  
 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.