

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Santa Barbara  
2022-2023 General Catalog, Quarter

From: De Anza College  
2022-2023 General Catalog, Quarter

## Biochemistry, B.S.

### GENERAL INFORMATION FOR ALL MAJORS

All transfer applicants must satisfy University of California admissions eligibility requirements as well as meeting campus admission selection criteria. Completing the UC transfer admission requirements in English and mathematics by the end of the fall term prior to the fall application quarter makes an applicant more competitive for admission to UCSB. All admission requirements must be completed by the end of spring prior to transfer. For more information on UC admissions eligibility requirements and admission to UCSB, please visit the Admissions website: [www.admissions.ucsb.edu](http://www.admissions.ucsb.edu)

This articulation agreement lists course-to-course or sequence-to-sequence substitutions for preparation in the major. **Transfer students are strongly encouraged to complete as many major preparatory courses as possible prior to enrolling at UCSB. Completion of all major preparatory courses is not an admissions requirement, but some majors require certain courses to be completed prior to transfer with a specified GPA, and completion or near completion of major preparatory courses will help students move more efficiently toward graduation after transfer.**

Please note that the course "equivalencies" do not necessarily apply to UCSB general education. For information concerning satisfaction of UCSB general education requirements, please refer to the General Education/Breadth articulation agreement.

**Advanced Placement (AP)** and **International Baccalaureate (IB)** exams may or may not be used to meet course requirements, depending on the exam. Please refer to the [AP Chart](#) and [IB Chart](#) in the [UCSB General Catalog](#) for information on how we use AP and IB exams.

### TIME TO DEGREE

New UCSB students might need more than two years to graduate if a significant amount of lower-division major preparation is not completed prior to transfer. Students should complete as many of the pre-major (if applicable) and major preparation courses as possible prior to transfer if they wish to graduate within two years after transfer.

### BIOCHEMISTRY, B.S.

Please visit the department's website to learn more about this major: [www.chem.ucsb.edu](http://www.chem.ucsb.edu)

#### PRE-MAJOR INFORMATION

Upon admission, all prospective Chemistry and Biochemistry majors are accepted into the **Pre-Chemistry** major. Students who have completed all pre-major coursework may petition to declare the full major immediately after the completion of their first quarter at UCSB. Transfer students need to obtain a UC GPA of 2.0 or above in each of the 6 pre-major course sequences. Only applicable UC courses will be included in this GPA calculation, regardless of course transferability. For example, if the equivalent of MATH 3A is completed prior to transferring, then a student must achieve a GPA of at least 2.0 in MATH 3B and 4A at UCSB. **Admission to the pre-major does not guarantee admission to full major status.**

**Prospective transfer students are strongly encouraged to complete all of the Pre-Major and Preparation for the Major coursework prior to transfer in order to ensure timely progress to degree.** Failure to complete all requirements prior to transfer is likely to delay graduation by a full year; students missing preparatory coursework are barred from enrolling in required upper-division course sequences and will have to wait a full year until these sequences are offered again.

#### I. PRE-MAJOR REQUIREMENTS

Chemistry 1A-B-C

Chemistry 1AL-BL-CL

Chemistry 6AL-BL

Chemistry 109A-B-C

Mathematics 3A, 3B, 4A

Physics 1-2-3-4 or Physics 6A-B-C

#### II. PREPARATION FOR THE MAJOR

*The following courses are not required to be admitted into the Biochemistry B.S. major, but MATH 6A and PHYS 3L-4L or 6AL-BL-CL are required for enrollment in Biophysical Chemistry (CHEM 112A-B-C at UCSB). Biophysical Chemistry sequences start in the fall quarter; transfer students arriving at UCSB in the fall without having completed all pre-major requirements and MATH 6A and PHYS 3L-4L or 6AL-BL-CL will be unable to enroll in Biophysical Chemistry for a full year.*

Mathematics 6A

Physics 3L-4L or Physics 6AL-BL-CL

MCDB 1A-1B-1LL and EEMB 2

**Students must earn a minimum grade of C- in all major-applicable transfer courses in order to satisfy UCSB major requirements.**

**Advisory note for fall 2025 applicants to Biochemistry, B.S.** (October-November 2024 application filing period)

**NEW ADMISSION SELECTION CRITERIA FOR FALL 2025:** Transfer applicants must complete the following (in addition to general admission requirements) with a minimum 2.85 GPA in these courses, with no grade lower than C. (Letter grades are required.)

- Full year of general chemistry with labs (courses articulating with UCSB's CHEM 1A-1AL-1B-1BL-1C-1CL series)
- Full year of organic chemistry with labs (courses articulating with UCSB's CHEM 109A-B-C series and CHEM 6AL and 6BL)
- Calculus I, Calculus II, Multivariable/Vector Calculus (courses articulating with UCSB's MATH 3A, 3B, 6A)
- Full sequence of calculus-based physics for science majors with labs (courses articulating with UCSB's PHYS 1-2-3-4 and 3L-4L) or full year of general physics with labs (courses articulating with UCSB's PHYS 6A-6B-6C and 6AL-6BL-6CL)

NOT required for admission but **HIGHLY RECOMMENDED** before transfer: Linear Algebra (course articulating with UCSB's MATH 4A) and full sequence of biology for biology majors with labs

## PRE-MAJOR REQUIREMENTS

An AP exam cannot be used to satisfy this course requirement  
An IB exam cannot be used to satisfy this course requirement

**CHEM 1A** - General Chemistry (3.00)

--- And ---

**CHEM 1AL** - General Chemistry Laboratory (2.00)

--- And ---

**CHEM 1B** - General Chemistry (3.00)

--- And ---

**CHEM 1BL** - General Chemistry Laboratory (2.00)

--- And ---

**CHEM 1C** - General Chemistry (3.00)

--- And ---

**CHEM 1CL** - General Chemistry Laboratory (2.00)



**CHEM 1A** - General Chemistry (5.00)

--- And ---

**CHEM 1B** - General Chemistry (5.00)

--- And ---

**CHEM 1C** - General Chemistry and Qualitative Analysis (5.00)

--- Or ---

**CHEM 1AH** - General Chemistry - HONORS (5.00)

--- And ---

**CHEM 1BH** - General Chemistry - HONORS (5.00)

--- And ---

**CHEM 1CH** - General Chemistry and Qualitative Analysis - HONORS (5.00)

**CHEM 6AL** - Laboratory Methods of Organic Chemistry (3.00)

--- And ---

**CHEM 6BL** - Laboratory Methods of Organic Chemistry (3.00)



**CHEM 12A** - Organic Chemistry (5.00)

--- And ---

**CHEM 12B** - Organic Chemistry (5.00)

--- And ---

**CHEM 12C** - Organic Chemistry (5.00)

**CHEM 109A** - Organic Chemistry (4.00)

--- And ---

**CHEM 109B** - Organic Chemistry (4.00)

--- And ---

**CHEM 109C** - Organic Chemistry (4.00)



**CHEM 12A** - Organic Chemistry (5.00)

- Lower division credit only

--- And ---

**CHEM 12B** - Organic Chemistry (5.00)

- Lower division credit only

--- And ---

**CHEM 12C** - Organic Chemistry (5.00)

- Lower division credit only

**MATH 3A** - Calculus with Applications, First Course (4.00)



**MATH 1A** - Calculus (5.00)

--- Or ---

**MATH 1AH** - Calculus - HONORS (5.00)

**MATH 3B** - Calculus with Applications, Second Course (4.00)



**MATH 1B** - Calculus (5.00)

--- Or ---

**MATH 1BH** - Calculus - HONORS (5.00)

**MATH 4A** - Linear Algebra with Applications (4.00)



**MATH 2B** - Linear Algebra (5.00)

--- Or ---

**MATH 2BH** - Linear Algebra - HONORS (5.00)

**PHYS 1** - Basic Physics (4.00)

--- And ---

**PHYS 2** - Basic Physics (4.00)

--- And ---

**PHYS 3** - Basic Physics (3.00)

--- And ---

**PHYS 4** - Basic Physics (3.00)



**PHYS 4A** - Physics for Scientists and Engineers: Mechanics (6.00)

--- And ---

**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)

--- And ---

**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)

--- Or ---

**PHYS 6A** - Introductory Physics (3.00)

--- And ---

**PHYS 6B** - Introductory Physics (3.00)

--- And ---

**PHYS 6C** - Introductory Physics (3.00)



**PHYS 2A** - General Introductory Physics (5.00)

--- And ---

**PHYS 2B** - General Introductory Physics (5.00)

--- And ---

**PHYS 2C** - General Introductory Physics (5.00)

## PREPARATION FOR THE MAJOR

**\*\*REFER TO TOP OF AGREEMENT\*\***

**MATH 6A** - Vector Calculus with Applications, First Course (4.00)



**MATH 1C** - Calculus (5.00)

--- And ---

**MATH 1D** - Calculus (5.00)

--- Or ---

**MATH 1CH** - Calculus - HONORS (5.00)

--- And ---

**MATH 1DH** - Calculus - HONORS (5.00)

**\*\*REFER TO TOP OF AGREEMENT\*\***

**PHYS 3L** - Physics Laboratory (1.00)

--- And ---

**PHYS 4L** - Physics Laboratory (1.00)



**PHYS 4B** - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)

--- And ---

**PHYS 4C** - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)

--- Or ---

**PHYS 6AL** - Introductory Experimental Physics (1.00)

--- And ---

**PHYS 6BL** - Introductory Experimental Physics (1.00)

--- And ---

**PHYS 6CL** - Introductory Experimental Physics (1.00)



**PHYS 2A** - General Introductory Physics (5.00)

--- And ---

**PHYS 2B** - General Introductory Physics (5.00)

--- And ---

**PHYS 2C** - General Introductory Physics (5.00)

An AP exam cannot be used to satisfy this course requirement  
An IB exam cannot be used to satisfy this course requirement

**MCDB 1A** - Introductory Biology I (4.00)

--- And ---

**MCDB 1B** - Introductory Biology II - Physiology (3.00)

--- And ---

**MCDB 1LL** - Introductory Biology Laboratory I (1.50)

--- And ---

**EEMB 2** - Introductory Biology II - Ecology and Evolution (3.00)

- *If the entire sequence is not completed prior to transfer, students must consult the department advisor prior to enrollment*



**BIOL 6A** - Form and Function in the Biological World (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6C** - Ecology and Evolution (6.00)

--- Or ---

**BIOL 6AH** - Form and Function in the Biological World - HONORS (6.00)

--- And ---

**BIOL 6B** - Cell and Molecular Biology (6.00)

--- And ---

**BIOL 6CH** - Ecology and Evolution - HONORS (6.00)

**END OF AGREEMENT**