

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

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

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

## Biochemistry and Molecular Biology B.S.

### GENERAL INFORMATION FOR ALL MAJORS

All transfer applicants must satisfy University of California admissions eligibility requirements as well as meet campus selection criteria. 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 UC Santa Cruz, please visit the Admissions website:

<https://admissions.ucsc.edu/attend-ucsc/transfer-students>.

This articulation agreement lists course-to-course, sequence-to-sequence or requirement substitutions for preparation in the major. **Transfer students are strongly encouraged to complete as many major preparatory courses as possible prior to enrolling at UCSC. 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.**

UC Santa Cruz Advanced Placement (AP) and International Baccalaureate (IB) credit policies are detailed in the link below:

[UC Santa Cruz AP/IB Chart 2022-2023](#)

### BIOCHEMISTRY AND MOLECULAR BIOLOGY B.S.

Please visit the department's website to learn more about this major:

<https://www.chemistry.ucsc.edu/academics/undergraduates/index.html>

#### ADMISSION SELECTION CRITERIA

To be considered for admission to the Biochemistry and Molecular Biology B.S. major, transfer students must pass equivalents of the following courses, by the end of spring term for students planning to enter in the fall, with a cumulative GPA of 2.50 or higher:

CHEM 4A: Advanced Chemistry: Molecular Structure and Reactivity

CHEM 4B: Advanced Chemistry: Molecular Structure and Reactivity

CHEM 8A: Organic Chemistry

CHEM 8B: Organic Chemistry

BIOL 20A: Cell and Molecular Biology

#### **Plus one of the following options:**

MATH 11A: Calculus with Applications **OR** MATH 19A: Calculus for Science, Engineering, and Mathematics

**In addition to the required transfer courses, it is *strongly recommended* that all transfer students complete the equivalents to the following courses if they will be entering at the junior level and wish to graduate in two years:**

BIOE 20B: Development and Physiology

CHEM 8L: Organic Chemistry Laboratory

CHEM 8M: Organic Chemistry Laboratory

MATH 11B: Calculus with Applications **OR** MATH 19B: Calculus for Science, Engineering, and Mathematics

MATH 22: Introduction to Calculus of Several Variables

Prospective students are encouraged to prioritize required and recommended major preparation, and may additionally complete courses that articulate to UC Santa Cruz general education requirements as time allows. Students who complete **only the minimal introductory coursework** prior to transfer may take longer to complete their degree. For additional information on getting started in the major as a transfer student, please visit the following link:

[https://advising.ucsc.edu/gettingstartedinthemajor/transfers/bmb\\_tr.html](https://advising.ucsc.edu/gettingstartedinthemajor/transfers/bmb_tr.html)

**THIS IS A SCREENING MAJOR.** For more information on screening major requirements please visit the Admissions website:

<https://admissions.ucsc.edu/posts/screening-major-selection-criteria>

### MAJOR PREPARATION COURSES REQUIRED FOR TRANSFER

**CHEM 4A** - Advanced General Chemistry: Molecular Structure and Reactivity (5.00)



**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 4B** - Advanced General Chemistry: Molecular Structure and Reactivity (5.00)



**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 8A** - Organic Chemistry (5.00)



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

**CHEM 8B** - Organic Chemistry (5.00)



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

**BIOL 20A** - Cell and Molecular Biology (5.00)



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

**MATH 11A** - Calculus with Applications (5.00)



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

--- Or ---

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

--- Or ---

**MATH 19A** - Calculus for Science, Engineering, and Mathematics (5.00)



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

--- Or ---

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

## STRONGLY RECOMMENDED ADVANCED PREPARATION COURSES

**BIOE 20B** - Development and Physiology (5.00)



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

--- Or ---

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

**CHEM 8L** - Organic Chemistry Laboratory (2.00)



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

**CHEM 8M** - Organic Chemistry Laboratory (2.00)



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

<b>MATH 11B</b> - Calculus with Applications (5.00)	<div>←</div> <div> <b>MATH 1B</b> - Calculus (5.00)           </div> <div>             --- And ---           </div> <div> <b>MATH 1C</b> - Calculus (5.00)           </div> <div>             --- Or ---           </div> <div> <b>MATH 1BH</b> - Calculus - HONORS (5.00)           </div> <div>             --- And ---           </div> <div> <b>MATH 1CH</b> - Calculus - HONORS (5.00)           </div>
--- Or ---	
<b>MATH 19B</b> - Calculus for Science, Engineering, and Mathematics (5.00)	<div>←</div> <div> <b>MATH 1B</b> - Calculus (5.00)           </div> <div>             --- And ---           </div> <div> <b>MATH 1C</b> - Calculus (5.00)           </div> <div>             --- Or ---           </div> <div> <b>MATH 1BH</b> - Calculus - HONORS (5.00)           </div> <div>             --- And ---           </div> <div> <b>MATH 1CH</b> - Calculus - HONORS (5.00)           </div>
<b>MATH 22</b> - Introduction to Calculus of Several Variables (5.00)	<div>←</div> <div> <b>MATH 1C</b> - Calculus (5.00)           </div> <div>             --- And ---           </div> <div> <b>MATH 1D</b> - Calculus (5.00)           </div> <div>             --- Or ---           </div> <div> <b>MATH 1CH</b> - Calculus - HONORS (5.00)           </div> <div>             --- And ---           </div> <div> <b>MATH 1DH</b> - Calculus - HONORS (5.00)           </div>

ADDITIONAL MAJOR PREPARATION COURSES

<div> <b>PHYS 5A</b> - Introduction to Physics I (5.00)           </div> <div>             --- And ---           </div> <div> <b>PHYS 5L</b> - INTRODUCTION TO PHYSICS I LABORATORY (1.00)           </div>	<div>←</div> <div> <b>PHYS 4A</b> - Physics for Scientists and Engineers: Mechanics (6.00)           </div> <div>             --- Or ---           </div> <div> <b>PHYS 6A</b> - Introductory Physics I (5.00)           </div> <div>             --- And ---           </div> <div> <b>PHYS 6L</b> - Introductory Physics I Laboratory (1.00)           </div>
--- Or ---	
<div> <b>PHYS 5B</b> - Introduction to Physics II (5.00)           </div> <div>             --- And ---           </div> <div> <b>PHYS 5M</b> - INTRODUCTION TO PHYSICS II LABORATORY (1.00)           </div>	<div>←</div> <div> <b>PHYS 4A</b> - Physics for Scientists and Engineers: Mechanics (6.00)           </div> <div>             --- Or ---           </div> <div> <b>PHYS 2A</b> - General Introductory Physics (5.00)           </div>
--- Or ---	
<div> <b>PHYS 5C</b> - Introduction to Physics III (5.00)           </div> <div>             --- And ---           </div> <div> <b>PHYS 5N</b> - INTRODUCTION TO PHYSICS III LABORATORY (1.00)           </div>	<div>←</div> <div> <b>PHYS 4C</b> - Physics for Scientists and Engineers: Fluids, Waves, Optics and Thermodynamics (6.00)           </div> <div>             --- Or ---           </div> <div> <b>PHYS 2C</b> - General Introductory Physics (5.00)           </div>
--- Or ---	
<div> <b>PHYS 5C</b> - Introduction to Physics III (5.00)           </div> <div>             --- And ---           </div> <div> <b>PHYS 5N</b> - INTRODUCTION TO PHYSICS III LABORATORY (1.00)           </div>	<div>←</div> <div> <b>PHYS 4B</b> - Physics for Scientists and Engineers: Electricity and Magnetism (6.00)           </div>

--- Or ---

**PHYS 6C** - Introductory Physics III (5.00)

--- And ---

**PHYS 6N** - INTRODUCTORY PHYSICS III LABORATORY (1.00)



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

--- Or ---

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

**STAT 5** - Statistics (5.00)



**MATH 10** - Introductory Statistics (5.00)

--- Or ---

**MATH 10H** - Introductory Statistics - HONORS (5.00)

--- Or ---

**PSYC 15** - Statistics and Research Methods in Social Science (4.00)  
Same-As: SOC 15

--- Or ---

**SOC 15** - Statistics and Research Methods in Social Science (4.00)  
Same-As: PSYC 15

--- Or ---

**STAT 7** - Statistical Methods for the Biological, Environmental, and Health Sciences (5.00)

--- And ---

**STAT 7L** - Statistical Methods for the Biological, Environmental, and Health Sciences Laboratory (2.00)



No Course Articulated

**END OF AGREEMENT**