

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

Chemistry, Biochemistry Concentration 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](#)

CHEMISTRY, BIOCHEMISTRY CONCENTRATION B.S.

Please visit the department's website to learn more about this major: <https://www.chemistry.ucsc.edu>

The biochemistry concentration is designed for students who intend to pursue a career in biochemistry or in a related field such as biotechnology, and it provides an especially rigorous chemistry emphasis.

ADMISSION SELECTION CRITERIA

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

CHEM 4A: Advanced General Chemistry: Molecular Structure and Reactivity

CHEM 4B: Advanced General Chemistry: Molecular Structure and Reactivity

MATH 22: Introduction to Calculus of Several Variables

Plus one of the following options:

MATH 11A: Calculus with Applications **AND** MATH 11B: Calculus with Applications

OR

MATH 19A: Calculus for Science, Engineering, and Mathematics **AND** MATH 19B: Calculus for Science, Engineering, and Mathematics

In addition to the courses required for transfer admission, the following courses are strongly recommended prior to transfer to ensure timely graduation:

CHEM 8A/8L: Organic Chemistry and Organic Chemistry Laboratory

CHEM 8B/8M: Organic Chemistry and Organic Chemistry Laboratory

PHYS 6A/6L: Introductory Physics I and Introductory Physics I Laboratory

PHYS 6B/6M: Introductory Physics II and Introductory Physics II Laboratory

Winter Applicants

Students applying for admission to the winter term will be required to complete the following courses in addition to the courses required for fall entrance:

CHEM 8A: Organic Chemistry **AND** CHEM 8L: Organic Chemistry Laboratory

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. For additional information on getting started in the major as a transfer student, please visit the following link:

https://advising.ucsc.edu/gettingstartedinthemajor/transfers/chem_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>

IMPORTANT INFORMATION ABOUT CHEMISTRY SERIES

Transfer students are advised to complete the approved equivalent of the full general chemistry series (CHEM 4A, 4B and 4BL at UCSC) at one college or university. Failure to complete the full series of general chemistry at one institution before transferring to UCSC may result in no subject credit or partial credit for the general chemistry series at UCSC. Partial credit may require that the student go back to the previous college/university to complete their general chemistry series.

Not all community colleges offer a full year Organic Chemistry sequence which directly articulates to the required full year UCSC sequence of CHEM 8A, 8B and CHEM 110. In some cases, students will be required to take CHEM 110 - Intermediate Organic Chemistry even though they have completed a full year of intro Organic Chemistry at a Community College.

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)

MATH 22 - Introduction to Calculus of Several Variables (5.00) ←

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)

Select 1 Sequence(s) from the following

MATH 11A - Calculus with Applications (5.00)



MATH 1A - Calculus (5.00)

--- Or ---

MATH 1AH - Calculus - HONORS (5.00)

--- And ---

MATH 11B - Calculus with Applications (5.00)



MATH 1B - Calculus (5.00)

--- And ---

MATH 1C - Calculus (5.00)

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

--- And ---

MATH 1CH - 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)

--- And ---

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



MATH 1B - Calculus (5.00)

--- And ---

MATH 1C - Calculus (5.00)

--- Or ---

MATH 1BH - Calculus - HONORS (5.00)

--- And ---

MATH 1CH - Calculus - HONORS (5.00)

STRONGLY RECOMMENDED ADVANCED PREPARATION COURSES

CHEM 8A - Organic Chemistry (5.00)



CHEM 12A - Organic Chemistry (5.00)

--- And ---

CHEM 8L - Organic Chemistry Laboratory (2.00)



CHEM 12A - Organic Chemistry (5.00)

CHEM 8B - Organic Chemistry (5.00)



CHEM 12B - Organic Chemistry (5.00)

--- And ---

CHEM 8M - Organic Chemistry Laboratory (2.00)



CHEM 12B - Organic Chemistry (5.00)

PHYS 6A - Introductory Physics I (5.00)



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

--- Or ---

PHYS 2A - General Introductory Physics (5.00)

--- And ---

PHYS 6L - Introductory Physics I Laboratory (1.00)



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

--- Or ---

PHYS 2A - General Introductory Physics (5.00)

PHYS 6B - Introductory Physics II (5.00)



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

--- Or ---

PHYS 2C - General Introductory Physics (5.00)

--- And ---

PHYS 6M - INTRODUCTORY PHYSICS II LABORATORY (1.00)



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

--- Or ---

PHYS 2C - General Introductory Physics (5.00)

ADDITIONAL MAJOR PREPARATION COURSES

BIOL 20A - Cell and Molecular Biology (5.00)



BIOL 6B - Cell and Molecular Biology (6.00)

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)

PHYS 6C - Introductory Physics III (5.00)



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

--- Or ---

PHYS 2B - General Introductory Physics (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)

Select 1 Course(s) from the following

AM 10 - Mathematical Methods for Engineers I (5.00)



MATH 2B - Linear Algebra (5.00)

--- Or ---

MATH 2BH - Linear Algebra - HONORS (5.00)

--- Or ---

MATH 21 - Linear Algebra (5.00)



MATH 2B - Linear Algebra (5.00)

--- Or ---

MATH 2BH - Linear Algebra - HONORS (5.00)

--- Or ---

MATH 24 - Ordinary Differential Equations (5.00)



MATH 2A - Differential Equations (5.00)

--- Or ---

MATH 2AH - Differential Equations - HONORS (5.00)

END OF AGREEMENT