

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

Earth Science, B.S. - Geohydrology Emphasis

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

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.

EARTH SCIENCE

Please visit the department's website to learn more about this major: www.geol.ucsb.edu

An initial consultation with a departmental advisor is essential before embarking on the Earth Science major.

A grade of C- or better is required in all courses in the major preparation.

The Earth Science majors are: Earth Science, B.A.; Earth Science B.S. - Climate and Environment Emphasis; Earth Science, B.S. - Geohydrology Emphasis; Earth Science, B.S. - Geology Emphasis; Earth Science, B.S. - Geophysics Emphasis; Earth Science, B.S. - Paleobiology Emphasis.

PRE-MAJOR INFORMATION

Students are admitted initially to **Pre-Earth Science**, not directly to the major. Admission to the full major is contingent upon completion of the Pre-Major courses with a combined GPA of at least 2.3 in those courses completed at the University of California. The **Pre-Major** courses are:

- Earth 2
- Earth 3 or 4 (or Earth 9, 11, or 20 for Geophysics); (Earth 3 is a prerequisite for Earth 122 which is required for Earth Science Major, B.A., and for the Paleobiology and Geology Emphases)
- Chemistry 1A & 1AL
- MATH 3A (or MATH 34A for the Paleobiology Emphasis)

Admission to the Pre-Major does not guarantee admission to full major status.

EARTH SCIENCE, B.S. - GEOHYDROLOGY EMPHASIS

PREPARATION FOR THE MAJOR:

Earth 2

Earth 3 or 4 (note: Earth 3 is required for Earth 122)

Earth 18

Chemistry 1A-1AL-1B-1BL-1C-1CL

Math 3A and 3B and 4A and 4B

Physics 1-2-3-4 or Physics 6A-6AL-6B-6BL-6C-6CL

(Transfer applicants do not need to complete all of the Preparation for the Major in order to be admitted, but should complete as much as possible before transferring so they will be prepared to progress in the major at UCSB.)

Recommended: Math 6A-B, computer programming (i.e. Engineering 3), statistics

PREPARATION FOR THE MAJOR

REFER TO TOP OF AGREEMENT

EARTH 2 - Principles of Physical Geology (4.00)



GEOL 10 - Introductory Geology (5.00)

EARTH 3 - Principles of Historical Geology (4.00)



No Course Articulated

--- Or ---

EARTH 4 - Introduction to Oceanography (4.00)



GEOL 20 - General Oceanography (4.00)

EARTH 18 - Field Studies in Geological Sciences (1.00)



No Course Articulated

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)

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)

MATH 4B - Differential Equations (4.00)



MATH 2A - Differential Equations (5.00)

--- Or ---

MATH 2AH - Differential Equations - 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 6AL - Introductory Experimental Physics (1.00)

--- And ---

PHYS 6B - Introductory Physics (3.00)

--- And ---

PHYS 6BL - Introductory Experimental Physics (1.00)

--- And ---

PHYS 6C - Introductory Physics (3.00)

--- 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)

RECOMMENDED

Recommended; Not required for the major

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)

Recommended; Not required for the major

MATH 6B - Vector Calculus with Applications, Second 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)

Recommended; Not required for the major

ENGR 3 - Introduction to Programming (3.00)

No Course Articulated

--- Or ---

CMPSC 8 - Introduction to Computer Science (4.00)

CIS 5 - Swift Programming (4.50)

--- Or ---

CIS 22A - Beginning Programming Methodologies in C++ (4.50)

--- Or ---

CIS 35A - Java Programming (4.50)

--- Or ---

CIS 40 - Introduction to Programming in Python (4.50)

--- Or ---

CIS 41A - Python Programming (4.50)

--- Or ---

CMPSC 16 - Problem Solving with Computers I (4.00)

CIS 22B - Intermediate Programming Methodologies in C++ (4.50)

--- Or ---

CIS 22BH - Intermediate Programming Methodologies in C++ - HONORS (4.50)

--- Or ---

CIS 26A - C as a Second Programming Language (4.50)

--- Or ---

CIS 26B - Advanced C Programming (4.50)

--- Or ---

CIS 26BH - Advanced C Programming - HONORS (4.50)

Recommended; Not required for the major

PSTAT 5A - Understanding Data (5.00)



MATH 10 - Introductory Statistics (5.00)

--- Or ---

MATH 10H - Introductory Statistics - HONORS (5.00)

--- Or ---

MATH 17 - Integrated Statistics 2 (5.00)

--- Or ---

MATH 23 - Engineering Statistics (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

END OF AGREEMENT