

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

Physical Geography, B.S. - Ocean Science 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.

PHYSICAL GEOGRAPHY, B.S. - OCEAN SCIENCE EMPHASIS

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

PREPARATION FOR THE MAJOR:

1. Geography 3 and 4
2. Geography 5
3. Math 3A and 3B and 4A
4. Physics 6A-6B-6C or Physics 1-2-3-3L-4-4L
5. PSTAT 5A or PSTAT 5LS
6. Chemistry 1A-1AL
7. 12 elective quarter units (8 semester units) from: Chemistry 1B, 1BL, 1C, 1CL; MCDB 1A, 1AL, 1LL, 1B, 1BL; EEMB 2, 2L, 2LL, 3, 3L; Earth Science 2, 3, 4; Astronomy 1, 2; Math 4B, 6A, 6B, 8

Note: Chemistry 1A-B-C is prerequisite to MCDB 1A

Strongly recommended: Computer Science 8; Geography 12; any additional courses from the above elective selection

(Transfer applicants do not need to complete all 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.)

PREPARATION FOR THE MAJOR

GEOG 3 - Oceans and Atmosphere (4.00)	←	MET 10 - Weather and Climate Processes (5.00)
GEOG 4 - Land, Water and Life (4.00)	←	GEO 1 - Physical Geography (4.00)
GEOG 5 - People, Place and Environment (4.00)	←	GEO 4 - Cultural Geography (4.00)
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)

Select 1 Sequence(s) from the following

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)

--- Or ---

PHYS 1 - Basic Physics (4.00)



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

--- And ---

PHYS 2 - Basic Physics (4.00)



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

--- And ---

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

--- And ---

PHYS 3 - Basic Physics (3.00)

--- And ---

PHYS 3L - 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)

--- And ---

PHYS 4 - Basic Physics (3.00)

--- And ---

PHYS 4L - Physics Laboratory (1.00)



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

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

--- Or ---

PSTAT 5LS - Statistics for Life Sciences (5.00)



No Course Articulated

CHEM 1A - General Chemistry (3.00)

--- And ---

CHEM 1AL - General Chemistry Laboratory (2.00)



CHEM 1A - General Chemistry (5.00)

--- Or ---

CHEM 1AH - General Chemistry - HONORS (5.00)

Select 12 Quarter Unit(s) from the following

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

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)

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)
--- And ---
EEMB 2LL - Introductory Biology Laboratory II (1.50)
--- And ---
EEMB 3 - Introductory Biology III (3.00)



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)

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

EARTH 4 - Introduction to Oceanography (4.00)



GEOL 20 - General Oceanography (4.00)

ASTRO 1 - Basic Astronomy (4.00)



ASTR 4 - Solar System Astronomy (5.00)
--- Or ---

ASTR 10 - Stellar Astronomy (5.00)

ASTRO 2 - History of the Universe (4.00)



No Course Articulated

MATH 4B - Differential Equations (4.00)



MATH 2A - Differential Equations (5.00)
--- Or ---
MATH 2AH - Differential Equations - HONORS (5.00)

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)

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)

MATH 8 - Transition to Higher Mathematics (5.00)



No Course Articulated

STRONGLY RECOMMENDED

Recommended; Not required for the major

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)

Recommended; Not required for the major

GEOG 12 - Maps and Spatial Reasoning (4.00)



No Course Articulated

REFER TO TOP OF AGREEMENT

Any additional courses from the above elective selection



No Course Articulated

END OF AGREEMENT