

# Articulation Agreement by Major

Effective during the 2022-2023 Academic Year

To: University of California, Los Angeles  
2022-2023 General Catalog, Quarter

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

## Atmospheric and Oceanic Sciences/B.S.

### IMPORTANT MAJOR INFORMATION

Listed below are the lower division preparation for the major. **Effective fall 2024 admission and thereafter, you must complete the following preparation courses by the end of spring before transfer: one year of calculus; one year of calculus-based physics with lab and one semester of general chemistry with lab. Completion of a second semester of general chemistry with lab and one course in computer programming (preferably Python) are recommended.** All courses must be taken for a letter grade. For more information regarding this major and UCLA's transfer selection process, visit <https://www.atmos.ucla.edu> and <https://admission.ucla.edu>.

**PLEASE NOTE:** the community college courses listed below have been approved to satisfy the preparation for this major at UCLA, but they may not be exact equivalents of the UCLA courses listed.

### ADDITIONAL MAJOR INFORMATION

The Calculus for Life Sciences courses listed below have been approved as substitutes for UCLA's Math 3ABC series through Spring 2019. However, students may be required to complete additional math courses after transfer to satisfy this requirement.

### LOWER DIVISION MAJOR REQUIREMENTS

**A&O SCI 51** - Fundamentals of Climate Science (4.00) ← No Course Articulated

**A&O SCI M71** - M71. Introduction to Computing for Geoscientists (4.00) ← No Course Articulated

--- Or ---

**COMPTNG 10A** - Introduction to Programming(C++) (5.00) ←

**CIS 27** - Programming in C++ for C/Java Programmers (4.50)

--- Or ---

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

--- And ---

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

**A&O SCI 90** - Introduction to Undergraduate Research in Atmospheric and Oceanic Sciences (4.00) ← No Course Articulated

**CHEM 20A** - Chemical Structure (4.00)

--- And ---

**CHEM 20B** - Chemical Energetics and Change (4.00)

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

--- And ---

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

--- And ---

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

**LIFESCI 30A** - Mathematics for Life Scientists (5.00) ← No Course Articulated

**LIFESCI 30B** - Mathematics for Life Scientists (5.00) ← No Course Articulated

--- Or ---

**MATH 3A** - Calculus for Life Sciences Students (4.00)

← No Course Articulated

--- And ---

**MATH 3B** - Calculus for Life Sciences Students (4.00)

← No Course Articulated

--- And ---

**MATH 3C** - Ordinary Differential Equations with Linear Algebra for Life Sciences Students (4.00)

← No Course Articulated

--- Or ---

**MATH 31A** - Differential and Integral Calculus (4.00)

--- And ---

**MATH 31B** - Integration and Infinite Series (4.00)

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

--- And ---

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

--- And ---

**MATH 32A** - Calculus of Several Variables (4.00)

--- And ---

**MATH 32B** - Calculus of Several Variables (4.00)

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

--- And ---

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

**MATH 33A** - Linear Algebra and Applications (4.00)

--- And ---

**MATH 33B** - Differential Equations (4.00)

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

--- And ---

**MATH 2A** - Differential Equations (5.00)

**PHYSICS 1A** - Physics for Scientists and Engineers: Mechanics (5.00)

--- And ---

**PHYSICS 1B** - Physics for Scientists and Engineers: Oscillations, Waves, Electric and Magnetic Fields (5.00)

--- And ---

**PHYSICS 1C** - Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity (5.00)

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**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 ---

**PHYSICS 5A** - Physics for Life Sciences Majors: Mechanics, and Energy (5.00)

--- And ---

**PHYSICS 5B** - Physics for Life Sciences Majors: Thermodynamics, Fluids, Waves, Light, and Optics (5.00)

--- And ---

**PHYSICS 5C** - Physics for Life Sciences Majors: Electricity, Magnetism, and Modern Physics (5.00)

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

--- And ---

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

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

## STRONGLY RECOMMENDED

A second semester of general chemistry with laboratory and one course in computer programming (preferably in Python).

← No Course Articulated

END OF AGREEMENT