# **Articulation Agreement by Major**

Effective during the 2022-2023 Academic Year

To: University of California, Berkeley 2022-2023 General Catalog, Semester

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

# **Environmental Sciences, Lower Division B.S.**

# **PROGRAM**

# **College Admission Requirements for Transfer Students**

This major is offered by the Rausser College of Natural Resources.

The **Environmental Sciences (ES)** major is administered by the Department of Environmental Science, Policy, and Management (ESPM). The major prepares students to deal with issues arising from the impact of human activities on natural systems. To address these problems, all ES students acquire strong backgrounds in math, biological sciences, and physical sciences.

Because this is an interdisciplinary major, students may choose to take upper division electives (if they satisfy pre-requisite requirements) in fields such as ecology, conservation biology, energy and resources, environmental health, toxicology, geology, hydrology, meteorology, geography, and engineering, or a social science field such as city planning, policy analysis, environmental economics and policy, environmental justice, and education.

Each ES student completes a year-long senior research project with the support of a mentor in a biological, physical, or interdisciplinary research area.

### For more information on this major:

Environmental Sciences:

https://nature.berkeley.edu/advising/majors/environmental-sciences

For more information on the Rausser College of Natural Resources:

http://nature.berkeley.edu

For more information on admission to UC Berkeley:

http://admissions.berkeley.edu

For more information on majors at UC Berkeley:

Berkeley Academic Guide: http://guide.berkeley.edu

# **REQUIREMENTS**

# PREPARATION FOR TRANSFER AT THE JUNIOR LEVEL

Transfer applicants <u>must</u> complete the minimum admissions requirements by the end of the <u>spring</u> term preceding fall enrollment at Berkeley, and are encouraged to complete as many additional lower division requirements as possible. Exceptions are highly unlikely. <u>NOTE</u>: The ESPM Environmental Science Core and the ESPM Social Science Core requirements may be taken at UC Berkeley if no course is articulated at student's home institution.

Please pay particular attention to how courses from your community college articulate to UC Berkeley. If courses for a particular subject are articulated as a group (for example, a 3-course series at your college may articulate to a 2-course series at UC Berkeley), you will need to take all of the courses noted in order for the articulation to work. If you have questions about articulation, please contact the Office of Instruction and Student Affairs, Rausser College of Natural Resources at <a href="mailto:energy-new-college-english-eng

In general, students will be evaluated on:

- the strength of academic preparation and the completion of lower division requirements in biology, chemistry, and math
- GPA in the required courses
- cumulative GPA
- the personal statement

# **MINIMUM ADMISSIONS REQUIREMENTS**

There are three areas of concentration within the Environmental Sciences major: **Biological Sciences**, **Physical Sciences**, or **Social Sciences**. Applicants should meet the requirements for one concentration.

In addition to the requirements below, students must also complete the Reading & Composition requirement.

IGETC Certification will satisfy both halves of the Reading & Composition requirement, the ESPM Social Science Core, and the Social & Behavioral Science and Humanities breadth courses required for the major.

# **BIOLOGICAL SCIENCES CONCENTRATION**

Chemistry 1A & 1AL

Chemistry 3A & 3AL

Biology 1A & 1AL

Biology 1B

Math 16A (or Math 1A)

Math 16B (or Math 1B)

Recommended:

Physics 8A (or Physics 7A)

Environmental Sciences, Policy, and Management 15

Environmental Economics & Policy C1 (A course in micro-economics satisfies this requirement)

# SOCIAL SCIENCE CONCENTRATION

Chemistry 1A & 1AL

Chemistry 1B (or Chemistry 3A & 3AL)

Biology 1A & 1AL and Biology 1B (or Biology 11 & 11L, with the upper division biology elective to be taken at Berkeley)

Math 16A (or Math IA)

Math 16B (or Math IB)

Recommended:

Physics 8A (or Physics 7A)

Environmental Sciences, Policy, and Management 15

Environmental Economics & Policy C1 (A course in micro-economics satisfies this requirement)

# PHYSICAL SCIENCE CONCENTRATION

Chemistry 1A & 1AL

Chemistry 3A & 3AL

Biology 1A & 1AL and Biology 1B (or Biology 11 & 11L, with the upper division biology elective to be taken at Berkeley)

Math 1A

Math 1B

Physics 7A

Physics 7B

Recommended:

Environmental Sciences, Policy, and Management 15

Environmental Economics & Policy C1 (A course in micro-economics satisfies this requirement)

Please note that substituting AP scores for chemistry and biology coursework is accepted, but not recommended. Students who use AP scores for these requirements may struggle in subsequent coursework.

### **BIOLOGY**

Biology 1A/1AL and Biology 1B satisfies the Biology requirement for **all three** concentrations.

Biology 1B or Biology 11 & 11L satisfies the Biology requirement for the Physical and Social Science concentrations only. The student will be required to take an upper division ecology elective at UC Berkeley for the second half of the requirement.

### CHEMISTRY

Chem 1A & 1AL and Chem 3A & 3AL will satisfy the Chemistry requirement for all three concentrations.

Chem 1A & 1AL and Chem 1B will satisfy the Chemistry requirement for the Social Sciences concentration only.

### **ECONOMICS**

Required for all concentrations, if articulated course offered.

Environmental Sciences requires only one course in micro-economics; thus, a course in micro-economics will satisfy the requirement. Macro-economics is OPTIONAL for this major.

Berkeley's ECON 1 covers macro-economics and micro-economics.

# **HUMANITIES (3-4 UNITS)**

One UC-transferable course in Humanities is required for both concentrations.

# **MATHEMATICS**

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Math 16A and Math 16B will satisfy the math series for the Biological and Social Science concentrations only.

# **PHYSICS**

It is highly recommended that you complete the Physics requirement prior to transfer. If an equivalent to the Physics 8 series is unavailable, students should complete the equivalent of the Physics 7 series.

Physics 7A and 7B satisfies the Physics requirement for the Physical Science concentration.

Physics 8A will satisfy the Physics requirement for the Biological and Social Science concentrations **only**. Physics 7A will also satisfy the Physics requirement for the Biological and Social Science concentrations.

**NOTE:** This institution may cover the topics in Berkeley's PHYSICS 7ABC series in a different order. Students who transfer before completing courses equivalent to the entire 7ABC series may need to enroll in Berkeley's PHYSICS 49 to complete missing topics such as wave motion (7A) or heat (7B).

# **READING & COMPOSITION**

Students must complete Reading and Composition prior to transfer. Courses comparable to Berkeley's Reading & Composition (R&C) 1A & 1B.

# SOCIAL & BEHAVIORAL SCIENCES (3-4 UNITS)

One UC-transferable course in Social and Behavioral Sciences is required for both concentrations.

To ensure full articulation of transfer coursework: if a series of courses at a community college is required (e.g., Chemistry 101 + 102 + 103 = Chemistry 1A,1AL + 1B at UC Berkeley), all the courses in the series must be completed, and must (unless otherwise indicated) be completed at the same community college. Partial completion of the series (e.g., 2 of the 3 required courses) may result in no credit toward the requirement(s), and completion of series courses at different community colleges is not guaranteed to satisfy the requirement. Courses taken out of series will be evaluated by college faculty during the transfer admissions process.

# **AP TEST CREDIT**

The Environmental Sciences major will accept AP credit for the following courses:

- AP Biology, with a score of 4 or 5 = Bio 1B, or Bio 11 & 11L
- AP Calculus AB, with a score of 3, 4, 5 = Math 1A or Math 16A
- AP Calculus BC, with a score of 3 or 4 = Math 1A or Math 16A
- AP Calculus BC, with a score of 5 = Math 1A/16A and Math 1B/16B
- AP Economics (Micro), with a score of 4 or 5 = Env Econ C1/Econ C3
- AP Chemistry, with a score of 4 or 5 = Chemistry 1A & 1AL

- AP English Literature, with a score of 3 = Entry Level Writing requirement
- AP English Literature, with a score of 4 = First half of Reading & Composition (ENGLISH R1A)
- AP English Literature, with a score of 5 = Both halves of Reading & Composition (ENGLISH R1A and R1B)
- AP English Language, with a score of 3 = Entry Level Writing requirement

--- And --BIOLOGY 1B - General Biology (Plant Form & Function, Ecology, Evolution)

Courses that satisfy the Biology requirement for the Physical and Social Science

(4.00)

concentrations only:

- AP English Language, with a score of 4 or 5 = First half of Reading & Composition (ENGLISH R1A)
- AP Environmental Science, with a score of 4 or 5 = ESPM Environmental Science Core

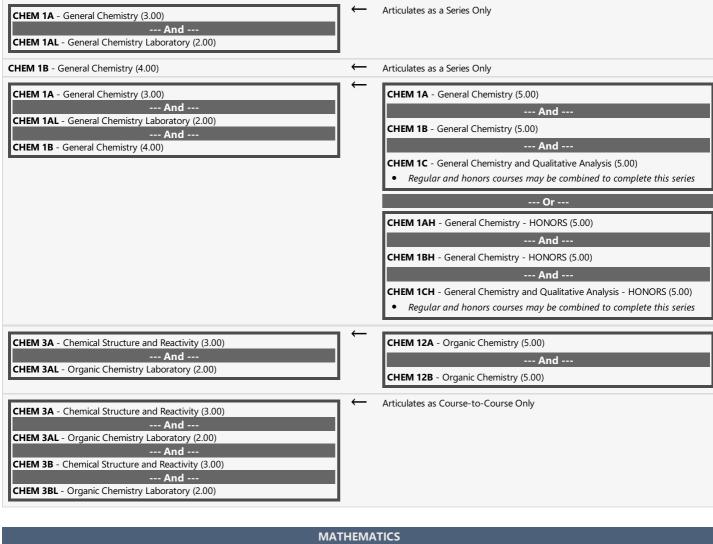
Please note that substituting AP scores for chemistry and biology coursework is accepted, but not recommended. Students who use AP scores for these requirements may struggle in subsequent coursework.

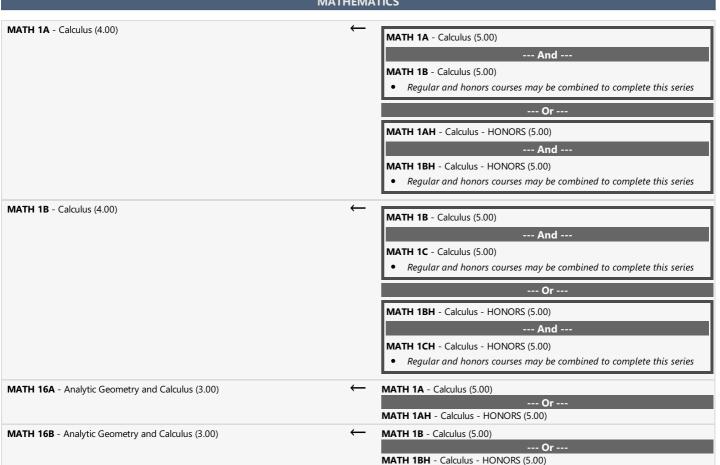
Please refer to the Rausser College of Natural Resources website for more information about substitutions for the English RIA and RIB requirements: http://nature.berkeley.edu/handbook

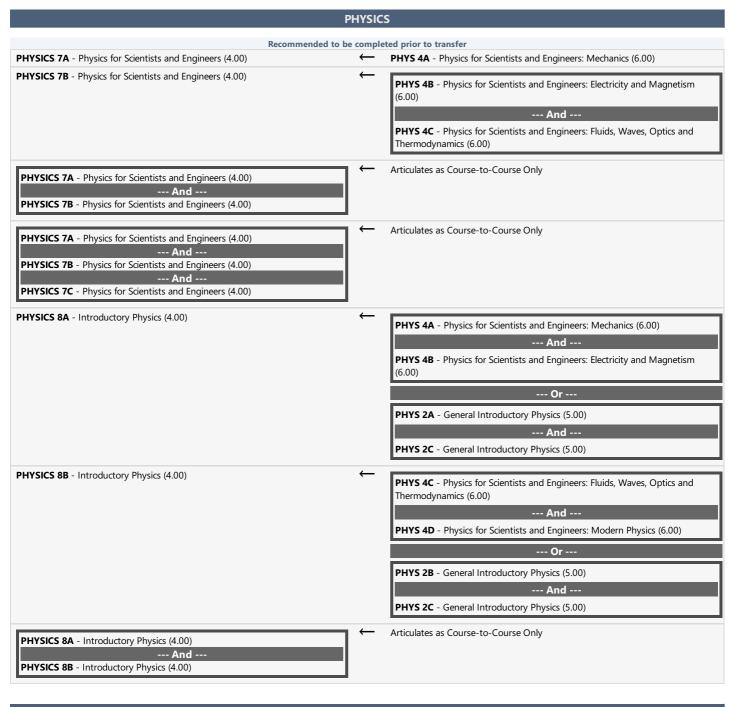
# ENGLISH R1A - Reading and Composition (4.00) EWRT 1A - Composition and Reading (5.00) --- Or -- EWRT 1AH - Composition and Reading - HONORS (5.00) --- Or -- ESL 5 - Advanced Composition and Reading (5.00) ENGLISH R1B - Reading and Composition (4.00) EWRT 1B - Reading, Writing and Research (5.00) --- Or -- EWRT 2 - Critical Reading, Writing and Research - HONORS (5.00) --- Or -- EWRT 1BH - Reading, Writing and Research - HONORS (5.00) --- Or -- EWRT 1BH - Reading, Writing and Research - HONORS (5.00)

# EWRT 2H - Critical Reading, Writing and Thinking - HONORS (5.00) **BIOLOGY** BIOLOGY 1A - General Biology Lecture (Cells, Genetics, Animal Form & **BIOL 6A** - Form and Function in the Biological World (6.00) Function) (3.00) --- And ----- And ---BIOL 6B - Cell and Molecular Biology (6.00) **BIOLOGY 1AL** - General Biology Laboratory (2.00) --- Or --BIOL 6AH - Form and Function in the Biological World - HONORS (6.00) --- And ---BIOL 6B - Cell and Molecular Biology (6.00) **BIOLOGY 1B** - General Biology (Plant Form & Function, Ecology, Evolution) (4.00) **BIOL 6A** - Form and Function in the Biological World (6.00) BIOL 6C - Ecology and Evolution (6.00) BIOL 6AH - Form and Function in the Biological World - HONORS (6.00) --- And --BIOL 6C - Ecology and Evolution (6.00) --- Or ---BIOL 6A - Form and Function in the Biological World (6.00) --- And ---BIOL 6CH - Ecology and Evolution - HONORS (6.00) --- Or ---BIOL 6AH - Form and Function in the Biological World - HONORS (6.00) BIOL 6CH - Ecology and Evolution - HONORS (6.00) Articulates as Course-to-Course Only BIOLOGY 1A - General Biology Lecture (Cells, Genetics, Animal Form & Function) (3.00) --- And ---**BIOLOGY 1AL** - General Biology Laboratory (2.00)

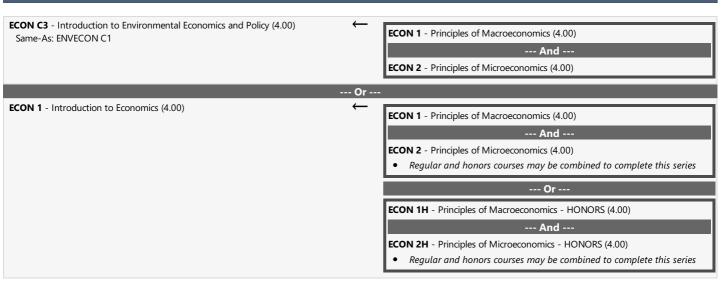
No Course Articulated







# **ECONOMICS**



Select 1 Course(s) from the following			
ESPM 2 - The Biosphere (3.00)	← No Course Articulated		
ESPM 6 - Environmental Biology (3.00)	← No Course Articulated		
<b>ESPM C10</b> - Environmental Issues (4.00) Same-As: LNS C30V	← ESCI 19 - Environmental Biology (5.00)		
<b>ESPM 15</b> - Introduction to Environmental Sciences (3.00)	← ESCI 1 - Environmental Science (4.00)		
ESPM C46 - Climate Change and the Future of California (4.00)	← No Course Articulated		

# ESPM SOCIAL SCIENCE CORE COURSE

Select 1 Course(s) from the following			
<b>ESPM C11</b> - Americans and the Global Forest (4.00) Same-As: LNS C30U	<b>←</b>	No Course Articulated	
<b>ESPM C22AC</b> - Fire: Past, Present and Future Interactions with the People and Ecosystems of California (4.00) Same-As: ANTHRO C12AC	<b>←</b>	No Course Articulated	
<b>ESPM 50AC</b> - Introduction to Culture and Natural Resource Management (4.00)	$\leftarrow$	No Course Articulated	
ESPM 60 - Environmental Policy, Administration, and Law (4.00)	←	ES6 - Introduction to Environmental Law (4.00)	

# **END OF AGREEMENT**