B.S. in Environmental Science

UCLA Institute of the Environment and Sustainability

The UCLA Institute of the Environment and Sustainability, together with the Departments of Atmospheric and Oceanic Sciences, Civil and Environmental Engineering, Earth and Space Sciences, Ecology and Evolutionary Biology, Environmental Health Sciences and Geography, offers an innovative dual-component degree program in Environmental Science.

The first component, the Environmental Science Major, provides students with disciplinary breadth in areas important to environmental science. The second component, a Minor in one of seven environmental science areas, provides students with focused, disciplinary depth in an area of their choosing. Both components of the program must be completed to receive the degree.

Graduates of this program will be fully prepared to enter a career in environmental science or to continue their education in a graduate degree program.

I. Environmental Science Major

Preparation for the Major (57-63 units)

- Environment 10 [recommended in first or second year of program]
- Geography 7

Note: Where two options are listed, the first option is recommended. Ideally students will complete the majority of the preparation courses by the end of the 2nd year.

- Chemistry 14A/B/BL *or* Chemistry 20A/B/L
- Life Science 7A *and* Life Science 7B
- Mathematics 3A/B *or* Mathematics 31A (or 31AL)/B *or* Life Science 30A/B
- Physics 5A/C *or* Physics 1A/B
- Statistics 12 *or* Statistics 13 *or* Life Science 40

One additional course from the following choices, depending on the Minor/Concentration selected (see Minor/Concentration on back side of this sheet):

- Chemistry 14C *or* Chemistry 30A
- Mathematics 3C *or* Mathematics 32A
- Physics 5B *or* Physics 1C
- Life Science 7C *and* Life Science 23L
- Earth Planetary & Space Sciences 1

Major requirements (50-52 units)

Note: Where a course is listed in multiple categories, it may be used in one or the other, but not both.

Physical & Life Sciences (5 courses, 20-22 units)

One required course

Environment 175 (recommended in 3rd year)

Choice of *four* courses from list,
with no more than *two* courses from any one department:

Atmospheric and Oceanic Sciences 101, 102, 103, 104, M105, 107, 112, 121, 123, 130, 135, 141, 155
Civil & Environmental Engineering 153, 154, M166
Earth Planetary and Space Sciences 101, C113, 119, 139, 150, 153
Ecology and Evolutionary Biology 100, 109, 116, 136, 151A, 154, 168, CM173
Environment 116, 157
Environmental Health Sciences 100, C125, C152D
Geography 101, M102, M103, 107, M110, 115, 116, 117, M118, 119, 120, M126, 133

Social Sciences & Humanities (3 courses, 12-13 units)

One required course

Environment 140 (recommended in 2nd year)

Choice of *two* courses from list:

Anthropology 132, 133
Atmospheric & Oceanic Sciences 121, 123
Ecology & Evolutionary Biology 176
English 118E
Environment M125, M133, 134, M147, 150, M153, 155, 157, C159, M161, 162, 163, M164, 166, M167, 168, M169
Geography M127, 130, 138, 143, 160, 161, 171C
Philosophy 125
Public Affairs M160
Society and Genetics 141
Urban Planning 121

Sustainability Talks (1 unit) 1 term of Environment 185A

Environmental Science Practicum (3 courses, 14 units) Environment 180A/B/C

For further guidance in course selection, please see: ioes.ucla.edu/envisci/course-requirements

II. Minor/Concentration

Students choose one of seven minors/concentrations, each associated with a particular department.

Students will normally choose their minor/concentration by the end of their second year. Students choosing one of the seven minors must, with assistance from IoES staff, apply to the associated department to be accepted into the minor program.

A minimum of 20 units must be unique to each minor.

Atmospheric and Oceanic Sciences

Minor, Dept. of Atmospheric and Oceanic Sciences

*Additional preparation required: Mathematics 3C or 32A **or** Physics 5B or 1C **or** Chemistry 14C or 30A*

Requirements: (7 courses, 28-31 units, *two course overlap possible*)

- Three from Atmospheric and Oceanic Sciences M100, 101, 102, 103, 104, M105, M106, 107, C110, 113, CM114A, C115, M120, 121, 123, 130, 135, 141, C144, 145, 150, C160, C170, 180, 181, CM185
- Four additional courses (two of which must be upper-division) from any of the above AOS courses beyond the minimum three required or from: Atmospheric and Oceanic Sciences 1, 2, 3, 51, 90, 186 (must be taken twice); Chemistry 103, 110A, 110B, 113A, C113B, 114; Earth Planetary & Space Sciences 15; Mathematics 115A, 115B, 132, 135, 136, 146, 170A, 170B; Ecology & Evolutionary Biology 109, C119A, 122, 123A, 123B, 147, 148; Physics 110A, 110B, 112, M122, 131, 132

Conservation Biology

Minor, Dept. of Ecology and Evolutionary Biology

*Additional preparation required: Chemistry 14C or 30 A **or** Life Science 7C/23L*

Requirements: (7-9 courses, minimum 28 UD units, *two course overlap possible*)

- Ecology and Evolutionary Biology 100, and 116
- Four to six (minimum 19 units) from Ecology and Evolutionary Biology 100L, 101, 103, 105, 109, 109L, 111, 112, 113A, 113AL, 114A, 114B, C119A, C119B, 122, M127, 129, M131, 140, 142, 143, 144, 144L, C146, 149, 151A, 152, 153, 154, 155, 161, 162, 162L, 168, 169, C174 176, 180A, 180B, 183, 184, any course completed from Field or Marine Biology Quarter or approved equivalent; Atmospheric & Oceanic Science M106, Geography M102, M103, 106, 107, M110, 116, 117, M118, M126, M131, 133 (maximum of two non-EEB courses can be applied to the minor)

Environmental Engineering

Minor, Dept. of Civil and Environmental Engineering

Additional preparation required: Mathematics 3C or 32A

Requirements (6 courses, 24 units, *one course overlap possible*)

- Civil and Environmental Engineering 153
- Five from Civil and Environmental Engineering 110, 150, 151, 152, 154, 155, 156A, 156B, 157A, 157B, 157C, 157L, C159, C164, M165, M166, Chemical Engineering 102A, Mechanical & Aerospace Engineering 103, 105A. C&EE 107 by substitution.
- **Credit for both MAE 105A & CH ENGR 102A will not be granted)*

Environmental Health

Minor, Dept. of Environmental Health Sciences

Additional preparation required: One from Chemistry 14C or 30A, Math 3C or 32A, Life Science 7C&7L

Requirements (7 courses, 28-30 units, *two course overlap possible*)

- Public Health 50A or C150
- Environmental Health Sciences 100
- 5 Upper Division Electives, at least two from the "Methods" list and at least two from the "Topics" list. No more than 2 non-ENV HLT courses may be applied to the minor electives

Methods

- Environmental Health Sciences 112, C140, C152D, C157, Epidemiology 100 or 120, Biostatistics 121, 125, Chemistry 153A, Geography 181A

Topics

Environmental Health Sciences 110, C125, 151, 170, M171, A&O Sci 104, Community Health 131, CM170, Environment 140, M167, 168, Geography 136, 146, Public Affairs 158XP

- NOTE: Environmental Health will be by competitive application, so we recommend taking only EHS coursework that overlaps with major requirements until admitted

Environmental Systems and Society

Minor, Institute of the Environment and Sustainability

Additional preparation required: One from Chemistry 14C or 30 A, Mathematics 3C or 32A, Physics 5B or 1C, Life Science 7C/23L, EPSS 1

Requirements (7 courses, 28-30 units, *two course overlap possible*)

- Seven from Environment M111, 116, M125, M126, M131, M133, 134, 140, M147, 150, M153, 155, 157, C159, M161, 162, 163, M164, 166, M167, 168, M169, 175, 188A, 185B/C SAR series (by request)

Geography/Environmental Studies

Minor, Dept. of Geography

Additional preparation required: One from Chemistry 14C or 30 A, Mathematics 3C or 32A, Physics 5B or 1C, Life Science 7C/23L, EPSS 1

Minor requirements (7 courses, 30 units, *two course overlap possible*)

- Geography 5
- One from Geography 1, 2, 3, 4, 6
- Three from Geography 101, M102, M103, 106, 107, 108, 109, M110, 115, 116, 117, M118, 119, 120, M125, M126, M127, 130, M131, 133, 135, 136, 137, 138, 139B, 139C
- Two additional upper division Geography courses, *excluding* those from the preceding list and courses 190-199

Earth and Environmental Science

Minor, Dept. of Earth, Planetary, and Space Sciences

Additional preparation required: One from Mathematics 3C or 32A, Physics 5B or 1C, Chemistry 14C or 30A

Minor Requirements (7 courses, 30 units, *two course overlap possible*)

- One course from Earth Planetary and Space Sciences 1, or any EPS SCI course 3 through 17, or GE Cluster 70A
- One course from EPS SCI 51, 61, M71.
- Five courses from Earth Plantetary and Space Sciences 100 to 186 (except M187, or 189-199)