

# Global Sustainability, Minor

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The interdisciplinary minor in Global Sustainability prepares students to consider the challenges of meeting the needs of the present without compromising the ability of future generations to meet their own needs, with emphasis upon addressing the extreme poverty that afflicts at least 20 percent of the world's current population. The Earth is a complex system comprised of interactions between its various physical, biological, social, and political components, and human populations have initiated many global trends that cannot be sustained indefinitely. Some of these trends are physiochemical or biological in nature (the depletion of fossil fuels, the accumulation of ozone-depleting chemicals, the destruction of wildlife habitat, and high rates of species extinction), while others are social and political (accelerating urbanization, population displacement, environmental injustices, and regional economic imbalance).

As a result, the vitality of the Earth depends upon interdisciplinary and collaborative approaches that draw on the strengths of multiple fields. In this program, students will become aware of the main drivers of climate change, both natural and human-induced, the intrinsic as well as the resource values of species, ecosystems, and communities, and how the loss of cultural diversity and a growing income gap between nations leads to additional pressure for biological resource exploitation. Students will become familiar with foundational sustainability concepts in social practice, governance and allocation, the physical sciences, and the biological sciences to better understand and effectively deal with contemporary environmental and social equity crises.

The minor is open to all UCI students. Courses in addition to those already approved for the minor (below) may be petitioned to the Director via email ([pabowler@uci.edu](mailto:pabowler@uci.edu)).

Students are required to complete three introductory courses (12 units), three electives (12 units), one methods course (4 units), and three quarters of a senior capstone sequence (8 units).

## A. Introductory Course

Select one of the following:

EARTHSS 1	Introduction to Earth System Science
EARTHSS 3	Oceanography
EARTHSS 5	The Atmosphere
EARTHSS 15	Introduction to Global Climate Change

## B. Introductory Course B

Select one of the following:

BIO SCI 6	Tropical Biology: Race to Save the Tropics
BIO SCI 9K	Global Change Biology
BIO SCI 55	Introduction to Ecology

## C. Introductory Course C

Select one of the following:

ANTHRO 20A	People, Cultures, and Environmental Sustainability
ANTHRO 30A	Global Issues in Anthropological Perspective
ANTHRO 41A	Global Cultures and Society
POL SCI 41A	Introduction to International Relations
PUBHLTH 30	Introduction to Urban Environmental Health
PUBHLTH 60	Environmental Quality and Health
UPPP 8	Introduction to Environmental Analysis and Design
SOCIOL 44	Births, Deaths, and Migration
UNI STU 13C	Introduction to Global Sustainability III

## D. Electives

Select three courses from among a list of quarterly approved courses, with each elective course drawn from a different category. Two of the three courses must be upper-division and none of the three courses may overlap with selected introductory courses. As per university policy, students may overlap a maximum of two courses between their major and minor.

Category 1 - Social Practice (Ethics, Identity, Culture, Wellness, Education Business):

AFAM 128	Topics in Gender/Sexuality
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ANTHRO 20A	People, Cultures, and Environmental Sustainability
ANTHRO 30A	Global Issues in Anthropological Perspective
HISTORY 12	Introductory Topics in History
HISTORY 100W	Writing About History
HISTORY 190	Colloquium
PHILOS 131A	Applied Ethics
PUBHLTH 60	Environmental Quality and Health
PUBHLTH 90	Natural Disasters
PUBHLTH 125	Foundations of Community Health
PUBHLTH 167	Air Pollution, Climate, and Health
PUBHLTH 173	Health and Global Environmental Change
Category 2 - Governance and Allocation (Natural Resource Management, Economics, Development, Poverty Alleviation, Social Justice):	
ANTHRO 125A	Economic Anthropology
ECON 145E	Economics of the Environment
ECON 145FW	Economics of the Environment II
ECON 152A	Economic Anthropology
UPPP 4	Introduction to Urban Studies
UPPP 40	Urban Sociology
UPPP 113	Poverty and Change in Developing Countries
UPPP 131	Environmental Sustainability I
UPPP 132	Environmental Sustainability II
UPPP 139	Water Resource Policy
UPPP 155	Urban Design Principles
SOC SCI 5D	US & World Geography
SOC SCI 119	Special Topics in Geography
UPPP 8	Introduction to Environmental Analysis and Design
SOCIOL 44	Births, Deaths, and Migration
UNI STU 13C	Introduction to Global Sustainability III
Category 3- Physical Sciences (Earth System Science, Engineering, Computing):	
EARTHSS 1	Introduction to Earth System Science
EARTHSS 3	Oceanography
EARTHSS 5	The Atmosphere
BIO SCI 9K	Global Change Biology
EARTHSS 15	Introduction to Global Climate Change
EARTHSS 17	Hurricanes, Tsunamis, and Other Catastrophes
EARTHSS 19	Introduction to Modeling the Earth System
EARTHSS 21	On Thin Ice: Climate Change and the Cryosphere
EARTHSS 23	Air Pollution: From Urban Smog to Global Change
EARTHSS 51	Land Interactions
EARTHSS 55	Earth's Atmosphere
EARTHSS 146	Consequences of Air Pollution
EARTHSS 164/BIO SCI E118	Ecosystem Ecology
UPPP 131	Environmental Sustainability I
UPPP 132	Environmental Sustainability II
ENGRCEE 60	Contemporary and Emerging Environmental Challenges
ENGRCEE 160	Environmental Processes
ENGRCEE 171	Water Resources Engineering
ENGRMAE 118	Sustainable Energy Systems
ENGRMAE 164	Air Pollution and Control
I&C SCI 5	Global Disruption and Information Technology
IN4MATX 161	Social Analysis of Computing
Category 4 - Biological Sciences (Biology, Ecology, Evolutionary Sciences):	

BIO SCI 9E	Horticulture Science
BIO SCI 23	Sustainable Landscaping: Design and Practices
BIO SCI 55	Introduction to Ecology
BIO SCI 94	From Organisms to Ecosystems
BIO SCI E106	Processes in Ecology and Evolution
BIO SCI E118/EARTHSS 164	Ecosystem Ecology
BIO SCI E120	Marine Biology
BIO SCI E127/EARTHSS 168	Physiological Plant Ecology
BIO SCI E150	Conservation Biology
BIO SCI E172	Plant Diversity in a Changing World
BIO SCI E179	Limnology and Freshwater Biology
BIO SCI E182	Mediterranean Ecosystems: Biodiversity and Conservation
BIO SCI E186	Population and Community Ecology
BIO SCI E189	Environmental Ethics

### E. Methods

Select one of the following:

BIO SCI E166L	Field Biology
EARTHSS 19	Introduction to Modeling the Earth System
EARTHSS 114	Earth System Science Laboratory and Field Methods
EARTHSS 116	Introduction to Environmental Data Science
ENGRCEE 11	Methods II: Probability and Statistics
ENGRCEE 20	Introduction to Computational Problem Solving
UPPP 107	Urban and Regional Planning
UPPP 8	Introduction to Environmental Analysis and Design
SOCECOL 10	Research Design
SOCECOL 13	Statistical Analysis in Social Ecology
SOCIOL 10A- 10B- 10C	Probability and Statistics and Probability and Statistics and Probability and Statistics

### F. Senior Capstone Sequence

BIO SCI 191A- 191B- 191CW	Senior Seminar on Global Sustainability I and Senior Seminar on Global Sustainability II and Writing/Senior Seminar on Global Sustainability III
or	
EARTHSS 190A- 190B- 190CW	Senior Seminar on Global Sustainability I and Senior Seminar on Global Sustainability II and Writing/Senior Seminar on Global Sustainability III
or	
SOCECOL 186A- 186B- 186CW	Senior Seminar on Global Sustainability I and Senior Seminar on Global Sustainability II and Writing/Senior Seminar on Global Sustainability III