ENVIROMENTAL SCIENCES UNDERGRADUATE MAJOR (BS, HBS)

Also available via Ecampus.

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An Environmental Sciences undergraduate degree provides a rigorous education that can lead to helping to understand and resolve some of today’s most challenging scientific and policy issues—including global climate change, pollution, biodiversity conservation, sustainability, and balancing resource use and preservation. To help reach these objectives, the Bachelor of Science in Environmental Sciences offers an interdisciplinary approach to environmental problem solving. As an Environmental Sciences major, a student completes course work in four general areas:

1. OSU’s general education courses (the baccalaureate core)
2. Basic science and math
3. Environmental sciences and humanities core
4. A specialization area

In addition, each student completes a minimum of 3 credits of experiential learning as an internship, research, study abroad, or field course. The BS degree in Environmental Sciences provides excellent training for a variety of careers—including work with federal, state, and local agencies, industry, non-profits, and education—or for graduate school. Students can pursue the BS degree either at the Corvallis campus or online through OSU Ecampus.

Major Code: 657

Major Curriculum
The Environmental Sciences major requires credits in seven categories: 48 credits of baccalaureate core; 51–53 credits of basic science and math; 27–36 credits of environmental sciences and humanities; 27–31 credits of specialization; 3 credits writing intensive course; 3 credits minimum of experiential learning; and 4–53 credits of elective courses (depends on the number of baccalaureate core electives that will also meet requirements of the major).

Baccalaureate Core
The university baccalaureate core course (BCC) requirement is met with 48 credits and a writing intensive course (WIC). The environmental sciences student satisfies the general education requirement by selecting 27 unrestricted credits from the general list of approved courses and 21 credits from a restrictive list of BCC courses, which simultaneously satisfy requirements for the Environmental Sciences major. The WIC and Synthesis requirements are satisfied by courses taken as part of the environmental sciences core curriculum.
Select one Human Environment course:

AEC 250  *INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY
AEC 253  *ENVIRONMENTAL LAW, POLICY, AND ECONOMICS
AEC 351  *NATURAL RESOURCE ECONOMICS AND POLICY
AEC 352/ECON 352  *ENVIRONMENTAL ECONOMICS AND POLICY
AEC 432  ENVIRONMENTAL LAW
ECON 201  *INTRODUCTION TO MICROECONOMICS
FOR 462  NATURAL RESOURCE POLICY AND LAW
FW 324  *FOOD FROM THE SEA
FW 415  FISHERIES AND WILDLIFE LAW AND POLICY
FW 422  INTRODUCTION TO OCEAN LAW
FW 462  ECOSYSTEM SERVICES
GEOG 340  *INTRODUCTION TO WATER SCIENCE AND POLICY
GEOG 450  LAND USE IN THE AMERICAN WEST
GEOG 451  PLANNING PRINCIPLES AND PRACTICES FOR RESILIENT COMMUNITIES
PPOL 446  THE POLICY AND LAW OF U.S. COASTAL GOVERNANCE
PPOL 447  INTEGRATED POLICY: FOOD, ENERGY, WATER, CLIMATE
PS 473  US ENERGY POLICY
PS 475  ENVIRONMENTAL POLITICS AND POLICY
PS 476  *SCIENCE AND POLITICS
PS 477  INTERNATIONAL ENVIRONMENTAL POLITICS AND POLICY
SOC 360  *POPULATION TRENDS AND POLICY
WGSS 440  *WOMEN AND NATURAL RESOURCES

Select one Environmental Economics and Policy course:

3-4

AEC 250  *INTRODUCTION TO ENVIRONMENTAL ECONOMICS AND POLICY
AEC 253  *ENVIRONMENTAL LAW, POLICY, AND ECONOMICS
AEC 351  *NATURAL RESOURCE ECONOMICS AND POLICY
AEC 352/ECON 352  *ENVIRONMENTAL ECONOMICS AND POLICY
AEC 432  ENVIRONMENTAL LAW
ECON 201  *INTRODUCTION TO MICROECONOMICS
FOR 462  NATURAL RESOURCE POLICY AND LAW
FW 324  *FOOD FROM THE SEA
FW 415  FISHERIES AND WILDLIFE LAW AND POLICY
FW 422  INTRODUCTION TO OCEAN LAW
FW 462  ECOSYSTEM SERVICES
GEOG 340  *INTRODUCTION TO WATER SCIENCE AND POLICY
GEOG 450  LAND USE IN THE AMERICAN WEST
GEOG 451  PLANNING PRINCIPLES AND PRACTICES FOR RESILIENT COMMUNITIES
PPOL 446  THE POLICY AND LAW OF U.S. COASTAL GOVERNANCE
PPOL 447  INTEGRATED POLICY: FOOD, ENERGY, WATER, CLIMATE
PS 473  US ENERGY POLICY
PS 475  ENVIRONMENTAL POLITICS AND POLICY
PS 476  *SCIENCE AND POLITICS
PS 477  INTERNATIONAL ENVIRONMENTAL POLITICS AND POLICY
SOC 360  *POPULATION TRENDS AND POLICY
WGSS 440  *WOMEN AND NATURAL RESOURCES

Select one Environmental Ethics course:

3-4

ANTH 481  *NATURAL RESOURCES AND COMMUNITY VALUES
CH 374  *TECHNOLOGY, ENERGY, AND RISK
ES 353  *ENVIRONMENTAL RACISM
ES 448/PHL 448/REL 448  NATIVE AMERICAN PHILOSOPHIES
FES 435/TOX 435  *GENES AND CHEMICALS IN AGRICULTURE: VALUE AND RISK
FES 485  *CONSSENSUS AND NATURAL RESOURCES
FW 340  *MULTICULTURAL PERSPECTIVES IN NATURAL RESOURCES
GEO 309  *ENVIRONMENTAL JUSTICE
PHL 325  *SCIENTIFIC REASONING
PHL 439  PHILOSOPHY OF NATURE
PHL 440  *ENVIRONMENTAL ETHICS
PHL 443/REL 443  *WORLD VIEWS AND ENVIRONMENTAL VALUES
PS 461  ENVIRONMENTAL POLITICAL THEORY
SOC 456  *SCIENCE AND TECHNOLOGY IN SOCIAL CONTEXT
SOC 480  *ENVIRONMENTAL SOCIOLOGY
SOC 481  *SOCIETY AND NATURAL RESOURCES
WGSS 440  *WOMEN AND NATURAL RESOURCES

Select one Human Environment course:

3-4

AG 301  *ECOSYSTEM SCIENCE OF PACIFIC NW INDIANS
BI 301  *HUMAN IMPACTS ON ECOSYSTEMS
BI 347  *OCEANS IN PERIL
BI 348  *HUMAN ECOLOGY
EAH 411  **PERSPECTIVES IN ENVIRONMENTAL ARTS AND HUMANITIES
ENSC 479  **ENVIRONMENTAL CASE STUDIES
FW 324  *FOOD FROM THE SEA
FW 325  *GLOBAL CRISIS IN RESOURCE ECOLOGY
FW 470  *ECOLOGY AND HISTORY: LANDSCAPES OF THE COLUMBIA BASIN
GEO 308  *GLOBAL CHANGE AND EARTH SCIENCES
GEOG 203  *HUMAN ENVIRONMENT GEOGRAPHY
GEOG 300  *SUSTAINABILITY FOR THE COMMON GOOD
GEOG 350  *GEOGRAPHY OF NATURAL HAZARDS
GEOG 431  GLOBAL RESOURCES AND DEVELOPMENT
HST 481  *ENVIRONMENTAL HISTORY OF THE UNITED STATES
OC 333  OCEANS, COASTS, AND PEOPLE
SUS 102  *INTRODUCTION TO ENVIRONMENTAL SCIENCE AND SUSTAINABILITY
SUS 350  *SUSTAINABLE COMMUNITIES
WGSS 440  *WOMEN AND NATURAL RESOURCES
WR 462  *ENVIRONMENTAL WRITING
Z 349  *BIODIVERSITY: CAUSES, CONSEQUENCES, AND CONSERVATION

Select one Environmental Management course:

3-4

BOT 413/FOR 413  FOREST PATHOLOGY
ENT 331/HORT 331  *POLLINATORS IN PERIL
FES 350/HORT 350  URBAN FORESTRY
FES 365  MANAGEMENT FOR MULTIPLE VALUE RESOURCES
FES 412  FOREST ENTOMOLOGY
FES 445/FW 445  ECOLOGICAL RESTORATION
FOR 346  TOPICS IN WILDLAND FIRE
FW 326  MANAGEMENT PRINCIPLES OF PACIFIC SALMON IN THE NORTHWEST
FW 326  INTEGRATED WATERSHED MANAGEMENT
FW 435  *WILDLIFE IN AGRICULTURAL ECOSYSTEMS
FW 464  MARINE CONSERVATION BIOLOGY
GEO 306  *MINERALS, ENERGY, WATER, AND THE ENVIRONMENT
GEOG 430  RESILIENCE-BASED NATURAL RESOURCE MANAGEMENT
GEOG 440  WATER RESOURCES MANAGEMENT IN THE UNITED STATES
GEOG 441  INTERNATIONAL WATER RESOURCES MANAGEMENT
GEOG 452  SUSTAINABLE SITE PLANNING
NR 455  NATURAL RESOURCE DECISION MAKING
RING 341  RANGE AND WILDLIFE CONSERVATION
RING 355  DESERT WATERSHED MANAGEMENT
RING 421  WILDLAND RESTORATION AND ECOLOGY
RING 455  RIPARIAN ECOTOLOGY AND MANAGEMENT
RING 490  RANGELAND MANAGEMENT PLANNING
TRAL 352  WILDERNESS MANAGEMENT

Specialization Area

Approved Certificate:

* Geographic Information Science (http://catalog.oregonstate.edu/college-departments/earth-ocean-atmospheric-sciences/geographic-information-science-certificate)
Approved Options (All options under the Environmental Sciences major):

- Conservation, Resources, and Sustainability (http://catalog.oregonstate.edu/college-departments/earth-ocean-atmospheric-sciences/environmental-sciences-bs-hbs/conservation-resources-sustainability-option) (EC)
- Environmental Policy and Economics (http://catalog.oregonstate.edu/college-departments/earth-ocean-atmospheric-sciences/environmental-sciences-bs-hbs/environmental-policy-economics-option) (EC)
- Environmental Science Education (http://catalog.oregonstate.edu/college-departments/earth-ocean-atmospheric-sciences/environmental-sciences-bs-hbs/environmental-science-education-option)
- Environmental Water Resources (http://catalog.oregonstate.edu/college-departments/earth-ocean-atmospheric-sciences/environmental-sciences-bs-hbs/environmental-water-resources-option) (EC)

1 The program must contain at least one internship, research, or study abroad experience that provides opportunities for hands-on experience in design and collection of observations in the physical, biological or social environment. Students are urged to work with advisors at an early stage in their study to identify experiences that are appropriate, or discuss alternative approved experiential courses.

2 This requirement can be met by completing an approved certificate, option, or minor from a participating program in the environmental or closely related sciences, or working with advisors to develop an innovative course cluster to analyze environmental systems.

EC Available via Ecampus
* Baccalaureate Core Course (BCC)
^ Writing Intensive Course (WIC)

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