# Environmental Studies

**Richard York, Program Director**
541-346-5000
541-346-5954 fax
144 Columbia Hall
5223 University of Oregon
Eugene, Oregon 97403-5223

Environmental studies crosses the boundaries of traditional disciplines in the natural sciences, social sciences, humanities, management, policy, design, and law. It challenges faculty members and students to look at the relationship between humans and their environment from new perspectives. The Environmental Studies Program is dedicated to gaining greater understanding of the natural world from an ecological perspective; devising policies and behaviors that address contemporary environmental problems; and promoting a rethinking of basic cultural premises, ways of structuring knowledge, and the root metaphors of contemporary society.

## Faculty

Core faculty members listed in the faculty list have dedicated responsibilities in the program. Participating faculty members have demonstrated professional interests in environmental studies by researching environmental issues, teaching courses that meet program requirements, or participating in a variety of program activities on a voluntary basis. They are all available to advise students who are interested in environmental studies. More information about the faculty is available on the program website.

## Resources

The program's resource center has a limited collection of books related to environmental topics. University of Oregon students and members of the faculty and staff may borrow items for up to two weeks.

## Faculty

Brendan J. M. Bohannan, associate professor (microbial ecology). See **Biology**.

Peg Boulay, instructor (environmental monitoring, wildlife conservation, outreach and education); codirector, environmental leadership and advising. BS, 1989, Furman; MS, 1992, Florida. (2009)

Scott D. Bridgham, professor (ecosystem ecology, climate change). See **Biology.**

Trudy Ann Cameron, Raymond F. Mikesell Professor of Environmental and Resource Economics (environmental economics). See **Economics**.

Mark Carey, associate professor (history). See **Robert Donald Clark Honors College**.

Matthew Dennis, professor (colonial and early national America, American cultural and environmental history, American Indian history). See **History**.

Alan Dickman, senior instructor with title of research associate professor. See **Biology**.

Stephanie LeMenager, Barbara and CarlisleMoore Distinguished Professor in English and American Literature. See **English**.

Kathryn A. Lynch, instructor (environmental leadership, tropical conservation, environmental education); codirector, environmental leadership and advising. BS, 1992, California, Davis; MA, 1995, PhD, 2001, Florida. (2005)

Kathy Lynn, research assistant (Tribal Climate Change Project).

Richard D. Margerum, associate professor (collaborative environmental management, conflict management in multistakeholder processes). See **Planning, Public Policy and Management**.

Galen Martin, senior instructor (sustainable agriculture, food systems).

Patricia F. McDowell, professor (river management and restoration). See **Geography**.

Ronald B. Mitchell, professor (environmental politics, international relations). See **Political Science**.

Erin Moore, assistant professor (life-cycle environmental impacts). See **Architecture**.

Nicolae Morar, visiting assistant professor (applied ethics, philosophy of biology). See **Philosophy**.

Brook Muller, associate professor (environmentally responsive architecture). See **Architecture**.

Kari Norgaard, associate professor (environment, climate-change denial). See **Sociology**.

Joshua J. Roering, associate professor (geomorphology, landscape evolution modeling). See **Geological Sciences**.

David Sutherland, assistant professor (ice-ocean interaction, coastal and estuarine oceanography). See **Geological Sciences.**

Ted Toadvine, professor (environmental ethics, ecophenomenology). See **Philosophy.**

Sarah Wald, assistant professor (race and ethnic studies, environmental humanities).

Peter A. Walker, professor (environmental politics, political ecology). See **Geography**.

Marsha Weisiger, Rocky and Julie Dixon Chair of U.S. Western History; associate professor (environmental, Native American, American West). See **History**.

Louise Westling, professor (ecocriticism, environmental humanities). See **English.**

Stephen Wooten, associate professor (international and food studies). See **International Studies**.

Richard York, associate professor (assessing anthropogenic driving forces of global environmental change). See **Sociology**.

*The date in parentheses at the end of each entry is the first year on the University of Oregon faculty.*

## Participating

Susan C. Anderson, German and Scandinavian

William S. Ayres, anthropology

Patrick J. Bartlein, geography

Carol Ann Bassett, journalism and communication

Carla Bengtson, art

Ann Bettman, landscape architecture

Aletta Biersack, anthropology

Thomas H. Bivins, journalism and communication

Christopher Bone, geography

John E. Bonine, law

Gregory D. Bothun, physics

William E. Bradshaw, biology

Yvonne A. Braun, women's and gender studies

G. Z. Brown, architecture

George C. Carroll, biology

Katharine V. Cashman, geological sciences

Richard W. Castenholz, biology

Suzanne Clark, English

Shaul E. Cohen, geography

John S. Conery, computer and information science

William A. Cresko, biology

James R. Crosswhite, English

Edward B. Davis, Museum of Natural and Cultural History

Jerome Diethelm, landscape architecture

Rebecca J. Dorsey, geological science

Michael C. Dreiling, sociology

James R. Elliott, sociology

Richard B. Emlet, biology

Paul C. Engelking, chemistry and biochemistry

Arthur M. Farley, computer and information science

Mark Fonstad, geography

John B. Foster, sociology

John T. Gage, English

Daniel Gavin, geography

Daniel Goldrich, political science

Jessica L. Green, biology

Patricia A. Gwartney, sociology

William T. Harbaugh, economics

Susan W. Hardwick, geography

Jill A. Harrison, sociology

Kenneth I. Helphand, landscape architecture

Michael Hibbard, planning, public policy and management

Richard G. Hildreth, law

Derrick Hindery, international studies

Janet Hodder, Oregon Institute of Marine Biology

Garrett K. Hongo, creative writing

Samantha Hopkins, honors college

Carl J. Hosticka, planning, public policy and management

David Hulse, landscape architecture

James E. Hutchison, chemistry and biochemistry

Renee A. Irvin, planning, public policy and management

Colin Ives, art

Grant Jacobsen, planning, public policy and management

Bart Johnson, landscape architecture

Mark Johnson, philosophy

Lamia Karim, anthropology

Craig Kauffman, political science

Lauren J. Kessler, journalism and communication

Gyoung-Ah Lee, anthropology

Glen A. Love, English

Bonnie Mann, philosophy

W. Andrew Marcus, geography

Ralph Mastromonaco, economics

Theresa May, theater arts

Gregory McLauchlan, sociology

Jerry F. Medler, political science

Kate Meehan, geography

Robert Z. Melnick, landscape architecture

Debra L. Merskin, journalism and communication

Geraldine Moreno Black, anthropology

Cassandra Moseley, Institute for a Sustainable Environment

Madonna L. Moss, anthropology

Alexander B. Murphy, geography

Lise Nelson, geography

Jeffrey Ostler, history

Robert G. Parker, planning, public policy and management

Stephen E. Ponder, journalism and communication

Daniel A. Pope, history

Scott L. Pratt, philosophy

Mark H. Reed, geological sciences

Gregory J. Retallack, geological sciences

John S. Reynolds, architecture

Robert G. Ribe, landscape architecture

William Rossi, English

Bitty A. Roy, biology

Michael V. Russo, management

Gordon M. Sayre, English

Marc Schlossberg, planning, public policy and management

Alan Shanks, biology

Lynda P. Shapiro, biology

Paul Slovic, psychology

J. Josh Snodgrass, anthropology

Lawrence S. Sugiyama, anthropology

Kelly Sutherland, geological sciences

Richard P. Suttmeier, political science

Nora B. Terwilliger, biology

Roxi Thoren, landscape architecture

Joseph W. Thornton, biology

Nelson Ting, anthropology

Douglas R. Toomey, geological sciences

Daniel Udovic, biology

Peter Warnek, philosophy

Peter B. Wetherwax, biology

Ray J. Weldon, geological sciences

W. Ed Whitelaw, economics

A. Michelle Wood, biology

Mary C. Wood, law

Yizhao Yang, planning, public policy and management

- **Bachelor of Arts in Environmental Studies**
- **Bachelor of Arts in Environmental Science**
- **Bachelor of Science in Environmental Studies**
- **Bachelor of Science in Environmental Science** (p. 5)
- **Minor in Environmental Studies**

## Undergraduate Studies

The program offers undergraduate instruction through two majors, leading to a bachelor of arts (BA) or a bachelor of science (BS) degree. A minor in environmental studies is also offered.

Both majors provide a broad, solid, interdisciplinary perspective on the relationship between humans and nature. Their goals are to develop awareness of environmental issues and to develop an understanding of the nature and scope of the forces underlying environmental problems, the various approaches used to bring environmental problems to the public's attention, and the methods and approaches used to solve these problems.

Majors gain an appreciation of the interdisciplinary nature of environmental studies, and they master content and skills associated with a number of different disciplines.

Majors and minors have considerable latitude in designing a course of study that combines theory and practice, invites active participation, and fits specific interests, needs, and aptitudes. The majors, which provide a well-rounded basic education, prepare students for entry-level positions in business, government, nongovernmental and nonprofit organizations, and for a variety of graduate and professional degree programs. Students are encouraged to take advantage of career planning services offered by the Career Center.

The environmental studies major focuses on social sciences, policy studies, the humanities, and sustainable design. It is designed for students who are interested in such areas as environmental policy, planning, ethics or philosophy, ecocriticism, ecofeminism, environmental justice, sustainable development, international environmental issues, or social theory and the environment.

The environmental science major is designed for students who want to focus on scientific careers in conservation biology, climate science, pollution prevention and abatement, or ecosystem protection, restoration, and management.

Students should plan their programs early in their undergraduate careers with the aid of an environmental studies academic advisor. Majors are urged to consider completing a second major or a minor in a related field. The program offers drop-in student advising in the main office.

Up-to-date information, major requirements sheets, and tip sheets are available in the program office and on the website.

## Major Requirements

The environmental studies curriculum is designed to provide a solid foundation in the sciences, social sciences, and humanities; to build on these foundations in advanced course work in a variety of disciplines; to develop the skills necessary to study human-environment interactions; and to encourage participation in experiential learning activities that help students prepare for active participation in the work force and in local and global communities. Students should have a strong foundation in written and verbal skills.

Courses applied to the major, except environmental studies courses numbered 401 through 409, must be taken for letter grades and passed

with grades of C– or better. As many as four upper-division courses may be used to fulfill requirements of another major. At least 24 credits must be taken at the University of Oregon.

## Bachelor of Arts in Environmental Studies

Upper-division credit may be earned through course work or through a combination of course work and an honors thesis. Major requirements sheets containing detailed information about specific courses that meet the major requirements are available on the program website (http://envs.uoregon.edu/undergrad/envsfocus) , in the program office, or from an environmental studies advisor.

| | | |
|---|---|---|
| **Lower-Division Core Courses** | | |
| ENVS201 | Introduction to Environmental Studies: Social Sciences | 4 |
| ENVS202 | Introduction to Environmental Studies: Natural Sciences | 4 |
| ENVS203 | Introduction to Environmental Studies: Humanities | 4 |
| **Lower-Division Mathematics and Science Courses** | | |
| MATH111 | College Algebra [1] | 4 |
| Approved statistics course | | 4 |
| Approved introductory sequence in natural science | | 12 |
| Course from different natural science sequence or from the list of approved science courses | | 4 |
| **Upper-Division Natural Science Courses** | | |
| Two upper-division natural science courses from the major requirements sheet | | 8 |
| **Upper-Division Social Science, Policy, Humanities, and Design Courses** | | |
| Social science core course | | 4 |
| Policy core course | | 4 |
| Humanities core course | | 4 |
| Design core course | | 4 |
| Six additional courses: three from one of the above areas; three from another | | 24 |
| **Environmental Issues Course** | | |
| ENVS411 | Environmental Issues: [Topic] | 4 |
| orENVS425 | Environmental Education Theory and Practice | |
| orENVS427 | Environmental and Ecological Monitoring | |
| **Practical Learning Experience** | | |
| Choose from one of several approved practical learning experience options. These include internships, participation in the Environmental Leadership Program, research experiences with UO faculty members, honors thesis, courses at field stations, study abroad opportunities, or IE3 internships. | | 4 |
| **Total Credits** | | **92** |

[1] Recommended course; however, a university-level mathematics course numbered 100 or higher fulfills the requirement.

## Bachelor of Science in Environmental Studies

| | | |
|---|---|---|
| **Lower-Division Core Courses** | | |
| ENVS201 | Introduction to Environmental Studies: Social Sciences | 4 |
| ENVS202 | Introduction to Environmental Studies: Natural Sciences | 4 |
| ENVS203 | Introduction to Environmental Studies: Humanities | 4 |
| **Lower-Division Mathematics and Science Courses** | | |
| MATH111 | College Algebra [1] | 4 |
| Approved statistics course | | 4 |
| Approved introductory sequence in natural science | | 12 |
| Course from different natural science sequence or from the list of approved science courses | | 4 |
| **Upper-Division Natural Science Courses** | | |
| Two upper-division natural science courses from the major requirements sheet | | 8 |
| **Upper-Division Social Science, Policy, Humanities, and Design Courses** | | |
| Social science core course | | 4 |
| Policy core course | | 4 |
| Humanities core course | | 4 |
| Design core course | | 4 |
| Six additional courses: three from one of the above areas; three from another | | 24 |
| **Environmental Issues Course** | | |
| ENVS411 | Environmental Issues: [Topic] | 4 |
| orENVS425 | Environmental Education Theory and Practice | |
| orENVS427 | Environmental and Ecological Monitoring | |
| **Practical Learning Experience** | | |
| Choose from one of several approved practical learning experience options. These include internships, participation in the Environmental Leadership Program, research experiences with UO faculty members, honors thesis, courses at field stations, study abroad opportunities, or IE3 internships. | | 4 |
| **Total Credits** | | **92** |

[1] Recommended course; however, a university-level mathematics course numbered 100 or higher fulfills the requirement.

## Bachelor of Arts in Environmental Science

The major requires a minimum of 112 credits including 60 upper-division credits. Upper-division credits may be earned through course work or through a combination of course work and an honors thesis. Sample course plans are available on the program's website. Major requirements sheets containing detailed information about specific courses that meet the major requirements are available in the program office, from an environmental science advisor, or on the program website (http://envs.uoregon.edu/undergrad/escifocus) .

| | | |
|---|---|---|
| **Lower-Division Core Courses** | | |
| ENVS201 | Introduction to Environmental Studies: Social Sciences | 4 |

| | | |
|---|---|---|
| ENVS203 | Introduction to Environmental Studies: Humanities | 4 |
| **Mathematics and Statistics Courses** | | |
| MATH246–247 | Calculus for the Biological Sciences I-II | 8 |
| orMATH251–252 | Calculus I-II | |
| Approved statistics course | | 4 |
| Approved course in analytical approaches | | 4 |
| **Lower-Division Introductory Science Sequences** | | |
| Two introductory sequences in focal area | | 24 |
| Up to three approved introductory courses in nonfocal area [1] | | 12 |
| **Upper-Division Natural Science Courses** | | |
| Six upper-division natural science courses in focal area (life sciences or earth and physical sciences) | | 24 |
| At least two upper-division courses in nonfocal area [1] | | 8 |
| **Upper-Division Social Science, Policy, Humanities, and Design Courses** | | |
| Three courses from the areas of social science, policy, humanities, or design (no more than one course per area) | | 12 |
| **Environmental Issues Course** | | |
| ENVS411 | Environmental Issues: [Topic] | 4 |
| orENVS425 | Environmental Education Theory and Practice | |
| orENVS427 | Environmental and Ecological Monitoring | |
| **Practical Learning Experience** | | |
| Choose from one of several approved practical learning experience options. These include internships, participation in the Environmental Leadership Program, research experiences with UO faculty members, honors thesis, and courses at field stations. | | 4 |
| **Total Credits** | | **112** |

1 Five courses total are required for nonfocal area.

## Bachelor of Science in Environmental Science

| | | |
|---|---|---|
| **Lower-Division Core Courses** | | |
| ENVS201 | Introduction to Environmental Studies: Social Sciences | 4 |
| ENVS203 | Introduction to Environmental Studies: Humanities | 4 |
| **Mathematics and Statistics Courses** | | |
| MATH246–247 | Calculus for the Biological Sciences I-II | 8 |
| orMATH251–252 | Calculus I-II | |
| Approved statistics course | | 4 |
| Approved course in analytical approaches | | 4 |
| **Lower-Division Introductory Science Sequences** | | |
| Two introductory sequences in focal area | | 24 |
| Up to three approved introductory courses in nonfocal area [1] | | 12 |
| **Upper-Division Natural Science Courses** | | |
| Six upper-division natural science courses in focal area (life sciences or earth and physical sciences) | | 24 |
| At least two upper-division courses in nonfocal area [1] | | 8 |
| **Upper-Division Social Science, Policy, Humanities, and Design Courses** | | |
| Three courses from the areas of social science, policy, humanities, or design (no more than one course per area) | | 12 |
| **Environmental Issues Course** | | |
| ENVS411 | Environmental Issues: [Topic] | 4 |
| orENVS425 | Environmental Education Theory and Practice | |
| orENVS427 | Environmental and Ecological Monitoring | |
| **Practical Learning Experience** | | |
| Choose from one of several approved practical learning experience options. These include internships, participation in the Environmental Leadership Program, research experiences with UO faculty members, honors thesis, and courses at field stations. | | 4 |
| **Total Credits** | | **112** |

1 Five courses total are required for nonfocal area.

## Options for Majors

### Environmental Leadership Program

Through the Environmental Leadership Program, students team up with local businesses, nonprofit organizations, and government agencies to work on environmental projects. Students learn professional research, writing, and presentation skills as they develop a network of professional relationships in the region. Participants make a two- or three-term commitment, for which they earn 8–12 upper-division credits. These credits satisfy upper-division requirements for the environmental studies and environmental science majors.

### Internships

By offering academic credit for environmentally focused work experience, the internship program allows students to connect their academic studies with practical applications. Internship positions must involve significant work with an environmental focus. Potential internship sponsors include public interest nonprofits, government agencies, and private corporations. Students are expected to be self-motivated and arrange their own positions in their areas of particular interest. However, if a student needs assistance finding an appropriate position program, the internship coordinator can help identify potential opportunities. Students may take 18 credits of Field Studies: [Topic] (ENVS196), Internship: [Topic] (ENVS404), or both. To fulfill the practical learning experience requirement, students take 4 credits (which translates to 120 hours) of internship service.

### Honors

Students who want to graduate with honors in environmental science or environmental studies must have a 3.30 overall grade point average (GPA) and a 3.50 GPA in courses required for the major. Honors candidates must also complete a research-based thesis or creative project under the direction of a faculty advisor. Students preparing to graduate with honors should notify their advisor no later than the first term of their senior year.

Honors students who are not enrolled in the Clark Honors College must earn 8 credits of Research: [Topic] (ENVS401), Thesis (ENVS403), or both in environmental studies or another appropriate department. These credits must be distributed over at least two terms. Environmental science majors may substitute these credits for one upper-division natural science elective, environmental studies majors for one upper-division

social science or humanities elective. This can also count for the practical learning experience requirement.

## Environmental Studies Minor

The interdisciplinary minor in environmental studies includes three lower-division courses and five upper-division elective courses for a minimum of 32 credits. Courses applied to the minor must be taken for letter grades and passed with grades of C– or better. At least 16 of the 40 credits must be taken at the University of Oregon. No more than 8 upper-division credits from the major may be applied to minor requirements. With the advisor's consent, an environmental issues course and a practical learning experience may be substituted for one of the elective courses. Students may also submit a petition to their advisor to substitute one upper-division course for one of the required lower-division courses.

| | | |
|---|---|---|
| **Required Courses** | | |
| ENVS201 | Introduction to Environmental Studies: Social Sciences | 4 |
| ENVS202 | Introduction to Environmental Studies: Natural Sciences | 4 |
| ENVS203 | Introduction to Environmental Studies: Humanities | 4 |
| **Advanced Course Requirements** | | |
| One upper-division natural science course from the major requirements sheet | | 4 |
| Four electives from areas of social science, policy, humanities or design | | 16 |
| **Total Credits** | | **32** |

## Kindergarten through Secondary Teaching Careers

Students who complete a bachelor's degree with a major in environmental studies or environmental science are eligible to apply for the College of Education's fifth-year licensure program in middle-secondary teaching or the fifth-year licensure program to become an elementary teacher. More information is available from the department's undergraduate advisor; see also the College of Education (http://catalog.uoregon.edu/archive/2015-2016/education) section in this catalog.

- **Master of Arts**
- **Master of Science**
- **Doctor of Philosophy**

# Graduate Studies

The Environmental Studies Program offers graduate study leading to the degrees of master of arts (MA) or master of science (MS) in environmental studies, and an interdisciplinary doctor of philosophy (PhD) degree in environmental sciences, studies, and policy.

Students choose courses offered in appropriate disciplines to design a course plan based on individual goals and backgrounds.

Some financial support for graduate students in the Environmental Studies Program is available through graduate teaching fellowships. Support generally consists of a stipend, health insurance, and a tuition waiver.

Application instructions and materials are available on the program's website.

## Application Deadline

Applicants for admission to the master's program must submit all necessary materials online by January 15. New students are accepted for fall term only.

## Master of Arts Degree in Environmental Studies

The master of arts degree requires demonstrated proficiency in a second language.

| | |
|---|---|
| Environmental studies graduate core sequence [1] | 9 |
| Concentration area course work [2] | 24 |
| Electives | 12 |
| Thesis or terminal project [3] | 12 |
| **Total Credits** | **57** |

1. First year.
2. Graduate-level courses related to environmental studies in each of two 12-credit concentration areas.
3. Public defense or presentation required.

## Master of Science Degree in Environmental Studies

| | |
|---|---|
| Environmental studies graduate core sequence [1] | 9 |
| Concentration area course work [2] | 24 |
| Electives | 12 |
| Thesis or terminal project [3] | 12 |
| **Total Credits** | **57** |

1. First year.
2. Graduate-level courses related to environmental studies in each of two 12-credit concentration areas.
3. Public defense or presentation required.

## Concurrent Master's Degrees Programs

Environmental studies students may obtain concurrent degrees in other disciplines. Applicants must apply separately to each program. For more information, contact the program office.

## Doctor of Philosophy Degree in Environmental Sciences, Studies, and Policy

The interdisciplinary PhD degree is offered by the Environmental Studies Program under the umbrella of the Joint-Campus Graduate Program in Environmental Sciences, Studies, and Policy, established by Oregon State University, Portland State University, and the University of Oregon.

The environmental sciences, studies, and policy program takes four or more years of study after earning the master's degree.

### Admissions Procedure

Admission to the PhD program must be granted by the Environmental Studies Program and approved by the focal department—another

University of Oregon academic unit, chosen by the applicant, that offers a PhD degree. Applications are reviewed independently by the admissions committee in the Environmental Studies Program and in the focal department. Both committees must approve the application before the applicant can be accepted into the program. The online application must be completed and submitted by December 1 for the following fall admission.

## Doctor of Philosophy Degree Requirements

| | | |
|---|---|---|
| Focal department course work [1] | | NaN |
| Environmental studies course work [2] | | 32 |
| Focal department assessment of competence [3] | | |
| Interdisciplinary assessment of competence [3] | | |
| ENVS603 | Dissertation | 18 |

1. Completion of graduate course work as established by the focal department, which includes basic graduate-level proficiency in research methods appropriate to the designated focal discipline.
2. Courses taken in departments or programs outside the focal department. First-year students participate in a sequence of courses required of all incoming environmental studies graduate students.
3. The term "assessment of competence" is used in lieu of "comprehensive examination" in recognition of the different ways in which departments engage in such assessments.

PhD students must satisfy breadth and concentration requirements established by the Environmental Studies Program and the focal department. Working with an advisory committee, each student customizes a plan of action for completion of the degree.

Requirements may vary depending on the chosen focal department. In addition to the course work, candidates are required to complete and defend a written dissertation and receive approval of the dissertation by a committee chosen in accordance with Graduate School regulations. The committee must have at least five members. The chair and two additional members must be from the focal department. At least three members of the committee must be participants in the Environmental Studies Program.

## Graduate Courses

Graduate students typically choose courses that contribute to their individual environmental focus from the Departments of Anthropology; Architecture; Biology; Chemistry and Biochemistry; Economics; English; Geography; Geological Sciences; History; Landscape Architecture; Philosophy; Physics; Planning, Public Policy and Management; Political Science; Psychology; and Sociology; from the International Studies Program; from the School of Law; and others. Consult the individual department listings in this catalog for course descriptions.

## Courses

**ENVS196. Field Studies: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS198. Laboratory Projects: [Topic]. 1-2 Credits.**
Repeatable.

**ENVS199. Special Studies: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS201. Introduction to Environmental Studies: Social Sciences. 4 Credits.**
Contributions of the social sciences to analysis of environmental problems. Topics include human population, the relationship between social institutions and environmental problems, and appropriate political, policy, and economic processes.

**ENVS202. Introduction to Environmental Studies: Natural Sciences. 4 Credits.**
Contributions of the natural sciences to analysis of environmental problems. Topics include biological processes, ecological principles, chemical cycling, ecosystem characteristics, and natural system vulnerability and recovery.

**ENVS203. Introduction to Environmental Studies: Humanities. 4 Credits.**
Contributions of the humanities and arts to understandings of the environment. Emphasis on diverse ways of thinking, writing, creating, and engaging in environmental discourse.

**ENVS225. Introduction to Food Studies. 4 Credits.**
An exploration of the field of "food studies" and examination of the role of food in historical and contemporary life in the US and around the world.

**ENVS298. Temporary Group-Satisfying Course. 4 Credits.**

**ENVS335. Allocating Scarce Environmental Resources. 4 Credits.**
Considerations for the design of environmental and natural resources policies and regulations: balancing society's preferences and the costs of environmental protection and resource conservation.
Prereq: MATH 105 or higher.

**ENVS345. Environmental Ethics. 4 Credits.**
Key concepts and various moral views surveyed; includes anthropocentrism, individualism, ecocentrism, deep ecology, and ecofeminism. Exploration includes case studies and theory.

**ENVS350. Ecological Footprint of Energy Generation. 4 Credits.**
Detailed study of the ecological consequences of all forms of energy generation including fossil fuels and alternative energy sources. Open to environmental science, environmental studies, and planning, public policy and management majors only.
Prereq: ENVS 201, MATH 112.

**ENVS355. Environmental Data Analysis and Modeling. 4 Credits.**
Statistical methods of data modeling and analysis with specific application to environmental data sets.
Prereq: MATH 252 or equivalent.

**ENVS375. Oregon Seminar. 4 Credits.**
Students broaden and deepen their understanding of the materials presented in three linked courses: BI 372 Field Biology, GEOL 308 Geology of Oregon and the Pacific Northwest, and HIST 473 American Environmental History: [Topic]. Offered alternate years.
Prereq: junior or senior standing.

**ENVS399. Special Studies: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS401. Research: [Topic]. 1-12 Credits.**
Repeatable.

**ENVS403. Thesis. 1-8 Credits.**
Repeatable.

**ENVS404. Internship: [Topic]. 1-12 Credits.**
Repeatable.
Prereq: Instructor's approval.

**ENVS405. Reading and Conference: [Topic]. 1-18 Credits.**
Repeatable.

**ENVS406. Field Studies: [Topic]. 1-12 Credits.**
Repeatable.

**ENVS407. Seminar: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS408. Workshop: [Topic]. 1-8 Credits.**
Repeatable.

**ENVS409. Practicum: [Topic]. 1-12 Credits.**
Repeatable.

**ENVS410. Experimental Course: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS411. Environmental Issues: [Topic]. 4 Credits.**
In depth examination of a particular environmental topic such as global warming, ecosystem restoration, energy alternatives, geothermal development, public lands management, or environmental literature. Repeatable twice when topic changes for maximum of 12 credits.
Prereq: junior or senior standing.

**ENVS425. Environmental Education Theory and Practice. 4 Credits.**
Learning theories, environmental literacy, and the planning, implementation, and evaluation of environmental education programs. Development of teaching materials in collaboration with a community partner for group project.
Prereq: instructor's approval.

**ENVS427. Environmental and Ecological Monitoring. 4 Credits.**
Theory, design, and practice of monitoring sampling mapping, field techniques, data collection, management, analysis and presentation methods, local case studies.

**ENVS429. Environmental Leadership: [Topic]. 1-4 Credits.**
Partnering with governmental agencies, nonprofit organizations, public schools and local businesses, students develop service learning projects. Repeatable when topic changes.
Prereq: instructor's approval.

**ENVS435. Environmental Justice. 4 Credits.**
Environmental justice and its impact on current decisions. Focus on civil rights law, perception of risk, and relation of sustainability and equity.
Prereq: ENVS 201.

**ENVS440. Environmental Aesthetics. 4 Credits.**
Explores aesthetic experience of nature through philosophical perspective; emphasizes nature and art; beauty and the sublime; embodiment, culture, and science; and ethics, conservation, and preservation.
Prereq: ENVS 345 or PHIL 340.

**ENVS450. Political Ecology. 4 Credits.**
Examines how social relations and economic, social, and cultural control of natural resources shape human interactions with the environment. Theory and case studies.
Prereq: ENVS 201.

**ENVS455. Sustainability. 4 Credits.**
Examines the evolution of the concept of sustainability and its complex and sometimes problematic uses among scholars, policymakers, environmentalists, and businesses.
Pre- or coreq: ENVS 201; junior or senior standing.

**ENVS465. Wetland Ecology and Management. 4 Credits.**
Examines management, law, and policies related to wetlands in an ecological framework; includes wetland type definitions, classification, distribution, formation and development, and restoration.
Prereq: BI 307 or BI 370 or GEOG 360.

**ENVS467. Sustainable Agriculture. 4 Credits.**
Examines sustainability issues in agricultural production and current food systems. Focuses on environmental aspects of seed, water, soil, energy, and pest management.
Prereq: ENVS 201 or 202.

**ENVS477. Soil Science. 4 Credits.**
Chemical and physical characteristics and classification of soils, field soil identification, soil degradation.
Prereq: CH 111 or 221 or 224H.

**ENVS503. Thesis. 1-16 Credits.**
Repeatable.

**ENVS507. Seminar: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS508. Workshop: [Topic]. 1-8 Credits.**
Repeatable.

**ENVS510. Experimental Course: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS511. Environmental Issues: [Topic]. 4 Credits.**
In-depth examination of a particular environmental topic such as global warming, ecosystem restoration, energy alternatives, geothermal development, public lands management, or environmental literature. Repeatable twice when topic changes for maximum of 12 credits.

**ENVS525. Environmental Education Theory and Practice. 4 Credits.**
Learning theories, environmental literacy, and the planning, implementation, and evaluation of environmental education programs. Development of teaching materials in collaboration with a community partner for group project.

**ENVS535. Environmental Justice. 4 Credits.**
Environmental justice and its impact on current decisions. Focus on civil rights law, perception of risk, and relation of sustainability and equity.

**ENVS540. Environmental Aesthetics. 4 Credits.**
Explores aesthetic experience of nature through philosophical perspective; emphasizes nature and art; beauty and the sublime; embodiment, culture, and science; and ethics, conservation, and preservation.

**ENVS550. Political Ecology. 4 Credits.**
Examines how social relations and economic, social, and cultural control of natural resources shape human interactions with the environment. Theory and case studies.

**ENVS555. Sustainability. 4 Credits.**
Examines the evolution of the concept of sustainability and its complex and sometimes problematic uses among scholars, policymakers, environmentalists, and businesses.

**ENVS565. Wetland Ecology and Management. 4 Credits.**
Examines management, law, and policies related to wetlands in an ecological framework; includes wetland type definitions, classification, distribution, formation and development, and restoration.

**ENVS567. Sustainable Agriculture. 4 Credits.**
Examines sustainability issues in agricultural production and current food systems. Focuses on environmental aspects of seed, water, soil, energy, and pest management.

**ENVS577. Soil Science. 4 Credits.**
Chemical and physical characteristics and classification of soils, field soil identification, soil degradation.

**ENVS601. Research: [Topic]. 1-16 Credits.**
Repeatable.

**ENVS602. Supervised College Teaching. 1-5 Credits.**
Repeatable.

**ENVS603. Dissertation. 1-16 Credits.**
Repeatable.

**ENVS604. Internship: [Topic]. 1-5 Credits.**
Repeatable for maximum of 10 credits.

**ENVS605. Reading and Conference: [Topic]. 1-16 Credits.**
Repeatable.

**ENVS606. Field Studies: [Topic]. 1-16 Credits.**
Repeatable.

**ENVS607. Seminar: [Topic]. 1-5 Credits.**
Repeatable.

**ENVS608. Workshop: [Topic]. 1-16 Credits.**
Repeatable.

**ENVS609. Terminal Project. 1-16 Credits.**
Repeatable.

**ENVS610. Experimental Course: [Topic]. 1-5 Credits.**
Repeatable. A recent topic is Interdisciplinary Capstone Project.

**ENVS631. Environmental Studies Theory and Practice. 4 Credits.**
Introduction to various disciplinary perspectives that contribute to environmental studies, including their research methods, vocabularies, and core concepts.

**ENVS632. Environmental Studies Research Methodology. 2 Credits.**
Identifying a clear and concise research problem, developing methodology to address that problem, and the process of developing a thorough knowledge of relevant literature.

**ENVS633. Environmental Studies Thesis Development. 3 Credits.**
Interdisciplinary readings in environmental studies focused on topics chosen by each student in consultation with instructor. Preparation for presentations at the Joint Campus Conference.