

# Environment and Society

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## Undergraduate Advisors:

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**Degrees offered:** Bachelor of Science (BS) in Environmental Studies; BS, Master of Science (MS), and Doctor of Philosophy (PhD) in Recreation Resource Management; BS, Bachelor of Arts (BA), MS, and Master of Arts (MA) in Geography; MS in Bioregional Planning (offered jointly with Department of Landscape Architecture and Environmental Planning); MS and PhD in Human Dimensions of Ecosystem Science and Management

**Vision/Mission:** The vision of the Department of Environment and Society is one of bringing people and science together for healthy communities and enduring ecosystems. The mission of the department is based on three goals: (1) to promote scholarship and creativity in the discovery, synthesis, and transfer of knowledge relating to the human dimensions of natural resource and environmental management; (2) to apply social science concepts and approaches to better understand human-environment interactions at a range of spatial scales; and (3) to enhance the effectiveness of policies, planning, and administrative processes that affect sustainable use of the natural world.

To this end, the department's academic programs provide undergraduate and graduate students with a balanced exposure to the social, physical, and biological sciences within an interdisciplinary framework. This combination has great relevance for students aspiring to careers in natural resource and environmental policy, planning, management, education, and science, as well as careers in geography. The program is designed to provide students with a working knowledge of the human aspects of ecosystems and a speaking knowledge of the biophysical aspects, as well as experience using "state of the art" tools and techniques for integrating this knowledge.

## Undergraduate Programs

### Objectives

The department offers the following undergraduate degree programs: Environmental Studies, Geography, and Recreation Resource Management. Each of these programs offers a balanced exposure to key ideas and principles of the social, biological, and physical sciences, placing special emphasis on the human dimensions of natural resources and environmental management. The department's goal is to train professionals who can lead the way toward finding and keeping a sustainable balance between protecting the environment and enhancing human societies.

Departmental programs offer learning experiences in the classroom and in the field, frequent individual contacts with faculty as teachers and advisors, and opportunities to take part in student and professional organizations. Seasonal employment, internships, and other activities promoting hands-on experience in natural resource and geographic professions are strongly encouraged.

The **Environmental Studies** curriculum is designed for students who wish to acquire a broad understanding of natural resources and human-environment relationships, together with the technical background needed to understand environmental issues. In many ways, the curriculum provides a traditional "liberal arts education" with a strong natural resources emphasis. Moreover, it offers flexibility for the development of either specialization or breadth of content to match the student's interests.

The **Geography** curriculum provides a broad background in the basic themes of geography—human (cultural), physical, and regional geography—with a particular focus on environmental and earth resources geography. In addition, students acquire technical geographic analysis skills. Students also have the opportunity to study in a systematic, regional, or technical area of geography.

The **Geography Teaching** curriculum offers students an opportunity to prepare for a career in secondary education with a geography emphasis.

The **Recreation Resource Management** curriculum prepares students for careers in managing outdoor recreation settings, such as public forests and rangelands, state and national parks, and wilderness areas. Because these jobs require an understanding of both the land and the people who visit it, the major offers courses in both the natural and social sciences, along with an emphasis on communication skills.

### Requirements

**Admission Requirements.** Admission requirements for the Department of Environment and Society are the same as those described for the College of Natural Resources (see pages 115-116).

**Graduation Requirements.** All courses listed as major subject courses must be taken on an *A-B-C-D-F* basis. The grade point average for all courses taught by the College of Natural Resources must be 2.5 or higher.

All students in the Environmental Studies and Recreation Resource Management majors must complete a series of basic lower-division courses providing the disciplinary foundation for natural resource professions before moving on to professional coursework. Equivalents of these foundation courses may be taken at many two- and four-year colleges. Some foundation and core courses may also be used toward the University Studies requirements, as shown by the University Studies designations listed in parentheses following the course numbers. Students should consult their academic advisor if they have questions about University graduation requirements.

### Environmental Studies Major

The Environmental Studies major consists of 92 credits. This total includes the disciplinary foundation, professional courses, and a specialization option of 15 or more credits.

*Lower-division Foundation:* BIOL 1010 (BLS), 1020; CHEM 1110; HIST 3950 (DHA/CI) or PHIL 3510 (DHA); MATH 1050 (QL); STAT 2000 (QI).

*Professional Coursework:* AWER 3100 (DSC/CI) or ENVS 3600 (DSC); AWER 3700; ENVS 1990, 2340 (BSS), 3000, 3300, 3500 (QI), 4000 (DSS), 4400, 4990, 5000; FRWS 2200 (BLS), 3900; GEOG 1130 (BPS) or GEOL 1150 (BPS); GEOG 3850; one of the following: BIOL 3040 (DSC), FRWS 3050 (DSC), 3600, PLSC 3500; one of the following: ANTH 3110, 4110 (DSS), or another course in cultural resource management approved by faculty advisor.

*Specialization Option:* Students work with their faculty advisor to develop a specialization option fitting their interests and career goals. The option consists of 15 or more additional credits, and may include any approved University minor or a suite of courses meeting the student's particular needs. At least one course in the specialization area must be a natural resources policy course numbered 3000 or higher.

### Geography Major

The Geography major consists of 43 credits. After meeting the University Studies, USU upper-division, and geography major requirements, students may take the remainder of their 120 required credits in any discipline from any department. Students interested in using their elective credits to develop a field of specialization should consult with their advisor to select appropriate courses.

*Disciplinary Foundation:* AWER 4930, GEOG 1030 (BSS), 1130 (BPS), 1140, 2030 (BSS), 3850, 4200 (CI), 4850; MATH 1050 (QL); STAT 2000 (QI).

*Geography Specialization:* Students work with their faculty advisor to develop a 12-credit specialization fitting their interests and career goals. The specialization may include internships, directed study, and courses offered throughout the University that complement their academic goals.

### Geography Teaching Major

The teaching major in Geography consists of both the geography courses (36 credits) and the Secondary Teacher Education Program (STEP) (35 credits). For details about the STEP, students are referred to the geography major requirement sheet, or the STEP information listed in the Department of Secondary Education section (pages 306-307). A geography teaching major also requires a teaching minor in another field of study.

*Foundation:* GEOG 1030 (BSS), 1130 (BPS), 2030 (BSS), 3850, 4200 (CI) (both the Utah section and one other); one of GEOG 4850 or AWER 4930.

*Professional Coursework:* GEOG 4300, 4800, 5900.

*Geography Electives:* 6-10 credits of Geography courses numbered 2000 and above. It is recommended that students take additional regional, systematic, technology in geography education, or classroom technology practicum credits. All electives must be coordinated with a geography education advisor.

### Recreation Resource Management Major

The Recreation Resource Management major consists of 82-86 credits.

*Lower-division Foundation:* BIOL 1010 (BLS), 1020; CHEM 1110; MATH 1050 (QL); STAT 2000 (QI).

*Professional Coursework:* AWER 3100 (DSC/CI) or ENVS 3600 (DSC); AWER 3700; ENVS 1990, 2340 (BSS), 3000, 3300, 3500 (QI), 4000 (DSS), 4130, 4400, 4500 (CI), 4600 or 5110, 4920 or 4950, 4990, 5000; FRWS 2200 (BLS), 3900; GEOG 1130 (BPS) or GEOL 1150 (BPS); GEOG 3850; SOIL 3000; one of BIOL 3040 (DSC), FRWS 3050 (DSC), 3600, or PLSC 3500; one of ANTH 3110, 4110 (DSS), or similar course approved by department.

### Environment and Society Minors

The department offers minors in Environmental Studies, Geography, Geography Teaching, and Recreation Resources. Students in all University majors may complete a Geography, Geography Teaching, or Recreation Resources minor. The Environmental Studies minor is open to all majors, *except* those in the College of Natural Resources. Because the same courses cannot be counted toward both a student's major and minor, students must take additional courses beyond those listed here if their majors require courses that are also included in the minor. Students wishing to minor in the above areas should contact the department to meet with the designated advisor for that minor.

The **Environmental Studies** minor totals 15-17 credits and includes ENVS 2340 (BSS), ENVS 3000, FRWS 2200 (BLS); one of ENVS 4110, 4130, 4400, 5300, 5320, 5550; and one additional upper-division course (minimum 3 credits) that can be applied to natural resources management, chosen in consultation with faculty advisor.

The **Geography** minor totals 24 credits and includes AWER 4930; GEOG 1030 (BSS), 1130 (BPS), 1140, 2030 (BSS), 3850, 4200 (CI), 4850.

The **Geography Teaching** minor totals 26-27 credits and includes GEOG 1030 (BSS), 1130 (BPS), 2030 (BSS), 3850, 4200 (CI) (both the Utah section and one other), 4300, 4800, 4850 or AWER 4930. An approved teaching major in another subject is also *required*.

The **Recreation Resources** minor totals 15 credits and includes ENVS 3300, 4130, 4500 (CI), 4600; plus one of the following: ENVS 3330, 4000 (DSS), 4400, or 5110.

### Financial Assistance

The main opportunities for undergraduates to find financial support through grants, work-study, and loans are listed on pages 22-26 in the *Financial Aid and Scholarship Information* section. Some students may be able to find paid internships with private or governmental organizations, or work for a faculty member on a research project. Interested persons should contact the College of Natural Resources Academic Service Center for more information on scholarships for undergraduate students.

### ***Additional Information***

For additional information about the Bachelor of Science requirements, course sequencing, and departmental specialization options and their related coursework, as well as updated information describing current programs and courses offered by the Department of Environment and Society, visit the Environment and Society main office, Natural Resources 201, or visit: <http://www.cnr.usu.edu/envs>.

## ***Graduate Programs***

### ***Admission Requirements***

See general admission requirements on pages 90-91. Applicants for graduate study in the Department of Environment and Society should have a bachelor's degree from an accredited college or university, a cumulative GPA of at least 3.0 (out of 4.0), and GRE scores (quantitative and verbal) above the 40th percentile. Foreign students should submit a TOEFL score of at least 550. Exceptions to these standards will be considered on a case-by-case basis. Written statements of interest help match applicants with faculty advisors. A faculty member must agree to serve as the major professor in order for an applicant to be accepted. Prospective students are encouraged to contact faculty members early in the application process to investigate mutual interests, projects, and prospects for financial support.

The department's graduate programs focus on providing students with a broad foundation in the social and natural sciences as they relate to the study, planning, and management of ecosystems. The curriculum is designed to enhance interdisciplinary integration by emphasizing current and future environmental issues facing humanity. Coursework and research are focused on problem solving through application of social research methods, case studies, computer mapping, and other analytical techniques.

The department values intellectual, academic, and social diversity in the applicants for graduate study. Mature professionals seeking education to augment life experiences, or practical training to pursue new career paths, are also encouraged to apply. Knowledge gaps will be identified early in a student's program and addressed on a case-by-case basis through agreements between students and their graduate advisory committees.

### ***Degree Programs***

The department offers opportunities for graduate study through the MS, MA, PhD, and graduate certificate programs listed below. The department also offers opportunities to participate in a college-wide Master of Natural Resources (MNR) program administered through the Dean's Office of the College of Natural Resources. This program is described more fully on page 278.

The MS degree requires a minimum of 30 credits, of which 24 must be in residence. Candidates for the MA must complete the requirements for the MS, with the addition of at least two years (approximately 16 credits) of an approved foreign language or some other demonstration of foreign language proficiency. There are two options available in both the MS and MA programs. The **Plan A** requires students to complete coursework, as well as a research thesis. The **Plan B** is a nonthesis, terminal degree, based largely on coursework and a professional paper or project.

For the PhD degree, there is a more variable amount of required coursework, as well as a research dissertation. Compared to the MS degree, the PhD degree has a greater emphasis on theory, research methods, writing research proposals, and publishing research in peer-reviewed outlets.

**Bioregional Planning.** Graduate education in bioregional planning recognizes the importance of how the biophysical attributes of a region influence the human dimensions of settlement and culture. The reciprocal is also addressed. The two-year Master of Science degree in Bioregional Planning, offered jointly with the Department of Landscape Architecture and Environmental Planning, presents an interdisciplinary core of courses and faculty for the purpose of addressing complex issues in the areas of environmental analysis, planning, and policy. Emphasis is placed on four problematic content areas associated with environmental planning: social/behavioral, biophysical, economic, and public policy. The spatial focus is on planning for large regional landscapes with dispersed populations with a primary economic base in agriculture, energy development, tourism/recreation, retirement communities, and natural resources. The program prepares future planners and managers to work within an interdisciplinary environment, providing better alternatives for decisions and policy implementation. Bioregional planning is practiced in both the private and public sectors, which may include offices of the National Park Service, U.S. Forest Service, Bureau of Land Management, and various state, county, and community organizations. For further information, see page 242.

**Geography.** Graduate education in Geography provides opportunities for students to gain advanced technical knowledge and skills in formal specializations that include: (1) Human-Environment Interactions, (2) Geographic Information Systems, (3) International Rural Development, (4) Geographic Education, and (5) Environmental Education.

**Human Dimensions of Ecosystem Science and Management.** Graduate education in the *Human Dimensions of Ecosystem Science and Management* (HDESM) was created in response to a growing demand in natural resource fields for more interdisciplinary professionals with diverse skills and broader intellectual capabilities. Moreover, it is being recognized that social and managerial sciences are increasingly important in helping society better understand and solve environmental problems. The HDESM program will produce students who are problem solvers with an ability to integrate human and biophysical aspects of ecosystems, and to analyze policies and decisions that encourage both community and ecosystem sustainability. The HDESM degrees will train students for professional positions with local, state, national, and international resource management agencies, private consulting and environmental analysis firms, and nongovernmental environmental organizations. The MS degree will prepare students for professional practice in natural resources and environmental management and planning, policy and program analysis, public affairs, environmental education, community assessment and collaboration, conflict management, and extension/outreach positions. The PhD program puts greater emphasis on basic theory and research methods in one or more social science disciplines, depending on the student's interests. The PhD will prepare students for university teaching, research, and extension; conducting agency and private organizational research; and for positions in formal policy and program evaluation.

**Recreation Resource Management.** Graduate education in Recreation Resource Management provides opportunities for students to gain advanced knowledge and skills in topics such as: (1) outdoor recreation behavior and attitudes, (2) resource-based conflict and crowding, (3) natural resource-based tourism, (4) natural history interpretation, and (5) integration of outdoor recreation with protected area management or rural development.

### ***Graduate Certificate Programs***

Faculty in the Department of Environment and Society also administer two graduate certificate programs, including **Natural Resource and Environmental Education (NREE)** and **National Environmental Policy Act (NEPA)**. By meeting certain core requirements, students are able to obtain a certificate in one or both of these areas complementing their degree program. See pages 272-275 for a description of the NREE Program and pages 270-271 for a description of the NEPA Program. The Environment and Society Department is also affiliated with the Natural Resource and Environmental Policy (NREP) Program, which is described on pages 276-277.

### ***Research***

The generation of new knowledge through research is one of the key contributions that an academic department makes to professions and society at large. Research is also a major venue for the interaction of graduate students and faculty in the Department of Environment and Society. Although faculty and students work on many different issues, the research strives to be interdisciplinary and focuses on merging the relevant social and natural sciences. Work is undertaken in Utah and beyond, including several projects elsewhere in the United States and in developing nations. Funding comes from a variety of public and private sources. The department houses one institute and three programs that also collaborate on research. These include the Institute for Outdoor Recreation and Tourism, the Natural Resource and Environmental Policy Program, the Geographic Education Program, and the Environmental Education Program.

### ***Financial Assistance***

General aspects of financial support for graduate students at Utah State University are listed on pages 89-90 in the *Graduate Financial Assistance* section. This includes important information on the University-wide policies and terms of reference for research and teaching assistantships, graduate tuition obligations and benefits, Western Regional Graduate Programs, and competitive University-wide fellowships and scholarships.

The Department of Environment and Society intends that all graduate students be financially supported. Graduate research assistantships are available through major professors having contracts, grants, or other awards. Internships may also be created on a case-by-case basis. A student may want to author or co-author a proposal with a faculty member to fund a new initiative. There are also open competitions for graduate scholarships and fellowships through the College of Natural Resources. The department also has a few graduate teaching assistantships where graduate students typically help instructors with teaching, grading, or recita-

tion in large courses. Interested persons should contact the department early in the application process for more information on financial assistance for graduate students. Prospective students may also visit <http://www.cnr.usu.edu/envs>.

## ***Environment and Society Faculty***

### **Professors**

*Clifford B. Craig*, geographic education, community development, rural planning, economic geography, geography of Utah

*Steven E. Daniels*, natural resource policy, collaborative community processes

*Leona K. Hawks*, sustainability, energy efficiency, water conservation, healthy indoor environments, green consumerism in buildings and technologies

*James J. Kennedy*, policy and administration of natural resource and environmental management

*Richard S. Krannich*, natural resource policy and sociology

*Jack M. Payne*, Vice President and Dean for University Extension, conservation program administration, agriculture and natural resource policy

*H. Charles Romesburg*, natural resources research methods and natural resources ethics

*Terry L. Sharik*, natural resource and environmental management, institutional analysis, teaching and learning pedagogy, forest ecology

*Derrick J. Thom*, land use, population and settlement, rural development, remote sensing, geography of Africa

*Richard E. Toth*, bioregional and water resources analysis, planning, and management

### **Associate Professors**

*Ted J. Alsop*, physical geography, climatology, geomorphology, photogrammetry, geography of North America

*Dale J. Blahna*, natural resource sociology, policy, outdoor recreation, and interpretation

*Mark W. Brunson*, social and psychological aspects of forest and rangeland management

*Steven W. Burr*, recreation resources, outdoor recreation and natural resource-based tourism, rural community development

*D. Layne Coppock*, rangeland ecology, management, and policy; international pastoral and agropastoral development; community-based natural resource management

*Joanna L. Endler-Wada*, cultural anthropology, natural resource policy and sociology

*Robert J. Lilieholm*, natural resource management and economics, land use planning, sustainable development

*Robert H. Schmidt*, wildlife policy, wildlife damage management

### **Assistant Professor**

*Nicole L. McCoy*, natural resource economics

### **Senior Lecturer**

*Michael F. Butkus*, recreation resources management and planning, interpretive planning

### **Lecturers**

*Judith A. Kurtzman*, natural resource policy

*Barbara Middleton*, environmental education

## ***Course Descriptions***

Environment and Society (ENVS), pages 392-394

Geography (GEOG), pages 403-404

National Environmental Policy Act (NEPA), page 447