

# ENVIRONMENTAL STUDIES AND PLANNING

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## DEPARTMENT OFFICE

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## DEPARTMENT CHAIR

Thomas Jacobson

## ADMINISTRATIVE COORDINATOR

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## Faculty

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Caroline Christian / Environmental Conservation and Restoration  
Thomas Jacobson / Planning  
\*Stephen Norwick / Water Quality, Hazardous Materials, GE Advising  
Steven Orlick / Planning  
Rocky Rohwedder / Education and the Environment, Outdoor Leadership  
Alexandra von Meier / Energy Management and Design  
Laura Watt / Environmental Conservation and Restoration, Planning  
*\*Faculty Early Retirement Program*

## Programs Offered

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Bachelor of Arts in Environmental Studies  
Education and the Environment  
Energy Management and Design  
Environmental Conservation and Restoration  
Outdoor Leadership  
Planning Concentration  
Water Quality and Hazardous Materials Management  
Bachelor of Science in Environmental Studies  
Energy Management and Design  
Water Quality and Hazardous Materials Management  
Minor in Environmental Studies and Planning  
Elementary Teacher Credential Multiple Subject  
Preparation in Environmental Studies  
Double Major with Economics

Dedicated to producing environmental problem solvers, the Department of Environmental Studies and Planning offers a distinctive program of interdisciplinary study. Students and faculty work together to develop an understanding of environmental "sustainability" in all its dimensions. The program addresses current environmental concerns that have far-reaching implications for human society, natural systems, and the fate of diverse species of plants and animals. This involves an integration of knowledge from a variety of disciplines to understand the functioning of ecological systems and the nature of human impact upon these systems at local, regional, and global scales. The department's two goals

are to prepare students for careers in the environmental professions, for graduate studies, and for positive action in their own lives; and to promote ecological literacy in order to help maintain and enhance the quality of the human and natural environments.

All students receive fundamental instruction related to ecology and the environment based on knowledge from the biological, physical, and social sciences and from the humanities. This broad understanding is applied in a particular area of environmental concern through a student's selecting one of the ENSP study plans. Career-oriented study plans are offered in conservation and restoration, energy management and design, education and the environment, outdoor leadership, city and regional planning, and water quality and hazardous materials. These study plans are described below. Many students pursue double majors, or a major and minor, in conjunction with traditional disciplines to prepare for specific careers related to the environment.

All students complete a senior project or internship.

## Supporting Programs

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In addition to the programs above, our department is the academic sponsor of two professional certificate programs offered by the School of Extended Education.

Green Building Professional Certificate  
Sustainable Landscape Professional Certificate

## Admission Requirements

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When applying to Sonoma State University, a student may declare a major in Environmental Studies and Planning. A student considering this major should make an appointment to see a faculty member for academic advising. (Students seeking financial aid to assist them in their studies should contact the financial aid office. Several scholarships are provided specifically for ENSP students through the University scholarship program; please refer to the Scholarships section of this catalog.)

## Advisory Plans for the Freshman and Sophomore Years

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In fulfilling their general education requirements, students who intend to major in Environmental Studies and Planning should select courses that will also meet the prerequisites for their intended study plans. Required and recommended prerequisites may be obtained by contacting the department office.

A broad-based program of lower-division work in the liberal arts and sciences is generally sufficient to meet the requirements for the B.A. degree. This program should include at least one course in biology; one in geology, chemistry, or physics; one in philosophy; and two or more in the social sciences, including a course in introductory economics (either microeconomics or macroeconomics is recommended). Additional course work is required for certain study plans.

## Required Courses

All ENSP majors are required to complete:  
ENSP 200\* Global Environmental Issues (3)  
ENSP 201 Environmental Forum (1)

In addition, in consultation with an advisor, students must complete 36-53 units in one of the six study plans described below. Details of each study plan, including specific courses and options, are available from the office of the Department of Environmental Studies and Planning.

At least 24 units of ENSP course work are required for the B.A. and B.S. degrees.

Courses required for the Major must be taken for a traditional letter grade, except for courses that are offered CR/NC only.

## Bachelor of Arts in Environmental Studies

Degree Requirements	Units
General education	48 or 51
Major requirements	36-53
General electives	16-36
Total units needed for graduation	120

## Bachelor of Science in Environmental Studies

A Bachelor of Science degree is available for students in the Energy Management and Design and Water Quality and Hazardous Materials plans.

Degree Requirements	Units
General education	48 or 51
Natural science support courses	32-34
Major requirements	22-35
General electives	10-15
Total units needed for graduation	120

The following natural science support courses are required for the B.S. degree, in addition to the specific requirements for Energy Management and Design and Water Quality and Hazardous Materials Management.

CS 101 Introduction to Computers and Computing	3
CHEM 115A* General Chemistry	5
CHEM 115B* General Chemistry	5
ENSP 403 Computer Modeling	3
MATH 161* Calculus I	4
MATH 211S Calculus II	2
MATH 165 Elementary Statistics	4
PHYS 210A* General Physics (Algebra/Trig or Calculus-based)	3-4
PHYS 210B General Physics	3-4
Total units natural science support courses	32-34

\* Courses that meet general education requirements.

## Study Plans

In consultation with an advisor, students must complete an additional 16-36 units in one of the six study plans outlined below. Details of each plan, including specific courses and options, are available from the office of the Department of Environmental Studies and Planning.

### Education and the Environment (B.A. degree option)

This track in environmental education is designed as a Subject Matter Preparation Program, approved by the California Commission on Teacher Credentialing, to prepare students in subject matter competency as defined by the *K-8 Academic Standards of California*. This track is excellent preparation for passing of the California Subject Examination for Teachers as well as for careers in outdoor leadership and education.

### Energy Management and Design (B.A. and B.S. degree options)

This program is designed to prepare students for careers or for graduate studies in the fields of residential and commercial energy management, energy-efficient architecture and design, energy planning in industry and government, renewable energy applications, and other energy-related businesses.

### Environmental Conservation and Restoration (B.A. degree option)

There are two tracks in this study plan: 1) Biological Resource Management; 2) Resource Planning and Management. This is an interdisciplinary science-based study plan for students who intend to pursue a career or graduate study in a variety of fields related to conservation; restoration; and management of habitats, ecosystems, and biological resources. Under the plan, students combine a broad-based environmental studies education with in-depth work in a particular area of interest, giving them a specific area of expertise within the broader field of environmental conservation. Electives in the plan are organized to facilitate a double major or minor in biology or geography, which is strongly encouraged.

### Outdoor Leadership (B.A. degree option)

This study plan combines relevant coursework in business, environmental studies, kinesiology, and organizational leadership. Outdoor leaders are in demand for growing outdoor recreation, adventure tourism, and multisport industries. Outdoor leadership skills are directly applicable to the workplace in a wide range of leadership, management, and coordination positions.

### Planning Concentration (City and Regional Planning) (B.A. degree option)

Students in the CSU-approved planning concentration follow a general preprofessional curriculum in planning and may choose to develop a specialization to suit their interests through a program

of recommended electives or as a minor. Focus is on sustainable community planning, including land use, growth management, environmental impact assessment, transportation, and natural resource planning. Graduates may work for a wide variety of governmental agencies or private firms, or may pursue graduate studies in planning or related fields. Also, students interested in future careers in environmental law usually follow the planning concentration.

### **Water Quality and Hazardous Materials Management (B.A. and B.S. degree options)**

This program prepares students for employment in environmental enforcement agencies, large private corporations, engineering firms which serve the public and private sectors, and public agencies that provides water or treats wastewater. Some of these agencies and firms are very small and rural; others are large and urban. The course work provides a comprehensive foundation in the science of environmental quality. Our program welcomes students who are new to this field, provides upper-division course work for students who have had previous training in community college hazardous materials and water technology programs, and also gives additional training to workers already employed in water-related occupations.

### **Double Major with Economics**

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The double major in economics and environmental studies and planning is intended for those students whose particular academic and career interests lie in natural resource economics, economic planning, energy management, and/or community development and redevelopment. The double major is also designed especially for students who intend to pursue graduate studies in natural resource management, urban planning, law, or related career fields. Students considering this double major should meet with their ENSP advisor to discuss requirements.

### **Minor in Environmental Studies and Planning**

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The purpose of the minor in environmental studies and planning is to help students from traditional disciplines apply their expertise to environmental and planning problems and issues. A minimum of 20 units is required. Students considering the ENSP minor should meet with their ENSP advisor to discuss requirements.

### **Special Resources in ENSP**

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The department utilizes several valuable learning environments and facilities on and off campus. They include:

**The Fairfield Osborn Preserve:** A 220-acre field station that provides environmental education programs and opportunities for scientific research. The preserve is a fifteen-minute drive from campus, atop Sonoma Mountain.

**The SSU Botanical and Kenneth M. Stocking Native Plant Garden:** A showcase of diverse California plant communities and a quiet place for education and relaxation. Located near the campus lakes, the garden includes a guided trail through woodland, marsh, and riparian ecosystems.

**The Environmental Technology Center:** A model for sustainable building techniques and technologies, this center includes energy and water-efficient landscaping, "smart building" control technologies, environmentally-sensitive materials, passive solar heating and cooling, and more. It serves as a training facility for building professionals and teachers and as an educational and research site.

**The Institute for Community Planning Assistance:** A research arm for the department, carrying out contract studies for local communities and public agencies, utilizing paid student assistants.

**Galbreath Wildlands Preserve:** A 3,670 acre preserve nestled in the Coast Range of northern California. The mission of the Preserve is to promote environmental education and research, as well as the effective stewardship of this diverse landscape.