# ENVIRONMENTAL STUDIES AND PLANNING

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## Programs Offered

Bachelor of Arts in Environmental Studies
- Education and the Environment
- Energy Management and Design
- Conservation and Restoration
- Outdoor Leadership
- Planning Concentration
- Water Quality Management

Bachelor of Science in Environmental Studies
- Energy Management and Design
- Water Quality 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 (ENSP) 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, and natural systems. This involves 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 primary 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 environmental literacy in order to maintain and enhance the quality of the human and natural environments.

Students receive fundamental instruction related to the environment based on the biological, physical, and social sciences and the humanities. This broad understanding is then 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 management. 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 an internship or senior project.

## Admission Requirements

When applying to Sonoma State University, a student may declare a major in Environmental Studies and Planning. Students will be admitted to the major only if they meet departmental academic requirements. A student considering this major should make an appointment to see a faculty member for academic advising.

## Financial Aid and Scholarships

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

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 for each study plan 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. Additional coursework is required for certain study plans.

## Required Courses

All ENSP majors are required to complete:
ENSP 201 Environmental Forum (1)

In addition, in consultation with an advisor, students must complete 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 only offered Cr/NC.

## Bachelor of Arts in Environmental Studies

| Degree Requirements | Units |
|---|---|
| General education | 48 or 50 |
| Major requirements | 36-53 |
| General electives | 17-37 |
| **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 Management plans.

| Degree Requirements | Units |
|---|---|
| General education | 48 or 51 |
| Science support courses | 29-31 |
| Major requirements | 22-35 |
| General electives | 10-18 |
| **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 Management.

| | |
|---|---|
| CHEM 115A* General Chemistry | 5 |
| CHEM 115B* General Chemistry | 5 |
| 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 science support courses** | **29-31** |

** Courses that meet general education requirements.*

## Study Plans

In consultation with an advisor, students must complete 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 study plan is designed for students interested in working with youth or a teaching career in public or private school settings. Coursework is designed to help students pass the California Subject Matter Examination for Teachers (CSET) as well as equip them with environmental science literacy, effective educational techniques, and extensive field experience. After completion of this B.A. degree track, many students go on for a multiple subject teaching credential.

### 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.

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

Track 1, Biological Emphasis, is for students interested in science-based conservation, restoration, conservation planning, land management, and preservation. Students participate in an interdisciplinary curriculum that combines course work in ecology and biology with environmental policy, law, and/or planning. A minor in Biology is strongly encouraged. Track 2, Social Science Emphasis, is for students interested in the human dimensions of conservation and restoration. Coursework focuses on the political, historical, and/or geographic aspects of land and resource conservation, planning, and management, while also covering a solid interdisciplinary foundation of ecological understanding. A minor in Geography is strongly encouraged.

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

This study plan combines relevant coursework in environmental science, kinesiology, leadership and small business management along with field experience to prepare the next generation of outdoor leaders. Career opportunities include the growing outdoor recreational field, eco and adventure tourism, and adventure and multi-sports programs at schools and universities, as well as activities for youth-at-risk and other special needs populations.

### 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. 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, private firms, or non-profits, or may pursue graduate studies in planning or related fields. Students interested in future careers in environmental law typically follow the planning concentration.

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

The Water Quality Management study plan provides excellent preparation for professional careers in the expanding field of water management. Graduates find employment in a wide variety of occupations with industry, private consulting firms, non-profit organizations, or government agencies that deal with the management of water supply, drinking water, waste water, solid waste, and other water quality concerns.

## Double Major with Economics

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 development 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

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 an ENSP advisor to discuss requirements.

## Special Resources in ENSP

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

**The Fairfield Osborn Preserve:** A 411-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.

**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.

**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 Center for Sustainable Communities:** The Center works with cities and counties, special districts, and regional and state government agencies utilizing ENSP faculty, students and “encore career” professionals on a wide array of projects.

**The Classroom Garden:** The garden adjacent to the ETC teaches SSU students and members of the public sustainable landscape practices and how these contribute to biodiversity and environmental health. Through internships, volunteering, and classroom experiences, students gain a sense of place, community, purpose, and an enriched academic experience.