

ENVIRONMENTAL STUDIES AND SUSTAINABILITY (ESS)

ESS 0001. The Environment and the Human Impact

Units: 3

Formerly known as INT 1

Advisory: Eligibility for ENGL 1A

Hours: 54 lecture

Theoretical and practical understanding of the principles of ecology, the complexities of technology, and the contemporary problems of the environment on both a local and global level. Lecture/discussion and films in the areas of population, technology, environmental restoration, land use, energy, pollution, and world hunger, as well as the basic concepts, economics, politics, poetry, literature, and philosophy of ecology. (CSU, UC)

ESS 0001L. Introduction to Environmental Science Laboratory

Unit: 1

Prerequisite: Completion with grade of "C" or better or concurrent enrollment in ESS 1

Hours: 54 laboratory

Hands-on, inquiry-based learning in topics associated with environmental science. Laboratory and field studies including applications of physical science principles, ecological studies, and exposure to sustainability issues related to human society. Promotes critical thinking, problem solving, scientific and environmental literacy. May include field trip(s) during or in lieu of lab time. Students may be required to provide their own transportation. (CSU, UC)

ESS 0006. The Sierra Nevada

Units: 3

Formerly known as INT 6

Advisory: Eligibility for ENGL 1A

Hours: 54 lecture

Integrated study of the Sierra Nevada including its physical attributes, geological characteristics, origin and development, flora and fauna, water resources, historical and economic significance, and influences on literature, art, and culture. Includes contemporary environmental, economic, and management issues in the Sierra. (CSU, UC)

ESS 0006F. Sierra Nevada Field Trip

Units: 0.5-1

Prerequisite: Completion with grade of "C" or better, or concurrent enrollment in ESS 6

Hours: 18 lecture per unit

Field lecture course designed to be taken concurrently with ESS 6. A field study of selected sites in the Sierra Nevada ecoregion, comparing their biological inventory, ecological relationships, physical environments, and sensitivity to human interactions and activities. Moderate hiking may be involved. Entrance and transportation fees may be required. Students may be required to provide their own transportation. (CSU)

ESS 0007. Energy, Environment, and Climate

Units: 3

Also known as ESCI 7

Advisory: Eligibility for ENGL 1A

Hours: 54 lecture

Analysis of the nature of energy and the environmental impact of its societal use in the context of Earth's record of changing climate. Explores current global climate change due to post-1750 greenhouse gas emissions and strategies for mitigation and adaptation to changing climate predictions, emphasizing future alternative energy sources. Designed for students majoring in areas related to the environmental sciences and/or those interested in developing a substantiated understanding of the role played by citizens in ensuring a healthy environment for future generations. (CSU, UC)

ESS 0008. California Water

Units: 4

Hours: 108 (54 lecture, 54 laboratory)

Interdisciplinary examination of California water ecosystems, infrastructure, uses, and impacts. Students will learn about: hydrology; aquatic ecosystems including rivers, lakes, wetlands, estuaries, and marine environments; water infrastructure including dams, levees, aqueducts, and wastewater treatment facilities; groundwater recharge, withdrawal, use and impacts; the role of water in agricultural, urban, environmental and political systems; water quality; water storage and transfers; water policy; and conflicts arising from water scarcity. May include field trips during or in lieu of lab time. Students may be required to provide their own transportation. (CSU)

ESS 0010. Conservation of Natural Resources

Units: 3

Formerly known as AGRI 190 and NATR 10

Advisory: Eligibility for ENGL 1A

Hours: 54 lecture

Use and protection of natural resources, including soil, water, forest, mineral, plant, and animal life. Ecological principles, history of the conservation movement, modern problems in resource use, and the citizen's role in conservation. (CSU, UC)

ESS 0013. Environmental Regulations

Unit: 1

Formerly known as BIOL 13A

Advisory: Completion of BIOL 14 or ESS 10 with grade of "C" or better

Hours: 18 lecture

Survey of major California environmental regulations and relevant federal regulations. Designed using case study analyses to explore environmental laws applicable to water, land and air resources. (CSU)

ESS 0014. Natural History, Ecology and Conservation

Units: 4

Also known as BIOL 14

Advisory: Eligibility for ENGL 1A

Hours: 108 (54 lecture, 54 laboratory)

Introduction to the study of biology and ecology of organisms and ecosystems of the world, with an emphasis on California. Special focus on significance of functioning ecosystems and human influence on biological environment. (CSU, UC)

ESS 0028. Independent Study

Units: 1-3

Designed for students interested in furthering their knowledge at an independent study level in an area where no specific curriculum offering is currently available. Independent study might include, but is not limited to, research papers, special subject area projects, and research projects. See Independent Study page in catalog. (CSU, UC-with unit limitation)

ESS 0095. Internship in Environmental Studies and Sustainability

Units: 0.5-4

Designed for advanced students to work in an area related to their educational or occupational goal. Provides new on-the-job technical training under the direction of a worksite supervisor, allowing students to expand knowledge and skills in the chosen field. Mandatory orientation session and faculty approval to determine eligibility. Students may earn up to a total of 16 units in internship courses (any course numbered 95 and PDEV 94). (CSU-with unit limitation)