

## SUSTAINABILITY AND RENEWABLE RESOURCES COURSES

**SUST 1310 Introduction to Environmental Science and Sustainability (3-0)** Prerequisites: None. This course will introduce students to the foundational concepts of environmental science and sustainability. Topics addressed will include human impacts on ecosystems, climate change, population growth, pollution, and environmental social science. (Fall)

**SUST 2310 Environmental Policy and Regulation (3-0)** Prerequisite: SUST 1310. This course will provide an overview of major environmental regulations and policies in the United States. Air quality, water quality, and land use policies will all be addressed. The cooperative role of state and federal governments will be discussed, as well as international environmental agreements. (Fall even)

**SUST 3100L Research Team Lab (0-3)** Prerequisite: Requires approval of instructor. Intended for Sustainability & Renewable Resources majors. Active research of basic nature under the supervision of Department of Sustainability & Renewable Resources faculty members. May be taken up to four times for credit and no grade less than a "B" is acceptable for continuation in subsequent semesters. (As needed)

**SUST 3310 Water and Society (3-0)** Prerequisite: SUST 1310 and GEOS 1405. This course will examine the interactions between water in the environment and human society and development. The course will cover the properties of water and the water cycle as well as water pollution, policy, and technology. Students will also evaluate future predictions of water availability, conflict, and water-related natural disasters. (Fall odd years)

**SUST 3320 Environmental Pollution (3-0)** Prerequisites: SUST 1310 and GEOS 1405. This course will provide an overview of the causes, consequences, and remediation of pollution in water, air, and soil. Students will learn about the sources, transformations, and potential environmental and health impacts of common pollutants. The course will also focus on issues related to environmental pollution such as environmental policy and environmental justice. (Spring even years)

**SUST 3330 Climate Change (3-0)** Prerequisites: SUST 1310 and GEOS 1405. This course will use an earth systems science perspective to examine the impacts of climate change on the various "spheres" of the earth. Students will learn about historical fluctuations in climate, modern day activities that contribute to climate change, and future predictions based on current models and the best available science. Economic, social, and political impacts of climate change will also be addressed. (Fall odd years)

**SUST 3340 Environmental Data Analysis (3-0)** Prerequisite: SUST 1310 and GEOS 1405. This course is designed to introduce students to common methods of data analysis in environmental and sustainability science. Both parametric and non-parametric statistical techniques will be taught, and a basic framework for determining appropriate statistical methods will be developed. Students will gain experience using statistical analysis software. (Spring odd years)

**SUST 3350 Urban Ecology (3-3)** Prerequisites: BIOL 1307 and BIOL 1107. This course will explore the expansion of urban and suburban land uses and the impacts of that expansion on ecological resources. The course will discuss ecology of urban areas as ecosystems themselves and in the larger context of "natural" ecosystems. The course will also incorporate social and political factors that influence ecology of urban places. (Spring even years)

**SUST 4300 Environmental Stewardship (3-0)** Prerequisite: SUST 1310. This course will examine the processes that are necessary for making informed decisions that lead to sustainable planning and policy implementation. Students will identify and evaluate personal and collective contributions to environmental issues. Case studies will be used to demonstrate previous responses to issues in sustainability and to evaluate the consequences of those responses. (Spring odd)

**SUST 4310 Natural Resource Conservation Methods (2-3)** Prerequisites: SUST 1310 and GEOS 1405. This course will introduce students to monitoring and research methods that are routinely utilized by land-use agencies and conservation based non-profit organizations. Students will be taught tools and methodology to investigate environmental resource issues. Water quality, forestry, range science, soil conservation, fisheries, and wildlife methods will be covered in this course. (Fall even years)

**SUST 4320 Conservation of Biodiversity (3-0)** Prerequisites: BIOL 1307 and BIOL 1107. This course will apply the principles of ecology, biogeography, population genetics, and economics to the maintenance of biodiversity. The intent of this course is to discuss the impact of anthropogenic activities on the global and local environment as well as issues that must be considered in efforts to conserve biodiversity. Students will evaluate humanity's impact on the natural world and the complexities of our efforts to lessen that impact. (Spring odd years)

**SUST 4360 Senior Capstone (2-3)** Prerequisites: SUST 1310 and GEOS 1405, and senior standing or permission of instructor. This course is an option for fulfilling the Capstone Experience requirement for graduation with a Sustainability & Renewable Resources major. Participation in a capstone integrates knowledge from coursework and culminates in observations, data handling, and analysis. Capstone experiences may consist of original research, summer research experiences, or other appropriate activities. (As needed Fall, Spring)

**SUST 4388 Internship in Sustainability & Renewable Resources (Variable credit)** Prerequisites: SUST 1310 and GEOS 1405, and junior standing or permission of instructor. This course is an option to fulfill the graduation requirements for a Capstone Experience in Sustainability & Renewable Resources. This course is acceptable for students who have completed an on-the-job work experience under the supervision of professionals in private or public agencies appropriate to the student's discipline. (As needed Fall, Spring)

**SUST 4X96 Honors Research (Variable Credit)** Prerequisites: Permission of instructor. Designed for SUST Honors participants. This course provides opportunities for investigations related to an approved upper level SUST course (with current enrollment) or as a separate independent study. (By arrangement)

**SUST 4X97 Honors Thesis (Variable Credit)** Prerequisites: SUST 4X96 and permission of instructor. Designed for SUST Honors participants. This course provides an opportunity to pursue a scholarly topic under the direction of a SUST faculty member, resulting in a final presentation to an appropriate audience. (By arrangement)

**SUST XX95 Independent Studies (Variable Level and Credit)** Prerequisites: Permission of instructor. A study program or research arranged between an advanced student and an instructor to provide intensive study or investigation in a particular area of interest. The course includes a definition of goals appropriate for the student, ways of attaining those goals, a schedule of frequent consultation, and means of measuring progress. (As needed)

**SUST XX99 Special Topics (Variable Level and Credit)** Prerequisites: Permission of instructor. A course of study offered occasionally to groups of students to broaden department curriculum, to meet student demand, or to observe special events. May be repeated for credit when topics vary. (As needed)