

# ENVIRONMENTAL SCIENCES & SUSTAINABILITY (ENV)

## **ENV 100 Gulf Coast Sustainability Seminar 1 cr**

This seminar focuses on understanding the intertwined nature of people and environments, with an emphasis on the Gulf Coast. Weekly readings, discussions, and guest speakers will focus on emerging socio-environmental issues facing Alabama and the broader Gulf Coast. Specific topics will include biodiversity conservation, air and water quality, equity and environmental justice, climate change, environmental literacy, market-based strategies, and co-management of ecosystems.

## **ENV 101 Environment & Society 3 cr**

This course focuses on understanding the intertwined nature of people and environments. After building a foundation in the fundamentals of coupled socioenvironmental systems, students will learn to see and describe the social, economic, and biophysical dimensions of environmental problems and solutions. Specific topics will include biodiversity conservation, air and water quality, equity and environmental justice, climate change, environmental literacy, market-based strategies, collective action, and co-management of ecosystems. The course will include a variety of activities, panels, and guest speakers to connect core concepts with current and emerging socio-environmental issues facing Alabama, the Gulf Coast, and beyond.

**Corequisite:** ENV 100

## **ENV 334 Enviro Monitoring & Assessment 3 cr**

This course presents the theory and application of environmental sampling and data analysis in support of regulatory standards and criteria for surface water, groundwater, soils, coastal habitats, and air.

**Prerequisite:** (CH 131 Minimum Grade of C and CH 131L Minimum Grade of C) and (CH 132 Minimum Grade of C and CH 132L Minimum Grade of C) and MA 125 Minimum Grade of C and (PH 114 Minimum Grade of C and PH 114L Minimum Grade of C)

## **ENV 334L Environmental Monitoring & Assessment Lab 1 cr**

Lab component for Environmental Monitoring & Assessment course. Must be taken with lecture.

## **ENV 335 Enviro Conserv/Sustainability-W 3 cr**

Students are introduced to the natural environment of different regions, helping to instill a sense of place and serving as a basis for understanding the varying environmental issues in each region.

**Corequisite:** ENV 335L

## **ENV 335L Env Conserv & Sustain Lab 1 cr**

Lab component for Environmental Conservation & Sustainability course. Must be taken with lecture.

**Corequisite:** ENV 335

## **ENV 337 Enviro Sciences I 3 cr**

This course provides basic scientific knowledge and understanding of how our world works from an environmental perspective.

**Corequisite:** BLY 121, BLY 121L, ENV 337L

## **ENV 337L Environ Sciences I Lab 1 cr**

Lab component for ENV 337. Must be taken with lecture.

**Corequisite:** ENV 337

## **ENV 338 Enviro Sciences II 3 cr**

This course will introduce biogeophysicochemical processes operating in the environment. Methods for quantifying chemical parameters together with data quality control practices will be covered.

**Prerequisite:** (BLY 121 Minimum Grade of C and BLY 121L Minimum Grade of C) and (ENV 337 Minimum Grade of C and ENV 337L Minimum Grade of C)

**Corequisite:** BLY 122, BLY 122L, CH 131, CH 131L, ENV 338L

## **ENV 338L Environ Sciences II Lab 1 cr**

Lab component for ENV 338. Must be taken with Lecture.

**Corequisite:** ENV 338

## **ENV 339 Climate Change - W 3 cr**

This course will introduce climate science and explore issues associated with modern climate change.

## **ENV 340 Fundamentals of E Tox & Chem 3 cr**

Students will be provided with a foundational knowledge of Environmental Chemistry and Environmental Toxicology. Students will be introduced to the impacts and influence of chemicals upon ecological systems. Students will examine the chemistry, fate and effects of environmental contaminants in various hierarchies of biological organization in order to carry out assessments of ecological risk.

## **ENV 420 Natural Resource Management 3 cr**

This class is designed to acquaint undergraduate students concerned with management of natural resources; development of legislation, evolution of policy, legal processes, impacts on human resources. The emphases will be placed on living resources.

**Prerequisite:** ENV 100 Minimum Grade of C and ENV 101 Minimum Grade of C

## **ENV 421 Environmental Policy 4 cr**

**Prerequisite:** ENV 100 Minimum Grade of C and ENV 101 Minimum Grade of C

## **ENV 422 Environmental Microbiology 3 cr**

Relationships between microorganisms and their biotic and abiotic environments. Role of microorganisms in biogeochemical cycling. Methodology in microbial ecology. Biotechnological aspects.

**Prerequisite:** (BLY 121 Minimum Grade of C and BLY 121L Minimum Grade of C) and (BLY 122 Minimum Grade of C and BLY 122L Minimum Grade of C) and (CH 131 Minimum Grade of C and CH 131L Minimum Grade of C)

## **ENV 422L Environmental Microbiology Laboratory 1 cr**

Taken in conjunction with Environmental Microbiology lecture.

Relationships between microorganisms and their biotic and abiotic environments. Role of microorganisms in biogeochemical cycling. Methodology in microbial ecology. Biotechnological aspects.

**Prerequisite:** (BLY 121 Minimum Grade of C and BLY 121L Minimum Grade of C) and (BLY 122 Minimum Grade of C and BLY 122L Minimum Grade of C) and (CH 131 Minimum Grade of C and CH 131L Minimum Grade of C)

**Corequisite:** ENV 422

## **ENV 490 Special Topics 1-8 cr**

An in-depth tutorial exposure to specific areas in the environmental and sustainability sciences. Credit and title will be arranged to examine the subject matter in the area of current interest to one group of students. Specialized topics not currently listed in catalog course offerings.

**Prerequisite:** (ENV 101 Minimum Grade of C)

**ENV 494 Directed Studies 1-4 cr**

Directed Studies in Environmental and Sustainability Sciences provides students the opportunity to explore authentic research in marine sciences by carrying out an individual research project under the supervision and guidance of a SSoMES faculty member. Requires securing a SSoMES faculty mentor, completed Directed Studies Application (see last page), and permission of the Stokes School of Marine and Environmental Sciences (SSoMES) Program Manager prior to registering for the course (e.g. at least a month prior to registration opening).

**Prerequisite:** (BLY 101 Minimum Grade of C and BLY 101L Minimum Grade of C and BLY 102 Minimum Grade of C and BLY 102L Minimum Grade of C) or (BLY 121 Minimum Grade of C and BLY 121L Minimum Grade of C and BLY 122 Minimum Grade of C and (CH 131 Minimum Grade of C and CH 131L Minimum Grade of C)