# **ENVIRONMENTAL SCIENCE**

# Faculty Director

John Braverman, Ph.D.

# **Environmental Science Advisory Board**

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# **Environmental Science in the GEP Environmental Science in the GEP (See Curricula)**

The GEP requires that all students take EITHER one semester of a labbased natural science course (6 contact hours) OR two semesters of lecture-only natural science courses.

Non-science majors Environmental Science GEP courses:

CodeTitleHoursENV 105The Environment3

Non-science majors Environmental Science GEP lab-based courses:

CodeTitleHoursENV 106Exploring the Earth4& 106Land Exploring the Earth Laboratory

# Programs Undergraduate Major

 Environmental Science (https://academiccatalog.sju.edu/artssciences/environmental-science/environmental-science-major/)

## **Undergraduate Minors**

- Environmental Science (https://academiccatalog.sju.edu/artssciences/environmental-science/minor-environmental-science/)
- Environmental and Sustainability Studies (https:// academiccatalog.sju.edu/arts-sciences/environmental-science/ minor-environmental-sustainability-studies/)

### **Courses**

#### ENV 102 Environ Theory & Ethics Sem (3 credits)

An introduction to the political, economic, social, scientific, and philosophical concerns involved in environmental issues. Students will read, discuss, and write about current and controversial topics or problems integrating the aforementioned disciplines of study. A major goal of this course is to expose the students to the interdisciplinary nature of environmental science and the challenges of solving environmentally related problems.

Prerequisites: PHL 154

Attributes: Ethics Intensive, Justice Ethics and the Law, Undergraduate

#### ENV 105 The Environment (3 credits)

An examination of the fundamental themes of ecology with an emphasis on the impact of humans on their environment. Included are discussions of current interest topics such as oil spills, nuclear waste, and rain forest destruction.

Restrictions: Students cannot enroll who have a major in Biology, Chemistry, Chemical Biology or Physics.

Attributes: GEP Natural Science, Undergraduate

#### ENV 106 Exploring the Earth (4 credits)

A lab-based course that provides an overview of the functioning of the Earth. Ecology, basic biology, environmental science, and current events are used to examine the earth. Topics include natural resources, population, pollution, ecosystems, biogeochemical cycles, and biodiversity.

Attributes: GEP Natural Science, Science Course w/Lab (Sci Maj), Undergraduate

#### ENV 106L Exploring the Earth Laboratory (0 credits)

#### ENV 150 Global Change Biology (3 credits)

This course explores the scientific basis of global climate change, the impacts of climate change, and the solutions needed to solve the problem. It also explores Catholic Social Teaching on the subject of care for the environment.

Restrictions: Students cannot enroll who have a major, minor, or concentration in Environmental Science.

Attributes: First-Year Seminar, Undergraduate

#### ENV 170 Special Topics (3 credits)

Topics will vary according to the semester in which the class is offered. *Attributes*: Undergraduate

#### ENV 270 Special Topics (3 credits)

Topics will vary according to the semester in which the class is offered. *Attributes:* Undergraduate

#### ENV 302 Environmental Geology (3 credits)

This course will provide an introduction to the earth's environmental systems and resources through an integrated study of relevant topics in geology, hydrogeology, and environmental science.

Prerequisites: CHM 120 or CH 101

Restrictions: Enrollment is limited to students with a major in Biology,

Chemistry, Environmental Science or Physics.

Attributes: Undergraduate

#### ENV 370 Special Topics (3 credits)

Topics will vary according to the semester in which the class is offered. *Attributes*: Undergraduate

#### **ENV 390 Environmental Science Seminar (0 credits)**

This series of speakers will introduce majors and minors to current environmental science research, career options and experts in relevant disciplines inside and outside of the natural sciences.

Attributes: Undergraduate

#### ENV 440 Environmental Toxicology (3 credits)

Course covers the physiological and systemic interaction of environmental pollutants with plants and animals. Prerequisites: CHM 120 or (CH 101 and CH 103)

Restrictions: Enrollment is limited to students with a major, minor, or

concentration in Environmental Science.

Attributes: Undergraduate

#### **ENV 470 Special Topics (3 credits)**

Topics will vary according to the semester in which the class is offered.

Attributes: Undergraduate

#### ENV 471 Environmental Law (3 credits)

This course provides students with an introduction to the laws and regulations that have been enacted to address environmental protection issues in the United States. The focus of this survey course will be the federal environmental regulatory system. The course addresses the history and regulatory components of a number of federal environmental statutes. A common theme is the role that enforcement mechanisms, like civil judicial and criminal enforcement actions, play in the achievement of the goals set forth in these statutes. The course will also explore current topics, such as the environmental and regulatory issues surrounding: regulation of e-waste; hydraulic fracturing and climate change.

Attributes: Undergraduate

#### ENV 490 Environmental Sci Internship (3 credits)

The Environmental Science Internship entails spending a minimum of ten (10) hours each week in a supervised fieldwork experience or approved environmental field course. Grading is based on student reports during weekly meetings with internship instructor, preparation of an internship journal, academic papers, exams, and formal evaluation by internship supervisor. Junior and senior Environmental Science majors and Environmental Science and Studies minors only Restrictions: Enrollment is limited to students with a major, minor, or concentration in Environmental Science.

Attributes: Undergraduate

#### ENV 493 Undergraduate Research in Env (3 credits)

This course pairs individual students with faculty mentors to perform independent environmental science related research.

Attributes: Undergraduate