Environmental Science

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Objectives

The environmental science degree offers a broad background in the basic and applied sciences, with foundation courses in general biology and ecology, general and organic chemistry, and environmental engineering. The major is partially self-designed, allowing each student to take additional upper division courses in areas of interest, such as water resources, marine biology, or chemical analysis of environmental samples.

The Bachelor of Science in Environmental Science is also compatible with obtaining a minor in biology, chemistry, or environmental engineering. The balance of scientific/technical training in the major and liberal arts in the core provides sound preparation for environmental field work, law school, advocacy, or graduate school in a variety of disciplines. The major can also be configured to meet pre-medical requirements.

Degree Offered

Bachelor of Science in Environmental Science

Major Offered

Environmental Science

Bachelor of Science in Environmental Science

In order to earn the bachelor of science in environmental science degree, students must complete a minimum of 180 credits with a cumulative and major/department grade point average of 2.00, including:

I. Core Curriculum Requirements

ENGL 110 College Writing: Inquiry and Argument 5
PHIL 110 Introduction to Philosophy and Critical Thinking 5

Choose one of the following two courses: 5
HIST 120 Origins of Western Civilization
HIST 121 Studies in Modern Civilization

ENGL 120 Introduction to Literature 5
Fine Arts (one approved 5 credit course; see course descriptions). 5
PHIL 220 Philosophy of the Human Person 5
Social Science I 5
Social Science II (ECON 271 or 272 recommended) 5
Theology and Religious Studies Phase II (200-299) 5
Ethics (upper division) 5
Theology and Religious Studies Phase III (300-399) 5
Interdisciplinary ..... 3 to 5
Senior Synthesis (Fulfilled by ISSC 489 and 490) 3

II. Major Requirements

98 credits in science, engineering and mathematics including:

MATH 134	**Calculus I**	**5**
MATH 135	**Calculus II**	**5**
MATH 244	**Probability and Statistics**	**5**
BIOL 161	**Biology I: Molecular and Cellular Biology**	**4**
BIOL 171	**Biology I Lab**	**1**
BIOL 162	**Biology II: Evolution and Ecology**	**4**
BIOL 172	**Biology II Lab**	**1**
BIOL 163	**Biology III: Physiology and Development**	**4**
BIOL 173	**Biology III Lab**	**1**
BIOL 470	**General Ecology**	**5**
CHEM 121	**General Chemistry I**	**4**
CHEM 131	**General Chemistry I Lab**	**1**
CHEM 122	**General Chemistry II**	**4**
CHEM 132	**General Chemistry II Lab**	**1**
CHEM 123	**General Chemistry III**	**4**
CHEM 133	**General Chemistry III Lab**	**1**
CHEM 231	**Fundamental Organic Chemistry I**	**4**
CHEM 241	**Fundamental Organic Chemistry I Lab**	**2**
CHEM 232	**Fundamental Organic Chemistry II**	**4**
CHEM 242	**Fundamental Organic Chemistry II Lab**	**2**
PHYS 105	**Mechanics**	**5**
PHYS 106	**Wave, Sound, Electricity and Magnetism**	**5**
CEEGR 341	**Biological Principles for Environmental Engineers**	**5**
CEEGR 342	**Environmental Engineering Chemistry**	**4**
CEEGR 351	**Engineering Geology**	**4**
CEEGR 473	**Principles of Environmental Engineering**	**5**
CEEGR 476	**Environmental Law and Impact Studies**	**4**
CEEGR 486	**Green Engineering**	**4**

III. Other Major Department Requirements

18 credits in science, environmental, and engineering electives from the following: (Additional prerequisites may be necessary for some courses.) 18

CHEM 319	**Quantitative Analysis (5)**
CHEM 454	**Biochemistry I (3)**
CEEGR 105	**Civil Engineering Graphics and Communication (3)**
CEEGR 302	**Engineering Economy (3)**
CEEGR 311	**Engineering Measurements (4)**
CEEGR 474	**Water Supply and Wastewater Engineering (5)**
CEEGR 475	**Hazardous Waste Engineering (5)**
MEGR 105	**Engineering Graphics and Design (3)**
BIOL 235	**Invertebrate Zoology (5)**
BIOL 240	**Genetics (5)**
BIOL 252	**Taxonomy of Flowering Plants (5)**

BIOL 275	**Marine Biology (5)**
BIOL 300	**Microbiology (5)**
BIOL 385	**Plant Physiology (5)**

NOTE: Credit for CEEGR 105 and MEGR 105 cannot both be applied to the major.

No more than 5 credits of elective from the following environmental classes:

PLSC 300	**Environmental Politics**
ECON 468	**Natural Resources and Environmental Economics**
HIST 351	**Environmental History**
PHIL 378	**Environmental Philosophy**
THRS 324	**Religion and Ecology**
ISSC 482	**Global Climate Change**

Note about minors: A minimum of 30 credits in biology or environmental engineering will constitute a minor in that area, 35 credits for chemistry. Only one minor can be earned for each degree. A biology minor would require 10 credits of biology from the elective list. A minor in chemistry would require CHEM 319 and additional chemistry credits to total 35. A minor in environmental engineering would require 4 civil engineering credits from the elective list.