Environmental Management
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The cross disciplinary environmental management minor prepares students to apply the principles of environmental science and engineering to contemporary environmental problems in natural resource, industrial and public policy contexts. The minor is particularly suitable for students interested in professional careers in industrial environmental management, natural resources management, and environmental policy and planning. After fulfilling prerequisite requirements in biology and statistics, students pursue the minor by completing core courses and electives.

The environmental management minor strives to develop graduates who can apply science and technology to a broad range of practical environmental problems in a variety of professional settings. Students are expected to be literate and competent in the sciences and mathematics underlying environmental problem-solving. The environmental management minor requires a total of 29 credits, including prerequisite courses. The prerequisites must have been completed successfully before the student may be enrolled in the environmental management minor. Prerequisite courses may be fulfilled as part of the student's major. At least one elective course must be outside of the student’s major.

**Prerequisites**

- BIO 124. Ecology and Evolution 4
- Three hours from one of the following: 3
  - MATH 220. Elementary Statistics
  - ISAT 251. Topics in Statistics for ISAT
  - MATH 285. Data Analysis
  - MATH 318. Introduction to Probability and Statistics

**Required Courses**

- ISAT 230-231. Fundamentals of Environmental Science and Technology I-II 6
- CHEM 221. Concepts of Organic Chemistry 3
- ISAT 302. Instrumentation and Measurement of the Environment 1
- ENVT 400. Capstone Seminar 3

**Concentration**

See descriptions below 9

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1 May also be fulfilled by CHEM 341-342 sequence

**Concentrations**

Students completing the environmental management minor must concentrate in one of three areas: natural resources, industrial systems or environmental policy. Students should be aware that some of the listed courses may have additional prerequisites.

**Natural Resources**

- ISAT 424. Natural Resource Management

Choose two of the following courses:

- BIO 456. Landscape Ecology
- BIO 457. Biological Applications of Geographic Information Systems
- BIO 458. Freshwater Ecology
- BIO 485. Environmental Toxicology
- CHEM 354. Environmental Chemistry Field Camp
- CHEM/GEOL 355. Geochemistry of Natural Waters
- GEOG 340. Biogeography
- GEOG 341. Wilderness Techniques
- GEOG 342. Management and Protection of Natural Resources
- GEOG 343. Wildlife Management
- GEOL 340. Soils and Land Use
- ISAT 420. Environmental Analysis and Modeling
- ISAT 425. Environmental Hydrology
- ISAT 429. Sustainability: An Ecological Process

**Industrial Systems**

- ISAT 422. Environmental Management

Choose two of the following courses:

- HTH 352. Environmental Health
- HTH 450. Epidemiology
- ISAT 423. Environmental Remediation
- ISAT 427. Industrial Hygiene
- ISAT 428. Industrial Ecology

**Environmental Policy**

- ISAT 422. Environmental Management or
- ISAT 424. Natural Resource Management
- ISAT 421. Environmental Policy and Regulation

One of the following courses:

- BIO 465. Environmental Toxicology
- ECON 305. Environmental Economics
- ECON 340. Economics of Natural Resources
- GEOG 325. Environmental Ethics
- GEOG/ISAT 429. Sustainability, An Ecological Process
- HIST 427. US Environmental History
- ISAT 420. Environmental Analysis and Modeling
- ISAT 423. Environmental Remediation
- ISAT 471. Transportation: Energy, Environment, and Society
- ISAT 472. Transportation: Air Quality Monitoring and Regulation
- SCOM 354. Communication, Environment, and Environmentalism
- SOCI 311. Sociology of the Environment

Other courses may apply by permission of the coordinator.

Environmental Science
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The environmental science minor is a cross disciplinary program that can be elected by any student. Students pursuing programs ranging from the physical, natural or social sciences, to education, journalism, or business could benefit from this broadly based environmental curriculum. The program draws from courses that focus on the application of scientific concepts and principles to the understanding of environmental problems and their solutions. The minor draws upon the expertise of faculty in the areas of biology, chemistry, geography, physics, and integrated science and technology.

The environmental science minor:

- provides a scientific background to those students interested in environmental law, environmental economics and environmental sustainability.
- broadens the student's understanding of how sciences are linked to environmental questions.
- complements any major by focusing on courses related to environmental issues.

The minimum requirement for a minor in environmental science is 24 credit hours taken from the four groups outlined below. Students wishing to complete more than one of the environmental minors (environmental management, environmental science and environmental studies) may receive dual credit for the capstone course (ENV 400), but may not receive dual credit for any other courses that might be shared by the minors. Pre-approved study abroad and/or internship experiences may be substituted for one or more of the courses listed below.

No more than two courses from a single subject area can count toward the completion of the Environmental Science minor.

A score of four or greater in AP Environmental Science substitutes for GEOL 115 or ISAT 112.

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