Environmental Management
Dr. Steven P. Frysinger, Coordinator
Phone: (540) 568-2710  E-mail: frysinsp@jmu.edu
Web site: http://www.jmu.edu/EnvironmentalMgt

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

GISAT 251. Topics in Statistics for ISAT

MATH 265. Data Analysis

MATH 318. Introduction to Probability and Statistics


Required Courses

ISAT 239-240. Fundamentals of Environmental Science and Technology I-II 8

CHEM 221. Concepts of Organic Chemistry

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. Biogography

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 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
Dr. Bruce Wiggins, Coordinator
Phone: (540) 568-6196  E-mail: wigginba@jmu.edu
Web site: http://www.jmu.edu/environment/science.shtml

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.

- complments 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 (ENVT 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 G3001 115 or ISAT 112.

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Courses | Credit Hours
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Group 1. Introduction to Environmental Science | 3-4
BIO 124. Ecology and Evolution
GEOG 102. Environment: Earth
GEOG 115. Earth Systems and Climate Change
GEOG 112. Environmental Issues in Science and Technology
GEOL 210. Physical Geography

Group 2. Advanced Environmental Science courses | 15
BIO 354. Global Climate and Life
BIO/GEOG 400. Geology and Ecology of the Bahamas
BIO/GEOG 402. Forest Ecology
BIO 451. Ecological Systems
BIO 452. Population Ecology
BIO 453. Microbial Ecology
BIO 454. Introduction to Biometrics
BIO 456. Landscape Ecology
BIO 457. Biological Applications of GIS
BIO 459. Freshwater Ecology
BIO 485 Environmental Toxicology
BIO 466. Ecotoxicology Seminar
CHEM 354. Environmental Chemistry Field Camp
CHEM 450. Nuclear and Radiation Chemistry
ENVT 200. Environmental Systems Theory
GEOG 215. Geospatial Tools I – Cartography & GIS
GEOG 290. Human Interaction with the Physical Environment
GEOG 340. Biogeography
GEOG 365. Cartography & Geospatial Visualization
GEOG 366. Introduction to GIS
GEOG 385. Principles of Remote Sensing
GEOG 390. Introduction to Oceanography
GEOG 310. Management of Marine Resources
GEOG 320. Meteorology
GEOG 340. Soils and Land Use
GEOG 355. Geochemistry of Natural Waters
GEOG 377. Earth Surface Processes
GEOG 385. Geomorphology
GEOG 410. Engineering Geology
GEOG 460. Hydrogeology
ISAT 320. Fundamentals of Environmental Science & Technology I
ISAT 321. Fundamentals of Environmental Science & Technology II
ISAT 420. Environmental Analysis and Modeling
ISAT 423. Environmental Remediation
ISAT 425. Environmental Hydrology
ISAT 427. Industrial Hygiene
ISAT 428. Industrial Ecology
MATH 321. Analysis of Variance and Experimental Design
MATH 322. Applied Linear Regression
MATH 324. Applied Nonparametric Statistics
MATH 328. Time Series Analysis
MATH/BIO 345E. Biometry
MATH 421. Applied Multivariate Statistics
PHYS 215. Energy and the Environment

Group 3. Environmental Studies courses | 3
One of the following courses:
ANTH 373. Anthropological Perspectives on Environment
ECON 305. Environmental Economics
ECON 340. Economics of Natural Resources
ENG 371. Literature and the Environment
ENG 471. Eco-Criticism and Environmental Ethics
GEOG 325. Environmental Ethics
HIST 427. US Environmental History
ISAT 421. Environmental Policy and Regulation
ISAT 425. Communication, Environment and Environmentalism
SOCI 311. Sociology of the Environment

Group 4 - Capstone course | 3
ENVT 400. Capstone Seminar

1 Can be double-counted with General Education
2 All students must complete the capstone course ENVT 400. Students must have completed 15 hours of their environment minor in order to enroll in the capstone.

Environmental Studies
Dr. Pete Bsumek, Coordinator
Phone: (540) 568-3386  E-mail: bsumekpk@jmu.edu
Web site: http://www.jmu.edu/environment/studies.shtml

The environmental studies minor provides an cross disciplinary education engaging socio-cultural, scientific and technical issues raised by the oft-conflicting needs and desires of globally interacting societies. Designed to complement any major, the goals of the environmental studies minor include:
- to help undergraduates develop an awareness of the cultural, political and scientific aspects of the world's environmental problems.
- to better prepare students for further study at the graduate or professional school level and careers in the expanding field of environmental professions.

The minimum requirement for a minor in environmental studies is 24 credit hours taken from the four categories outlined. No more than three courses from a single subject (e.g., GEOG, GEOL, ANTH, ENG, etc.) may count toward completion of the environmental studies minor. Students wishing to complete more than one of the environment minors (environmental management, environmental science and environmental studies) may receive dual credit for the capstone course (ENVT 400), but may not receive dual credit for any other courses that might be shared by the minors.

Courses | Credit Hours
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Introduction to Environmental Literacy | 3
ANTH 196. Biological Anthropology
BIO 103. Contemporary Biology
ENVT 200. Environmental Systems Theory
GEOG 102. Environment: Earth
GEOG 115. Earth Systems and Climate Change
GEOG 200. Literature, Nature, Environment (this section only)
GEOG 112 Environmental Issues in Science and Tech
GEOL 210 Physical Geography

Socio-Cultural Approaches to Environmental Studies | 15
ANTH 373. Anthropological Perspectives on Environment and Development
ECON 305. Environmental Economics
ECON 340. Economics of Natural Resources
ENG 371. Literature and the Environment
ENG 471. Eco-Criticism & Environmental Ethics
GEOG 290. Human Interaction with the Physical Environment
GEOG 300. Population Geography
GEOG 310. Environmental Issues
GEOG 311. Endangered Environments
GEOG 320. Human Dimensions of Global Change
GEOG 322. Agricultural Systems
GEOG 325. Environmental Ethics
GEOG 341. Wilderness Techniques
GEOG 342. Management and Protection of Natural Resources
GEOG 343. Wildlife Management
GEOG 345. Geography of Poverty
GEOG/ISAT 429. Sustainability: An Ecological Process
GEOG 430. Geography of Crop Plants
HIST 427. U.S. Environmental History
ISAT 421. Environmental Policy and Regulation
ISAT 354. Communication, Environment and Environmentalism
SOCI 311. Sociology of the Environment
Approved special topics courses
Approved internship programs
Approved study abroad courses

Environmental Science Literacy | 12
BIO 451. Ecological Systems
BIO 452. Population Ecology

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