

Environmental Studies Major

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Rapid growth in human population and development has led to complex environmental problems, both locally and globally. The way we address these issues will have a profound effect on our society and planet. Enlightened solutions require a strong component of scientific knowledge and an awareness of the relevant societal issues.

The bachelor's degree in environmental studies equips students with an understanding of earth systems and the environment, including the effect of geologic processes on human activity, and the impact of humans on the biosphere, atmosphere, hydrosphere, and global climate. Courses in the natural and social sciences supplement a traditional liberal arts curriculum to provide a comprehensive, interdisciplinary background in the scientific, economic, political, and social aspects of human interaction with the environment.

The environmental studies degree will provide a strong, balanced background for students who seek careers in fields such as resource development and management, environmental policy and regulation, risk assessment, land use planning, public policy, and education. Potential employers include local, state, or federal governments, non-profit organizations, consulting firms, or companies that are affected by environmental issues or regulations. Graduates of the environmental studies program can also pursue postgraduate study in fields such as business, law, medicine, public policy, education, international relations, urban and regional planning, environmental management, and public health.

The Environmental Studies Program is a combination of four basic components:

- Core courses provide a fundamental understanding of environmental processes, issues and policies, and include an interdisciplinary capstone course, an internship, and a field study course to provide hands-on experience;
- Co-requirements provide the necessary prerequisites for later study;
- Electives in the natural and social sciences allow the student to explore environmental issues in greater depth; and
- Students are strongly encouraged to undertake an independent research project or senior thesis, as well as courses in Public Policy (GEOL 1904) and Environmental Topics (GEOL 3963).

Required courses for the Environmental Studies major

The environmental studies major requires the completion of 73 credits distributed as follows.

Geology core requirements

One of the following

- _____ GEOL 0040 Physical Geology
- _____ GEOL 0800 Geology
- _____ GEOL 0840 Earth System Science
- _____ GEOL 0860 Environmental Geology

All of the following

- _____ GEOL 0030 Atmosphere, Oceans, and Climate
- _____ GEOL 0055 Physical Geology Lab
- _____ GEOL 1313 Communication for Environmental Professionals (W-course)
- _____ GEOL 1515 Environmental Geochemistry

Both of the following

- _____ BIOSC 0150 Foundations of Biology 1
- _____ BIOSC 0050 Foundations of Biology Lab 1

Legal Studies

- _____ LEGLST 1320 Law and Environment

One of the following

- _____ ECON 0100 Introduction to Microeconomic Theory
- _____ ECON 0110 Introduction to Macroeconomic Theory
- _____ ECON 0120 Introductory Economic Theory
- _____ ECON 0800 Introduction to Economics

One of the following

- _____ EOH 2180 Introduction to Risk Sciences **and**
 - _____ EOH 2181 Risk Assessment Practicum
- or**
- _____ HPS 0611 Principles of Scientific Reasoning

One of the following

- _____ GEOL 1055 Environmental Science, Ethics, and Public Policy
- _____ GEOL 1056 Environmental Science, Ethics, and Public Policy (UHC)

Environmental Science field course

- _____ BIOSC 0740 Yellowstone Field Course *

* This requirement can also be satisfied by taking any BIOSC course offered at the Pymatuning Ecology Laboratory **or** an approved environmental science field course offered through an outside institution. In either case, the substituted course must have a credit value of not less than two credits.

Internship

- _____ GEOL 1900 Internship

Co-requirements

_____ CHEM 0110 General
Chemistry

One of the following

_____ MATH 0125 Calculus for
Business 1 **and**
MATH 0126 Calculus for
Business 2
_____ MATH 0120 Business
Calculus
_____ MATH 0220 Analytic
Geometry and Calculus 1

One of the following

_____ STAT 0200 Basic Applied
Statistics
_____ STAT 1000 Applied
Statistical Methods
_____ STAT 1100 Statistics and
Probability for Business
Management

Grade requirements: A minimum
GPA of 2.0 is required in those
courses that count toward the
major. All core courses, co-
requirements, and electives must
be passed with a grade of C- or
better.

Satisfactory/Audit option: There
is no limit on the number of courses
in the major that can be taken on
an S/NC basis.

Writing (W) requirement: GEOL
1313 satisfies this requirement for
environmental studies majors.

Related Area: A related area is not
required due to the interdisciplinary
nature of the major.

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Electives

These credits are to be distributed
among courses in *the social
sciences and the humanities*, and
among courses in *the natural
sciences and engineering*. Other
courses may be appropriate; see
departmental advisor for new
additions to the electives list.

Social sciences/humanities (12-credits)

Anthropology

_____ ANTH 0582
_____ ANTH 0620
_____ ANTH 0680
_____ ANTH 0780
_____ ANTH 1520
_____ ANTH 1524
_____ ANTH 1525
_____ ANTH 1528

Economics

_____ ECON 0230
_____ ECON 0330
_____ ECON 0360
_____ ECON 0500
_____ ECON 0530
_____ ECON 0630
_____ ECON 1360
_____ ECON 1530
_____ ECON 1560
_____ ECON 1630
_____ ECON 1640

History

_____ HIST 1626
_____ HIST 1665
_____ HIST 1683
_____ HIST 1685

History & Philosophy of Science

_____ HPS 0517
_____ HPS 0610
_____ HPS 0621
_____ HPS 0633

Political Science

_____ PS 1261
_____ PS 1267
_____ PS 1301
_____ PS 1374
_____ PS 1541
_____ PS 1542
_____ PS 1543

Public Service

_____ PUBSRV 1320

Sociology

_____ SOC 0312
_____ SOC 1438
_____ SOC 1445

Urban Studies Program

_____ URBNST 0080

College of Business Administration

_____ BUSENV 1766

Graduate School of Public & International Affairs

_____ PIA 2113
_____ PIA 2114
_____ PIA 2115
_____ PIA 2116

Natural sciences/engineering (12-credits)

Biological Sciences

_____ BIOSC 0060 Lab
_____ BIOSC 0160*
_____ BIOSC 0350
_____ BIOSC 0370
_____ BIOSC 0390 Lab
_____ BIOSC 1170
_____ BIOSC 1220
_____ BIOSC 1230
_____ BIOSC 1250
_____ BIOSC 1270
_____ BIOSC 1320
_____ BIOSC 1330
_____ BIOSC 1350
_____ BIOSC 1370
_____ BIOSC 1380
_____ BIOSC 1600
_____ BIOSC 1610

* Students are strongly encouraged to
take this course because it is a
prerequisite for the Pymatuning field
courses and several other courses.

Chemistry

_____ CHEM 0120
_____ CHEM 0250
_____ CHEM 0310
_____ CHEM 0350
_____ CHEM 0810

Computer Science

_____ CS 0110
_____ CS 0131

Geology & Planetary Science

_____ GEOL 0060
_____ GEOL 0802
_____ GEOL 0890
_____ GEOL 1001
_____ GEOL 1020
_____ GEOL 1060
_____ GEOL 1079
_____ GEOL 1080
_____ GEOL 1100
_____ GEOL 1200
_____ GEOL 1201
_____ GEOL 1410
_____ GEOL 1445
_____ GEOL 1460
_____ GEOL 1640
_____ GEOL 1901
_____ GEOL 1902
_____ GEOL 1903
_____ GEOL 1904**
_____ GEOL 2447
_____ GEOL 3963**

** Students are strongly encouraged to
take this course.

Physics

_____ PHYS 0087

Civil & Environmental Engineering

_____ CEE 1210
_____ CEE 1503
_____ CEE 1513
_____ CEE 1514