Environmental Management (ENVT)

ENVT 1110 **PP**
Introduction to Environmental Management
3

Surveys environmental issues and the impact of people on the environment. Covers how we can sustainably use our natural resources and how we can prevent and remediate the degradation of the environment while using these natural resources.

ENVT 1200
Environmental Worker Safety
3

Discusses occupational safety and health for environmental management. Prepares students for future health and safety laws and regulation, training requirements, and the hierarchy of safety control. Covers management of a safety program, risk assessment, OSHA compliance, and development of a safety culture.

ENVT 1270
Environmental Microbiology
3
* Prerequisite(s): MICR 2060 recommended

Provides an understanding of microbiology tailored to the needs of water managers, public health workers, and environmental managers. Discusses the role microorganisms in water treatment, wastewater treatment, agriculture, environmental change, and others.

ENVT 1300
Environmental Lab and Sampling
2

Studies basic laboratory and environmental field techniques used by labs working on environmental projects and in sampling programs within the field. Covers safety, pH, dissolved oxygen, BOD, turbidity, organics, and others. Includes opportunities for undergraduate research. Course Lab fee of $38 for supplies/materials/lab applies.

ENVT 1510
Hazardous Materials Emergency Response
3

Meets the requirements for the OSHA 40 hour training. Includes personal protection, identifying hazardous materials, spill control, and incident management. Completers may obtain OSHA certification for handling hazardous materials. Course fee of $28 for materials applies.

ENVT 2560
Environmental Health
3
* Prerequisite(s): BIOL 1010 and CHEM 1110 recommended

Addresses environmental health issues for multiple environmental-related degree programs. Benefits students pursuing careers in nursing, biology, and other related fields. Examines infectious and non-infectious diseases, vectors and their control. Discusses the fundamentals of environmental health, water and wastewater management, population pyramid and associated environmental concerns in developed and developing nations. Includes topics of solid and hazardous waste management, recreation safety, air quality and environmental regulations.

ENVT 2710
Environmental Careers
1

Explores the career opportunities in environmental areas for students in environmental careers. Covers resumes, letters of inquiry, networking, interviews, and other methods of job seeking.

ENVT 2730
Introduction to Soils
4
* Prerequisite(s): ENGL 1010 or ENGH 1005

An introductory course for majors and non-majors. Covers basic topics such as soil classification, soil-water relations, fertility, soil strength, and soil conservation. Offers important background information for those involved in pollution prevention and remediation, environmental monitoring, and home gardening.

ENVT 3010
Environmental Toxicology
3
* Prerequisite(s): University Advanced Standing (BIOL 1010 and CHEM 1210 Recommended)

Discusses the history, scope, and importance of environmental toxicology and the toxicokinetic of pollutants in living organism when exposed. Reviews dose response relationships and the role of regulatory toxicology when creating exposure limits for toxicants in the workplace. Examines the fate and movements of toxicants in different compartments in the environment. Provides a knowledge base that is beneficial to environmental health and safety managers and students pursuing careers in nursing, biology, and other related fields.

ENVT 3210
Water Quality and Reclamation
4
* Prerequisite(s): CHEM 1210 and University Advanced Standing

Covers identifying and analyzing the major pollutants and parameters related to water quality and remediation. Provides basic training to remediate and mitigate the potential contamination of water sources and how to treat and manage wastewater (i.e. primary treatment, biological treatment, and chemical treatment processes).

ENVT 3280
Environmental Law
3
* Prerequisite(s): ENGL 1010 or ENGH 1005 (ENGL 2010 recommended), and University Advanced Standing.

Covers the Clean Water Act, the Safe Drinking Water Act, and the Clean Air Act. Reviews the Toxic Substances Control Act, the Resource Conservation and Recovery Act, the Superfund law, DOT regulations, and OSHA regulations.

ENVT 3290
Environmental Reporting WE
3
* Prerequisite(s): ENGL 1010 recommended, University Advanced Standing

Covers reporting frameworks and applications for environmental aspects of organizations. Focuses on reporting related to various aspects of environmental initiatives, including carbon, carbon credits, voluntary and mandatory reporting, buildings, products, and others. Introduces software and programs related to environmental reporting. Emphasizes systems thinking and holistic analysis.

ENVT 3320
Hydraulics of Water
3
* Prerequisite(s): PHYS 2010 or PHYS 2210; and University Advanced Standing

Prepares students to manage and quantitatively analyze the flow of water; including the use of the continuity equation, Hazen-Williams formula, and the Bernoulli Theorem. Integrates basic principles of engineering and geotechnical techniques with environmental management techniques to aid in the understanding of how to operate water equipment in a professional manner (i..e irrigation techniques, wastewater operation, and water processing).

ENVT 3330
Water Resources Management
3
* Prerequisite(s): University Advanced Standing

Examines the broad issues that affect water quality and supply. Covers watershed management, limnology, stormwater management, and wetlands. Discusses the biological and physical processes that occur and the legal constraints that affect management decisions.

ENVT 3530
Environmental Management Systems
3
* Prerequisite(s): ENGL 1010 or ENGH 1005 (ENGL 2010 recommended), and University Advanced Standing

Covers the systems and organization necessary to effectively manage environmental issues. Provides background and historical development for continuous process improvement and statistical process control. Discusses the ISO 14001 standard and its effect upon management practices. Introduces students to the National Environmental Protection Act (NEPA) including its processes and strategies for public input.

ENVT 3550
Site Investigation
3
* Prerequisite(s): University Advanced Standing; CHEM 1110 recommended

Covers the investigation and preliminary cleanup of a contaminated site. Includes planning, training, site characterization, sampling, and site control. Completers should have a basic understanding of the process used to remediate an environmentally damaged site.

ENVT 3600
Appropriate Technology and Sustainable Development for the Developing World
3
* Prerequisite(s): ENGL 2010 and University Advanced Standing

Reviews the origins of poverty and the current conditions of people in developing countries. Offers development solutions being pursued around the world. Empowers students to play an active role in international poverty reduction by introducing international development and its challenges. Teaches students how to determine appropriate technologies based on design, physical, and social considerations.

ENVT 3630
Introduction to Geographic Information Systems
4
* Prerequisite(s): University Advanced Standing

Introduces the operation of Geographic Information Systems (GIS). Focuses on GIS software and basic theory of geographic information science. Offers valuable preparation for careers in geography, planning, surveying, marketing, environmental technology, biology, engineering, and other related fields. Lab access fee of $30 for computers applies

ENVT 3700
Current Topics in Environmental Management
3
* Prerequisite(s): University Advanced Standing; ENVT 1110 recommended

Studies local environmental issues, new technologies, and the challenges faced by environmental managers. Issues discussed will vary with the semester. Prepares students for a thoughtful discussion of environmental issues.

ENVT 3750
Land Use Planning
3
* Prerequisite(s): University Advanced Standing; ENVT 3280 recommended

Covers key issues in land use planning and how they affect the environment. Includes multiple use concepts, focused uses, zoning, mapping, and the political processes used in planning. Discusses the importance of strategic planning and public relations.

ENVT 3770
Natural Resources Management
3
* Prerequisite(s): University Advanced Standing; BIOL 1010 recommended

Introduces the management and conservation of natural resources. Discusses forestry, range management, wildlife management, and outdoor recreation. Provides the opportunity for students to learn how to create conservation and research plans that are common in the industry.

ENVT 3790
Applied Hydrology WE
4
* Prerequisite(s): MATH 1060 or MATH 1080 or MATH 1210 or PHYS 1100, GEO 1010, and University Advanced Standing (PHYS 2210 or PHYS 2010 and GIS 3600 Recommended)

Provides the students with a water budget approach to understanding how surface water applies to all aspects of the hydrologic cycle, including interactions with the atmosphere and geosphere. Reviews how surface water resources are managed by analyzing flood frequencies, intensity-duration-frequency curves for rainfall/snowfall, estimation of gauged and ungauged stream locations, stream flow measurement techniques, analyzing consumptive use demands, watershed modeling, legal water rights, water contamination, and risk assessment in hydrologic design. Provides opportunities to investigate a specific problem, field site, and/or service learning project related to hydrology. Course fee of $21 applies.

ENVT 3800 (Cross-listed with: CHEM 3800, PHYS 3800)
Energy Use on Earth
3
* Prerequisite(s): (PHYS 1010 or PHSC 1000 or GEO 1010 or GEO 2040 or METO 1010) and (MATH 1050 or MATH 1055) and CHEM 1010 and University Advanced Standing

Covers the science of energy production and consumption. Quantitatively analyzes various methods of energy production, distribution, and end use in all sectors of our society, including transportation, residential living, and industry. Examines the impacts of our energy consumption on the environment and prospects for alternative energy sources. Is intended for science majors interested in energy use in society or in an energy related career, and for students in other majors who feel that a technical understanding of energy use will help them to understand and mitigate its impact in our society.

ENVT 3850
Environmental Policy WE
3
* Prerequisite(s): ENVT 1110 and University Advanced Standing

For upper-division students with an interest in environmental policy. Discusses the process by which policies are made and the factors that influence policy formation. Includes political factors, economics, international issues, public awareness and others.

ENVT 482R (Cross-listed with: GEO 482R)
Geologic Environmental Internship
1 to 3
* Prerequisite(s): GEO 1010 or ENVT 1110; 12 credit hours of any GEO, GEOG, or ENVT courses; declared major in any Earth Science program and University Advanced Standing

Engages students in supervised geologic or environmental work in a professional setting. Requires approval by the Chair of the Department of Earth Science. Includes maintaining a journal of student experiences and preparing a paper summarizing their experience. A maximum of 3 credit hours may be counted toward graduation. May be graded Credit/No Credit.

ENVT 495R
Special Projects in Environmental Management
1 to 3
* Prerequisite(s): Instructor Permission and University Advanced Standing

Allows students to pursue undergraduate research projects. Includes instructor directed practical research. Students will prepare a report of their findings. May be repeated for a maximum of 6 credits toward graduation.