ENVIRONMENT TECHNOLOGY (ENVR TC)

Environment Technology (ENVR TC) 100
Introduction to Emergency Management
This introductory course examines the principles and concepts of emergency management. It presents an overview of the various disciplines involved in preparing for emergencies resulting from many different causes. Writing assignments, as appropriate to the discipline, are part of the course.
Eligibility for English 101 based on prior coursework or CCCRTW, ACT, or SAT test scores, or Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 101
Basic Skills in Emergency Management
This course provides a background in the various aspects of emergency management that would apply in any emergency. Writing assignments, as appropriate to the discipline, are part of the course.
Eligibility for English 101 based on prior coursework or CCCRTW, ACT, or SAT test scores, or Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 102
Leadership/Influence/Communication
Among the most important attributes of the successful emergency manager is the ability to fill a strong authority position that will aid them in accomplishment
Grade of C or better in ENVR TC 100 and 101 or consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 103
Introduction to Emergency Planning
The importance of planning for emergencies before they occur has long been recognized as the key to minimizing their impact on society. This course is designed to provide a basic overview of the concepts of pre-planning needed to deal with a wide range of emergency situations. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 100 and 101 or consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 104
Energy Systems Fundamentals
Course covers the basics of building envelopes, HVAC, lighting, insulation, glazing, plumbing and electrical systems, construction materials, and the surrounding environment. Incorporates blueprint/design fundamentals. Focus on construction engineering concepts. Introduces LEED and Energy Star programs, relevant environmental, health and safety principles, impacts, and regulatory implications. Provides a broad overview of energy use and efficiency in structures and why it matters. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 107
Environmental Geology
This course will examine human interactions with geologic processes and hazards, including earthquakes, volcanoes, landslides, subsidence, hydrology, and flooding; occurrence and availability of geologic resources, such as energy, water, and minerals; principals of land-use planning, pollution, and waste disposal, environmental impact, health, and law. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: KK, TR, WR
IAI: P1 908 GE: Physical Sciences

Environment Technology (ENVR TC) 108
Mitigation Management
The impact of many types of emergencies can be reduced by taking certain actions prior to their occurrence that will lessen the damage when the emergency occurs. This course is designed to introduce the concept of mitigation, and the activities that will accomplish it in a wide range of potential emergency situations. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 100 or Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 109
Urban Agro-Ecology
Introduction to the ecology of agriculture in urban settings addressing current local food production challenges. This course explores opportunities and efforts for more sustainable agriculture. Laboratory required. Writing assignments, as appropriate to the discipline, are part of the course.
Eligibility for English 101 or Consent of Department Chairperson.
3 Lecture Hours. 2 Lab Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 111
Basic Incident Command
The Incident Command System provides a management framework for dealing with emergency situations. This course will provide the basic knowledge of what incident command is and how it functions, as well as the importance of having a strong central authority to oversee all aspects of responding to emergency situations. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 102 or consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 112
Disaster Response & Recovery
This course explores the basic nature of disasters, what they are, what steps must be taken to respond to them, and what is involved in recovering from them. This is a lab class that will culminate by conducting a day-long, campus wide disaster scenario response drill. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 100 and 101 or Consent of Department Chairperson.
3 Lecture Hours. 2 Lab Hours. 4 Credit Hours.
Offered At: WR
Environment Technology (ENVR TC) 113
Emergency Resource Management
In planning for and responding to emergencies, many varied resources will be required. This course identifies what these various resources are and how to put them to use.
Grade of C or better in ENVR TC 103 or consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 114
Renewable Energy Systems
An introductory, work-skills course on principles, concepts, applications, and installation of renewable and alternative energy technologies. Distinguishes between technologies appropriate to industrial/commercial settings versus those intended for residential structures.
Covers renewable energy sources (solar, wind, geothermal, etc.) as well as alternative technologies utilized for building operations (microturbines, fuel cells, combined heat and power). Designed to prepare tradesman for the installation of various technologies. Up to five (5) off-campus field trips to alternative energy installations will be scheduled as part of this course. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 2 Lab Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 121
Intro To Hazardous Materials Management
This course is an overview of the environmental impacts resulting from hazardous materials such as asbestos, and their mismanagement. Emphasis is placed on understanding the sources responsible for soil, water, land, and air pollution and the environmental laws governing our natural resources, including asbestos. Emphasis is placed on storage and treatment practices, monitoring, sampling and handling techniques, damaging effects on humans, ecology and environment, as well as governmental regulations concerning soil, water, and air. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 122
Disaster Site Worker
A course that focuses on the skills needed by workers who respond in the recovery phase of major disasters. This course includes the requirements for obtaining the OSHA Construction Worker 10-hour card, which is required for Disaster Site Worker certification. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 100 and 181 or Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 123
Chemical Emergency Response
This course is designed to meet the requirements of OSHA for workers that will respond to a hazardous chemical release. The course consists of the five levels of training required under 29CFR1910.120(q). Writing assignments, as appropriate to the discipline, are part of the course.
Eligibility for English 101 based on prior coursework or CCCRTW, ACT, or SAT test scores, or Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 131
Environmental Health & Safety
Introduction to health and safety principles and skills needed to conduct field operations dealing with hazardous substances and meets initial training requirements of the Occupational Safety and Health Administration for workers engaged in hazardous waste operations. Course includes fundamentals of hazard recognition, toxicology, selection, use, and limitations of personal protective equipment, and safety procedures for conducting waste site use, and limitations of personal protective equipment. It consists of lectures and demonstrations, problem-solving exercises, discussions, and field exercises. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 141
Site Investigation & Sampling
Introduction to the techniques for monitoring and sampling of soil, water, and air. Emphasis is on site investigation procedures for contamination by hazardous materials; the use of specialized sampling equipment, its maintenance and repair, and record keeping for chain-of-custody and other documentation. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 144
Building Systems Maintenance
Course is comprised of seven energy efficiency topics in building operations and maintenance. Building Operators Certification is a professional development program in the energy and resource efficient operation of buildings to qualify operations and maintenance staff for certification. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 2 Lab Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 150
Introduction to Homeland Security
Students will learn the basic concepts, strategies, and practices of the Department of Homeland Security (DHS), for the purpose of learning how to gather and use intelligence data and its specific application in emergency operations. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 151
Intro to Environmental Laws & Policies
This course introduces the student to the United States legal system, and to the doctrines and statues which regulate the production, treatment, transportation, and disposal of hazardous materials. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in Environmental Technology 121.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR
Environment Technology (ENVR TC) 160
Intelligence Analysis-Security Management
This course examines intelligence analysis and its indispensable relationship to the security management of terror attacks, manmade disasters and natural disasters. It also explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. This course examines substantive issues regarding intelligence support of homeland security measures implemented by the United States and explore how the intelligence community operates. Writing assignments, as appropriate to the discipline, are part of the course. Grade of C or better in ENVR TC 150, OR Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 170
Transportation and Border Security
This course provides students with an understanding of the variety of challenges inherent in modern transportation and border security challenges, as well as the technological solutions employed to address these challenges. The course covers the period from 9/11 to the present. The course explores the topics of seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines, and buses. Students will be required to discuss the legal, economic, political, and cultural concerns and impacts associated with transportation and border security. Writing assignments, as appropriate to the discipline, are part of the course. Grade of C or better in ENVR TC 160, OR Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 175
Hazardous Material Handling & Transportation
This course is designed to explore the regulations involving the transportation of hazardous materials and waste. It includes manifesting, generator and transporter standards, Department of Transportation hazard classes, placards, labels, markings, spill response, and driver responsibilities. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 190
Introduction to Animal Sciences
This is a survey course that will provide a firm biological and natural sciences background to students for understanding the principles important to the raising and management of livestock and companion animals. Students will have the opportunity to learn from animal industry leaders. The course is team taught to incorporate Animal Sciences instructors who are specialists in their subject matter areas. Writing assignments, as appropriate to the discipline, are part of the course. Placement Test, or Grade of C or better in English 101 and Math 118 or higher.
4 Lecture Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 191
Introduction to Crop Sciences
This course is designed to introduce students to the basic principles of plant growth, including human and environmental influences and the theoretical and practical application of agronomic principles to crop production. It also, serves as an introduction to basic agronomy revolving around crop production in the Midwest. The subject matter presented will provide an overview of major aspects of plant and soil management, pest control, and soil and water conservation issues and practices and how they affect growth and development. Writing assignments, as appropriate to the discipline, are part of the course. The student should be capable of college entry level reading, writing, and mathematics.
4 Lecture Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 192
Introduction to Soil Science
This course is designed to provide a comprehensive treatment of the basic principles of soils as they exist and interact in the environment. The course emphasizes soil as a natural body in nature, its formation, classification, chemical and physical properties. The course is designed to be equally useful to the non-agricultural production students, including those studying plant science, ecology and environmental science, and to students in curricula such as agronomy, crop science, soil science, horticulture and forestry. Writing assignments, as appropriate to the discipline, are part of the course. Successful completion of high school Chemistry is required.
4 Lecture Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 193
Introduction to Horticulture
This course is designed to offer the student a general introduction to the principles of plant growth and development as they apply to the wide range of horticultural crops and the industries related to production, marketing and utilization of horticultural crops. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 203
Advanced Emergency Planning
This course covers the planning required for specific emergency response actions including emergency evacuation, housing, and logistics and others. Course information is presented in the context of exercise design as part of pre-planning for response. Writing assignments, as appropriate to the discipline, are part of the course. Grade of C or better in ENVR TC 103 or consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR
Environment Technology (ENVR TC) 204
Residential Energy Systems
Course addresses energy systems and energy efficiency technologies utilized in single- and multi-family residential building forms. Covers systems design and installation in both new construction and retrofit projects. Introduces field auditing techniques, environmental impacts (indoor air quality, asbestos, lead, voc's, radon, waste disposal issues, etc.), worker health & safety considerations, Energy Star certification, building commissioning procedures, and local regulatory requirements. An off-campus field trip to a residential ‘green’ building/construction site will be scheduled as part of this course. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 209
ADVANCED URBAN AGROECOLOGY
This course explores ways to apply the knowledge and skills acquired through the full sequence of classes. The student will be expected to identify a practicum location and spend 64 hours working (either with or without compensation) on projects associated with the organization and relevant to the course material. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 109 AND 3 ADDITIONAL LAB COURSES (ENVR TC 190, 191, 192 193, CHEM 121, BIOLOGY 119, OR BOTANY 201) OR Consent of Department Chairperson.
1 Lecture Hours. 4 Lab Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 211
Recycling & Waste Minimizing
This course presents information on reuse and recycling of non-hazardous materials that dominate the municipal waste system. Waste reduction techniques for industrial processes that generate hazardous waste constitute the second half of the course. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 212
Advanced Incident Command
This course is designed to focus on the particular management issues associated with large-scale emergencies that require response from multiple entities including the federal government. The course will include a study of the National Incident Management System (NIMS) that is activated for incidents of national significance. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 111 and 112 or consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 214
Institutional Energy Systems
Course covers the types of energy systems and energy efficiency technologies in use in commercial, industrial, and high-rise buildings. Includes design, installation, testing, assessment, and operation of technologies in these structures, and details the integration of system control components. Also encompasses a synopsis of environmental, health & safety for construction and post-construction activities, Energy Star, LEED certification, other pertinent programs and regulatory aspects. An off-campus field trip to an institutional ‘green’ building/construction site will be scheduled as part of this course. Writing assignments, as appropriate to the discipline, are part of the course.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 221
Emergency Management Operations I
An advanced course that covers the workings of the Emergency Operations Center (EOC) during the response to major incidents. Students will fill operational roles in a simulated EOC as various drill scenarios are run. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 111 and 122 (concurrent enrollment will not qualify) or consent of Department chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 222
Emergency Management Operations II
A field course in which students will study the application of the concepts covered in the program through direct observation of emergency response activities performed by various government agencies. Students will be placed as interns in government agencies in this course. Students registering for this course must meet all prerequisite requirements and submit to a criminal background check. Writing assignments, as appropriate to the discipline, are part of the course.
Consent of Department Chairperson.
20 Lab Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 226
Disaster Psychology
This course examines the psychological impacts of disasters on both victims and responders. Writing assignments, as appropriate to the discipline, are part of the course.
Eligibility for English 101 based on prior coursework or CCCRTW, ACT, or SAT test scores, or Consent of Department Chairperson.
3 Lecture Hours. 3 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 241
Environmental Sampling
This course is an in-depth study of the procedures and concepts used by EPA to investigate sites. Emphasis is on hazardous waste at both controlled and uncontrolled sites. The course will include the investigation of ground water, surface water, air, and soil contamination including health and risk assessments. This course is designed for students interested in the fields of environmental engineering and environmental science. Writing assignments, as appropriate to the discipline, are part of the course.
Grade of C or better in ENVR TC 121 and ENVR TC 131.
2 Lecture Hours. 4 Lab Hours. 4 Credit Hours.
Offered At: WR
Environment Technology (ENVR TC) 243

Environmental Analysis
This course will introduce the student to the foundations of environmental chemistry. Man-made and natural systems will be examined. Students will be encouraged to qualify and quantify the relationships between chemistry and the environment. United States Environmental Protection Agency analytical requirements will be surveyed using inductively coupled argon plasma, gas chromatography, mass spectrometry, ion chromatography and UV-Vis spectrometry, among other state-of-the-art analytical technologies. Writing assignments, as appropriate to the discipline, are part of the course.

Grade of C or better in Chemistry 121 and Biology 106.

2 Lecture Hours. 4 Lab Hours. 4 Credit Hours.
Offered At: WR

Environment Technology (ENVR TC) 244

Energy Equipment Troubleshooting
A second tier course comprised of four (4) core classes in maintenance, operation, and diagnostics of electrical and HVAC systems, and two of four (2 of 4) possible electives in system specialty topics. Buildings Operator Certification is a professional development program in the energy and resource efficient operation of buildings to qualify operations and maintenance staff for certification. Writing assignments, as appropriate to the discipline, are part of the course.

3 Lecture Hours. 2 Lab Hours. 4 Credit Hours.
Offered At: WR