



Course Number and Title: HDM 105 Environmental Hazards and Vulnerabilities

Campus Location:

Dover

Effective Date:

2019-51

Prerequisite:

ENG 090 or ENG 091, HDM 101, SSC 100 or concurrent

Co-Requisites:

None

Course Credits and Hours:

3.00 credits

3.00 lecture hours/week

0.00 lab hours/week

Course Description:

This course provides an overview of the environmental vulnerabilities of the United States and typical hazard mitigations and responses to various threats to our environmental resources and infrastructures.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

None

Schedule Type:

Classroom Course

Hybrid Course

Online Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Explain major issues of pollution hazards associated with environmental science and technology. (CCC 1, 2, 3; PGC 1, 2)
2. Interpret and describe the basic concepts and vulnerabilities of environmental systems such as air, water, and transportation infrastructures with regard to both man-made and natural disasters. (CCC 2, 6; PGC 2, 3)
3. Explain storm water, flood water, and ground waterborne hazard management and infrastructure protection and treatment principles. (CCC 2, 6; PGC 1, 2, 3)
4. Explain the practices associated with hazardous waste management. (CCC 1, 2, 5; PGC 2, 3)
5. Examine the role of regulatory oversight in the protection of the environment. (PGC 1, 2, 3)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Explain major issues of pollution hazards associated with environmental science and technology.
 1. Examine environmental science and technology.
 2. Differentiate between the interrelationship of environmental health and public health and safety.
 3. Identify public health aspects of disease.
 4. Explain ecology.
 5. Identify food webs/food chains, and discuss their importance.
2. Interpret and describe the basic concepts and vulnerabilities of environmental systems such as air, water, and pipeline infrastructures with regard to both man-made and natural disaster.
 1. Identify sea/air and groundwater pollution.
 2. Identify methods for measuring and monitoring pollutants.
 3. Debate common water and air pollution abatement techniques.
 4. Describe the consequences of water pollution to society and natural ecosystems.
3. Explain storm water, flood water, and ground waterborne hazard management and infrastructure protection and treatment principles.
 1. Identify the characteristics of hazardous waste.
 2. Relate infiltration and runoff, and explain their consequences.
 3. Discuss a watershed, and identify how pollution impacts it.
4. Explain the practices associated with hazardous waste management
 1. Discuss hazardous chemical spill response and cleanup techniques.
 2. Discuss technology protection afforded the environment to ensure public health.
 3. Discuss hazardous waste site remediation and minimization.
5. Examine the role of regulatory oversight in the protection of the environment.
 1. Discuss the basic regulatory statutes as they pertain to environmental protection.
 2. Discuss the historical perspective of regulating environmental pollution.
 3. Distinguish between the National Environmental Pollution Act (NEPA) and the Environmental Impact Statement (EIS).

Evaluation Criteria/Policies:

Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	-	100	=	A
83	-	91	=	B
75	-	82	=	C
0	-	74	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Articulate the roles and responsibilities of key Criminal Justice and Homeland Security agencies and organizations.
2. Demonstrate "all-hazards" planning, mitigation, response and recovery.
3. Apply mitigation and crisis intervention strategies used by integrated disaster response teams to diverse citizen populations.
4. Articulate the psychology and history of domestic and international terrorism.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.