

EASTERN KENTUCKY UNIVERSITY

DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCE

Instructor: Joe E. Beck, Associate Professor

EHS 855 Emergency Sanitation/Shelter Environments 3 hours

COURSE DESCRIPTION:

This course will provide students with environmental health principles required to protect the environmental health of a community in times of emergency/disaster.

COURSE CONTENT:

It will cover many types of both natural and man-made disasters and will focus on the provision of preventive disease processes, safe food, water, and shelter.

NO REQUIRED TEXT:

This course will take advantage of numerous “pedigreed” internet sites and federal and state publications. Study of handouts, outside reading, and classroom presentations will also be required.

COURSE OBJECTIVES:

The student will be educated in both the personal and collective protective measures necessary to be employed by the emergency response teams. The nature of mutual aid will be discussed as well as collective self-reliance. Disease vectors and control processes will be examined. National and regional experts will be participating by providing visiting lectures, and through conference calls. The format will also take advantage gained from netbased instruction process. Upon completion of this course, the student will be able to:

- A. Understand the dimensions of disasters and their implications on both short and long term health of the community.
- B. Develop an in-depth understanding of local, state and federal support organizations; understand their missions; introduce coordination requirements and challenges.
- C. Identify common vectors of disease and their control.
- D. Identify the need for and implementation of infection disease control protocols.
- E. Identify short and long term methods of both solid and infectious waste management in order to identify possible solutions.
- F. Provide protocols for the provision of safe water and food.
- G. Establish decontamination provisions for both chemical and biological contamination.
- H. Establish isolation procedures for individuals contaminated with chemical and biological agents.

- I. Develop solutions to the disposal of human and animal waste.
- J. Develop appropriate secure, safe, shelter for meeting the needs of the community.
- K. Develop a firm understanding of the relationship of building codes to environmental health issues.
- L. Understand the health risk, causative factors and solutions to indoor air quality problems.
- M. Understand and evaluate strategic, tactical and implementation planning processes.
- N. Develop post disaster plans for clean up and disease prevention.

WEEK	COURSE OUTLINE
1	<p>Overview of Course Objectives and Outline Including identification of various organizations and their role/missions in disaster response and management.</p> <ul style="list-style-type: none"> A. Pre-event planning obligations B. Event response C. Post-event response
2	<p>The Concept of Mutual Aid in Disasters</p> <ul style="list-style-type: none"> A. Worst Case Planning-the process B. Contingency Planning C. Recovery Planning
3	<p>Disasters in history and their scope of impact</p> <ul style="list-style-type: none"> A. Floods B. Earthquakes C. Hurricanes D. Tornados E. Winter Storms F. Drought G. Heat & Cold H. Man-made events <ul style="list-style-type: none"> 1. Terrorist acts 2. Industrial accidents 3. Contagious Disease Control
4	<p>An overview of population, city structure and the dynamics of growth relevant to environmental health and disaster preparedness and response.</p> <ul style="list-style-type: none"> A. Issues of Environmental Justice B. Population Demographics and Risk C. Raising the Consciousness about the Unthinkable
5-6	<p>Infectious Disease Agents and their Control</p> <ul style="list-style-type: none"> A. Epidemics & Pandemic <ul style="list-style-type: none"> 1. Natural Causation 2. Man Made Causation 3. Historical Events of Significance B. Nosocomial Infections C. Food and Water Borne Outbreaks D. Emerging Pathogens
7-8	Risk From Industrial Chemicals: Select Manufacturing Processes
9-10	Transportation Issues and Accident Response

- 11 Emergency Water Decontamination and Improvised Lab Techniques
- 12-13 Emergency Food Quality Evaluation, Sanitation, and Storage
- 14-15 Environmental Health Standards for Housing and Shelter
 - A. Structure
 - B. Plumbing
 - C. Electrical Components
 - D. Air Quality
 - E. Cooling
 - F. Heating
- 16. Developing Emergency Housing, Shelter and Wastewater Management Plans

COURSE REQUIREMENTS:

The final grade will be derived from the following:

Two Major Exams	<i>Possible</i>
Final Exam	200 (100 Each)
Class Presentations	100
Paper	100
Total	<u>500 Points</u>

- 450-500 points = A
- 400-449 points = B
- 350-399 points = C
- 300-349 points = D
- Below 299 = F

ATTENDANCE:

No make up exams without one week prior approval. **Regular attendance of class by student is expected due to lack of consolidated class reading material and interactive nature of presentation.** Absences (excused or unexcused) equalling three or more of the class will result in an automatic failure. *Class role will be taken at every class meeting.*

Important Notice:

Acquiring missed handouts will be the responsibility of the student. Departmental policies regarding writing requirements, and honesty will be provided under separate cover.