

## **EPT-225 Hazard Analysis/Risk Assessment**

### **COURSE DESCRIPTION:**

Prerequisites: None

Corequisites: None

Course description. This course covers the probability and frequency of hazards, level of hazard exposure, and the effect or cost, both direct and indirect, of this exposure. Topics include identifying and characterizing hazards, evaluating hazard severity and frequency, estimating risks, and determining potential societal and economic effects. Upon completion, students should be able to identify the potential hazards and risks within a community. Course Hours per Week: Class, 3. Semester Hours Credit, 3.

### **LEARNING OUTCOMES:**

Upon completing requirements for this course, the student will be able to:

1. Identify and describe the risk management concept, including objectives, the five-step risk management process, types of risk assessment, and key terms.
2. Discuss hazard identification techniques and the assessment process.
3. Discuss implementation of control options, including dissemination and responsibilities.
4. Identify multiple natural and man-made hazards then discuss the potential impact those hazards may have on different social and economic social classes.
5. Complete a risk/hazard analysis worksheet demonstrating concepts and skills obtained.

### **OUTLINE OF INSTRUCTION:**

- I. Hazards and Disasters
  - A. Hazards defined
  - B. Risk defined
  - C. Five-step risk management process
    - i. Identify Hazards
    - ii. Assess Hazards
    - iii. Develop control options and make risk decision
    - iv. Implement Controls
    - v. Supervise and Evaluate
- II. Hazard identification techniques and the assessment process.
  - A. Preliminary Hazard Analysis/List (PHA/PHL)
  - B. Probability and severity factors.
  - C. Risk Assessment Matrix (RAM)
- III. Implementation of control options.
  - A. Three forms of risk management controls;
    - a. Educational Controls
    - b. Physical Controls
    - c. Avoidance

- B. Criteria for controls
    - a. Suitability
    - b. Feasibility
    - c. Acceptability
  - C. Implementation
    - a. Integration of control options
    - b. Dissemination
    - c. Responsibilities
- IV. Social impact of hazards and disasters
- A. Risk perception
  - B. Social structural
  - C. Public accountability
- V. Analysis and Assessment Application
- A. Risk assessment practical exercise
  - B. Risk assessment worksheet/record (RAWR)

**REQUIRED TEXTBOOK AND MATERIAL:**

The textbook and other instructional material will be determined by the instructor.