Southeast Missouri State University

Department of: Environmental Science  
Course Number: EV551

Course Title: Hazardous Materials Assessments  
New: Summer 2001

I. Catalog Description and Credit Hours of Course:
Introduction to the performance of investigative and remedial activities at hazardous waste sites. Three-hour lecture and one mandatory field exercise. (3)

II. Prerequisites:
CH-185, CH-186, EV/BI 455/655, or permission of instructor.

III. Purposes or Objectives of Course: Provide an understanding of:
A. Hazard recognition techniques used in hazardous waste site investigations.
B. Information sources used for assessing risks in hazardous waste site investigations.
C. Exposure evaluation techniques used in hazardous waste site investigations.
D. The use of air monitoring equipment for hazardous waste site investigations.
E. Site evaluation survey techniques used in hazardous waste site investigations.
F. Control techniques used in hazardous waste site investigations.
G. Personal protective equipment used in hazardous waste site investigations.
H. Health and Safety Plans for hazardous waste site investigations.

IV. Expectations of Students:
A. Attend and participate in each class
B. Successfully complete all classroom problem-solving exercises
C. Participate in field exercise
D. Successfully complete final examination

V. Course Content or Outline:
A. Unit I: Recognition  
   1. Incident response
   2. Chemical hazards
   3. Physical hazards
   4. Hazardous substance identification systems
   5. Sources of information

B. Unit II: Evaluation  
   1. Incident characterization
   2. Air monitoring instruments
   3. Exposure evaluation
   4. Survey techniques

15 hours
C. Unit III: Control 14 hours
   1. Site safety planning
   2. Levels of protection
   3. Respiratory protection
   4. Protective clothing
   5. Site control
   6. Decontamination
   7. Health and safety plans

D. Final examination 1 hour
45 hours

VI. Textbooks:

VII. Basis for Student Evaluation:
A. Problem solving exercises 20%
B. Final examination 30%
C. Field exercise 50%
    100%

The field exercise will be a capstone experience requiring the students to perform a practical application of the information provided in the course. Students must don protective clothing, utilize protective equipment in a staged emergency situation and record their findings in a format meeting regulatory requirements. Finally, students will critique their efforts to improve future professional performance in hazardous site operations.