

Course Objectives/Course Outline

Spokane Community College

Course Title: Hazardous Material 1
Prefix and Course Number: FS 170

Course Learning Outcomes:

By the end of the course, a student should be able to:

- Identify Hazardous Materials
- Analyze a Hazardous Materials Incident
- Plan the response
- Implement the planned response and evaluate the progress

Course Outline

- I. Introduction to Hazardous Materials
 - A. Define first responder roles
 - B. Hazardous Materials hazards
 - C. Routes of entry
 - D. Hazardous materials regulations and definitions
- II. Hazardous Materials Identification
 - A. Occupancy types, locations, and pre-incident surveys
 - B. Container shapes
 - C. Transportation placards, labels and markings
 - D. Written resources
 - E. Senses
 - F. Monitoring and detection devices
 - G. Identification of terrorist attacks and Illicit laboratories
- III. Awareness-level actions at Hazardous Materials incidents
 - A. Using the Emergency Response Guidebook
 - B. Isolation and denial of entry
 - C. Terrorist incidents
- IV. Chemical properties and Hazardous materials behavior
 - A. States of matter
 - B. Flammability
 - C. Vapor pressure
 - D. Boiling point/melting point
 - E. Solubility/Miscibility/ Specific gravity
 - F. Persistence/ reactivity
 - G. General Hazardous materials behavior
- V. Incident Management
 - A. Incident Priorities
 - B. Incident management systems

- C. Communications
- VI. Strategic goals and tactical objectives
 - A. Problem solving process
 - B. Isolation and scene control
 - C. Notification and protection
 - D. Recovery and termination
- VII. Terrorist attacks, criminal activities, and disasters
 - A. Chemical, biological, radiological and nuclear attacks
 - B. Illegal hazmat dumps
 - C. Evidence preservation
- VIII. Personal protective equipment
 - A. Respiratory protection
 - B. Protective clothing
 - C. PPE ensembles, classifications and selection
- IX. Decontamination
 - A. Decontamination methods
 - B. Recipient of decontamination operations
 - C. Emergency, technical and mass decon
 - D. Decon implementation
- X. Product control
 - A. Spill control
 - B. Leak control
 - C. Fire control
- XI. Air monitoring and sampling
 - A. Concentrations and exposure limits
 - B. Monitoring basics
 - C. Selection and maintenance of detection and monitoring devices
 - D. Detecting hazards
- XII. Victim Rescue and recovery
 - A. Rescue operations
 - B. Rescue equipment
 - C. Rescue methods
 - D. Recovery operations
- XIII. Evidence preservation and sampling
 - A. Hazards at crime scenes involving HazMat/ WMD incidents
 - B. Response phases at criminal HazMat/WMD incidents
 - C. The FBI twelve step process

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