

Central Arizona College

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FSC 129 Hazardous Materials First Responder Operations

Catalog Description:	Basic methods of recognition and identification based upon the chemical and physical properties of hazardous materials; basic safety procedures when utilizing specific types of protective clothing and equipment; basic tactical information relating to scene management. Confined space operations in accordance with the National Fire Protection Agency Association.
Credit Hours:	3
Effective Term:	Fall 2010
Teaching Methods:	Lecture
Modalities:	Face to Face
Prerequisite(s):	None
Corequisite(s):	None
Times for Credit:	1
Grading Option:	A/F
Credit Breakdown:	3 Lectures
Cross Listed:	None
Learning Outcomes:	<ol style="list-style-type: none">1. (Knowledge Level) Describe how various common alarms involve hazardous materials.2. (Comprehension Level) Explain why the ability to recognize and identify hazards is important to first responders.3. (Comprehension Level) Explain how the location of an incident may indicate the type and quantity of hazards present.4. (Knowledge Level) Describe the toxic effects that may result from exposure.5. (Knowledge Level) List five types of biological hazards.6. (Knowledge Level) Define "medical surveillance" and identify the elements of medical surveillance.7. (Comprehension Level) Explain why medical surveillance is important to first responders and discuss the requirements for medical surveillance under the applicable OSHA and EPA standards.8. (Application Level) Use four basic clues for identifying hazardous materials to include the Department of Transportation (DOT) system placarding, labeling and the hazards presented;

identify the (National Fire Prevention Association) NFPA 704 marking system.

9. (Application Level) Use highway cargo tanks, pressure and non-pressure tanks, and rail tank cars by shape to apply at least one commodity carried in each.

10. (Application Level) Demonstrate other resources that can be used to further identify hazardous materials.

11. (Knowledge Level) Define vapor density, flash point, lower- and upper-explosive limits, specific gravity, solubility, and vapor pressure.

12. (Comprehension Level) Explain the limitation of structural fire fighting gear and self-contained breathing apparatus (SCBA) and the types of respiratory equipment.

13. (Comprehension Level) Explain the importance of scene management at a hazardous materials incident and what are the common components of an incident management system.

14. (Knowledge Level) Define hot, warm and cold zones and list the areas or functions that might be found within each zone.

15. (Comprehension Level) Describe the first responder's initial actions on arriving at a hazardous materials incident.

Standards/Assessments:

1. Outcomes to be met by (International Association of Fire Fighters) IAFF HazMat First Responder Standards.

2. Outcomes to be measured by NFPA 471 Recommended Practices for Responding to HazMat Incidents.

3. Outcomes to be measured by NFPA 472 Standard for Professional Competence of Responders to HazMat Incidents.

4. Outcomes to be measured by NFPA 704, Standard System for Identification of HazMat for Emergency Response.

5. Student will be able to define and demonstrate what constitutes hazardous materials.

AGEC/Special Requirements:

None

Revised:

January 2010