

FIRE 0645 - HAZARDOUS MATERIALS SPECIALIST 1G

Catalog Description

Prerequisite: Completion of FIRE 644 with grade of "C" or better or approved Federal/State equivalent course(s)

Hours: 40 (16 lecture, 24 laboratory)

Description: Covers material presented in Hazardous Materials Courses 1A-1F in an environment of scenario based full scale exercises.

Participants evaluated for their ability to perform and be certified as a member of a Hazardous Materials Team. (not transferable) (not degree applicable) (pass/no pass grading)

Course Student Learning Outcomes

- CSLO #1: Explain how to appropriately identify and mitigate a leaking hazardous material for various types of containers.
- CSLO #2: Demonstrate how to transfer various types of hazardous materials from one container to another.
- CSLO #3: Identify standards and expectations pertaining to safety at a hazardous materials emergency.

Effective Term

Fall 2019

Course Type

Credit - Nondegree-applicable

Contact Hours

40

Outside of Class Hours

32

Total Student Learning Hours

72

Course Objectives

Lecture Objectives:

1. Evaluate and implement accepted methods and procedures to mitigate leaking containers;
2. Compare identified methods and procedures to transfer hazardous materials between containers.

Laboratory Objectives:

1. Practice procedures while adhering to operational guidelines;
2. Evaluate and utilize chemical protective clothing while performing mitigation skills;
3. Identify and classify known and unknown chemicals;
4. Formulate and practice methods and procedures to effectively participate as a member of a Haz Mat Team;
5. Practice safe methods and procedures required at a Haz Mat incident.

General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

Methods of Evaluation

- Objective Examinations
 - Example: Students will take a multiple-choice examination on a rail car with the identification of; AAR 103 J 60 AL F1, DOT 111 A 60 AL W 1. Standard Grading. Example Question: What do the first three letters suggest? A. These are the specification of the rail car, B. They identify the type of materials used in tank car construction, C. They identify the Authorizing Agency under whose authority the specification was issued, D. They are the class designation of the construction and materials type of the rail car.
- Skill Demonstrations
 - Example: Students will be required to demonstrate the ability to successfully control a hazardous materials emergency. Example: Firefighters respond to a reported emergency, 55 gallon drum leaking an unknown substance. Students are expected to respond and mitigate the emergency according to industry standards.

Repeatable

No

Methods of Instruction

- Laboratory
- Lecture/Discussion

Lab:

1. The instructor will review safety procedures for participating in simulated haz mat incidents and students will then participate in full scale exercises in a variety of positions within a hazardous materials response team. The team will identify materials, mitigate the emergency, and document their actions.

Lecture:

1. Instructor lead a review and discussion of material presented in Hazardous Materials 1A-1F courses. Students will then develop a notification list of agencies to notify in the event of a hazardous material incident.

Typical Out of Class Assignments Reading Assignments

1. Read and review the material on basic chemistry, then complete the provided worksheet identifying the atomic number, symbol, atomic weight, and family of the listed elements. 2. List the ICS positions needed to identify and mitigate an unknown liquid substance spill after reading the material on incident considerations.

Writing, Problem Solving or Performance

1. Given a scenario, appraise the seriousness of an incident and establish and implement appropriate operational guidelines. 2. Select and demonstrate methods and procedures for mitigating leaking containers and transfer between containers.

Other (Term projects, research papers, portfolios, etc.)

Required Materials

- Haz Mat Technician - 1A -1D
 - Author: California Specialized Training Institute
 - Publisher: State of California
 - Publication Date: 2003
 - Text Edition:
 - Classic Textbook?:
 - OER Link:
 - OER:
- Chemistry of Hazardous Materials
 - Author: Eugene Meyer
 - Publisher: Brady
 - Publication Date: 2010
 - Text Edition: 5th
 - Classic Textbook?:
 - OER Link:
 - OER:
- Hazardous Materials, Managing the Incident
 - Author: Gregory G. Noll & Michael S. Hildebrand
 - Publisher: Jones and Bartlett Learning
 - Publication Date: 2014
 - Text Edition: 4th
 - Classic Textbook?:
 - OER Link:
 - OER:

Other materials and-or supplies required of students that contribute to the cost of the course.