

# FIRE 0173 - HAZARDOUS MATERIALS - INCIDENT COMMANDER

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## Catalog Description

Formerly known as FIRE 202

Prerequisite: Completion of FIRE 241 with grade of "C" or better or a certified Hazardous Materials First Responder Operational course; and I-100 (Basic Incident Command System) or equivalent as determined by the Fire Technology Program Coordinator

Hours: 24 lecture

Description: Provides participants with the capability to assume the role of Incident Commander, as defined in the Occupational Safety and Health Act Hazardous Waste Operations (OSHA HAZWOPR) regulation, during an emergency response to an actual or potential hazardous materials release. (C-ID FIRE 232X) (not transferable)

## Course Student Learning Outcomes

- CSLO #1: Describe the primary hazardous materials protective action options.
- CSLO #2: Demonstrate and outline incident response objectives, an incident Action Plan, and a Site Safety Plan.
- CSLO #3: Identify the potential action response options (defensive, offensive and non-intervention).

## Effective Term

Fall 2019

## Course Type

Credit - Degree-applicable

## Contact Hours

24

## Outside of Class Hours

48

## Total Student Learning Hours

72

## Course Objectives

1. State the role of the Incident Commander (IC) as defined by state and federal regulations.
2. Identify the laws, regulations and plans that govern an emergency response to a hazardous materials incident.
3. Collect and interpret hazard and response information from sources such as printed reference material, technical resources, computer databases and monitoring equipment.
4. Estimate potential outcomes within an endangered area
5. Write incident response objectives
6. Identify the potential action response options (defensive, offensive and non-intervention) available

7. Demonstrate the ability to approve an appropriate level of personal protective equipment commonly to use in a hazardous materials incident
8. Determine if response objectives should be defensive, offensive and/or non-interventional.
9. Apply principles of Operational Risk Management to choose appropriate response objectives.
10. Implement ICS for a simulated incident to include: notification procedures; use of non-local resources; resource direction and support; and information transfer to the media and elected officials.
11. Write an Incident Action Plan consisting of at least an ICS form 201 and a site safety plan.
12. Identify government and private sector resources available to assist in an emergency response to a release of hazardous materials.
13. Evaluate the progress of the planned response
14. Apply tasks to terminate the emergency phase of a simulated hazmat incident
15. Describe the primary hazardous materials protective action options and identify factors to use in evaluating the selection of a protective action.

## 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

- Classroom Discussions
  - Example: The instructor will lead a discussion on a simulated train rail car emergency. During the discussion, students are expected to identify key hazards and mitigation measures to isolate the incident. Students are evaluated based on industry standard by correctly identifying problems and the steps necessary to control the incident.
- Objective Examinations
  - Example: Students will be given a multiple choice test on the components of an Incident Action Plan. Standard Grading. Example Question: What is the primary component of an Incident Action Plan?
- Problem Solving Examinations
  - Example: Students will work in groups on a hazardous materials scenario provided by the instructor. Students develop an incident action plan for the scenario outlining the critical elements of the scenario including: Key hazards, safety measures, control zones, organizational chart, resource needs, and incident demobilization plan. Students will be evaluated based on a rubric provided to the students.

## Repeatable

No

## Methods of Instruction

- Lecture/Discussion
- Distance Learning

Lecture:

1. The instructor will lead a discussion on working with news media at Haz Mat incidents. The student will then write a press release to be provided to the media using a simulated Haz Mat scenario.
2. The instructor will lecture on the need for scene management. Students will then work in groups to diagram an Incident Command organization chart and present their work to the class.

#### Distance Learning

1. Online instructor lecture on response options followed by students identifying the potential action response options for an instructor provided hazardous materials scenario. Students are to outline the actions and post for other students to review and provide comments followed by an online group discussion.

## Typical Out of Class Assignments Reading Assignments

1. The student will read the material in the text on disposing of hazardous waste and will fill out a uniform hazardous waste manifest and turn it in for evaluation.
2. The student will read the information on protective actions at a Haz Mat event and will create a list of the pro's and con's of sheltering in place and discuss their list in class.

## Writing, Problem Solving or Performance

1. Determine the physical hazards of unknown materials by identifying labels and placards and using the DOT ERG.
2. Develop an outline of items to cover in a post incident review.

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

### Required Materials

- Emergency Response Guidebook
  - Author: Department of Transportation
  - Publisher: U.S. Department of Transportation
  - Publication Date: 2016
  - 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 - Incident Commander
  - Author: California Specialized Training Institute
  - Publisher: State of California
  - Publication Date: 2001
  - Text Edition:
  - Classic Textbook?:
  - OER Link:
  - OER:

- Hazardous Materials, Managing the Incident
  - Author: Gregory G. Noll and 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.

Supplemental student course packs developed by instructor and provided to students.