

Name:	<i>Managerial Issues in Hazardous Materials</i>
Course Description:	This course examines regulatory issues, hazard analysis, multiagency contingency planning, response personnel, multiagency response resources, agency policies, procedures and implementation, public education and emergency information systems, health and safety, command post dynamics, strategic and tactical considerations, recovery and termination procedures, and program evaluation.
Objectives:	<p>Unit 1: Introduction</p> <p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • describe the correlation between trends in chemical use and emergency release incidents; • define the terms used by OSHA, EPA, and DOT to describe hazardous materials, hazardous waste, and extremely hazardous substances; and • explain the three emergency response levels described in NFPA 471. <p>Unit 2: Regulatory Issues</p> <p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • trace the history of U.S. environmental legislation as it affects hazardous materials response; • summarize the intent of major pieces of legislation that affect hazardous materials planning and emergency response; • explain the major provisions of SARA Title I and Title III with regard to hazardous materials planning and response; • list the federal agencies that have responsibility for enacting and enforcing hazardous materials regulations and the specific area of concern of each agency; and • identify national codes and standards dealing with hazardous materials. <p>Unit 3: Hazard Analysis</p> <p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • identify the purpose of each of the primary steps in hazard analysis; • describe how hazard analysis is performed at fixed facilities; • describe how hazard analysis is performed for transportation corridors; • state the purpose of performing a needs assessment regarding potential hazards; • explain why a jurisdiction should perform a capabilities assessment regarding its existing response system; and • explain why hazard analysis is an important part of emergency response. <p>Unit 4: Multi-Agency Contingency Planning</p> <p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • describe multiagency contingency planning and state its importance in managing a hazardous materials incident; • explain the purpose of the State Emergency Response Commission (SERC) and its role in managing a hazardous materials incident;

Objectives:	Unit 4: Multi-Agency Contingency Planning (cont'd)
	<ul style="list-style-type: none"> • explain the purpose of the Local Emergency Planning Committee (LEPC) and its role in the contingency planning process; • state the legal requirements for, and major benefits of, using the Incident Command System in contingency planning; and • describe the Community Awareness and Emergency Response (CAER) program and its possible role in the contingency planning process.
	Unit 5: Response Personnel
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • discuss the similarities and critical differences between a "normal" fire emergency and a hazardous materials emergency; • identify the capabilities and limitations of first responders with regard to equipment, protective clothing, training, and experience; • list and explain the training and emergency response requirements mandated in 29 CFR 1910.120 (q) and compare them to NFPA 472; • explain the certification of competency process; and • briefly discuss the major personnel issues involved in developing a hazardous materials team, including selection and training of personnel, medical surveillance, compensation, employee retention, and burnout.
	Unit 6: Multi-Agency Response Resources
	<p>After completing this unit, you should be able to do the following:</p> <ul style="list-style-type: none"> • outline the process for identifying the resources for a hazardous materials response; • identify local resources available for hazardous materials response; • outline the preresponse responsibilities of a manager planning for hazardous materials response; and • list special resources, other than local ones, that can be used for hazardous materials response.
	Unit 7: Agency Policies, Procedures, and Implementation: Making It Work
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • discuss the need for policies, plans, and SOPs; • identify the four components of the planning review process; • describe four issues that can affect the implementation of planning systems and documents; • list the four elements of tort liability; and • identify three actions that can reduce liability associated with planning documents and systems.
	Unit 8: Public Education and Emergency Information Systems
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • explain the terms "public alerting" and "emergency information"; • describe the purposes of public education programs; • explain the role that public education programs fill in community planning and right-to-know; • describe the two primary public protection options about which the public must be educated;

Objectives:	Unit 8: Public Education and Emergency Information Systems
	<ul style="list-style-type: none"> • identify the requirements of an effective emergency information system; and • explain the role of media relations in public education and emergency information.
	Unit 9: Health and Safety
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • list the managerial issues relating to hazardous materials health and safety requirements; • list the statutory requirements for compliance with OSHA 1910.120 with respect to health and safety; • define the duties and responsibilities of a hazardous materials scene Safety Officer; • state the similarities and differences between an ICS Safety Officer and a hazardous materials Safety Officer; • list in proper sequence the parts of a decontamination process; • state the reason for a baseline medical examination for hazardous scene/response workers; and • list the components of onscene medical and environmental monitoring.
	Unit 10: Command Post Dynamics
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • list and describe the major functions of the Incident Command System; • identify the differences between a Command Post and an Emergency Operations Center; • list and describe the added functions of an Incident Command System where hazardous materials are involved; • identify the special personnel and equipment needs of a Command Post or Emergency Operations Center during a hazardous materials incident; and • list the information functions required during a hazardous materials incident.
	Unit 11: Hazardous Materials Incident Management
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • list and describe the steps of the management process at a hazardous materials incident; • list the types of data needed to make an accurate sizeup at a hazardous materials incident; • discuss the strategic goals for managing a hazardous materials incident; • given a strategic goal, identify the tactical options available; and • describe the actions taken by the incident commander concerning his/her action plan.

Objectives:	Unit 12: Recovery and Termination Procedures
	<p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • define the terms "recovery" and "termination"; • describe what occurs during onscene recovery; • describe what occurs during operational recovery; • identify the federal precedents for cost recovery legislation; and • describe the four phases of termination. <p>Unit 13: Program Evaluation</p> <p>After completing this unit, you should be able to:</p> <ul style="list-style-type: none"> • list four primary parts of the response system that must be evaluated; • name the five local emergency response documents that should be integrated into the total hazardous materials response system; • describe the steps involved in a safety audit process; • explain the major elements of a Total Involvement Safety (TIS) program; • identify the three primary types of exercises found in an effective exercise program; and • discuss the effects of change relative to the ongoing evaluation process. <p>Unit 14: Putting It All Together</p> <p>At the conclusion of this unit, you should be able to:</p> <ul style="list-style-type: none"> • describe how hazardous materials regulatory trends affect the role of the fire service; • identify three ways in which legal affairs may determine future roles of the fire service when dealing with hazardous materials; • list two sources of alternative funding for fire service programs involving hazardous materials; • describe the relationship between the fire service and the five community hazardous materials planning tasks; and • discuss the means available to keep current with new developments in regulations, industry changes, and hazardous materials response systems.
Required Texts:	<p><i>Hazardous Materials: Managing the Incident</i>, Michael Hildebrand and Gregory Noll, Fire Protection Publications, Stillwater, Oklahoma.</p> <p><i>Managerial Issues in Hazardous Materials Course Guide</i>, National Fire Academy</p>
Supporting References/ Research for Faculty and Students	<p>U. S. Fire Administration</p> <p><u>Publications:</u> http://www.usfa.fema.gov/applications/publications/pubs_main.cfm See Fire Protection, Fire Administration, Fire Service Operations, Wildfire</p> <p><u>Applied Research:</u> http://www.usfa.fema.gov/dhtml/inside-usfa/research.cfm</p> <p><u>Research Reports:</u> http://www.usfa.fema.gov/dhtml/inside-usfa/r_reports.cfm</p> <p><u>Technical Reports:</u> http://www.usfa.fema.gov/applications/publications/techreps.cfm</p>

Supporting References/ Research for Faculty and Students	<p>Topical Fire Research Series: http://www.usfa.fema.gov/dhtml/inside-usfa/tfrs.cfm</p> <p>Learning Resource Center: http://www.usfa.fema.gov/dhtml/inside-usfa/lrc.cfm</p> <p>National Institute for Standards and Technology http://www.fire.nist.gov: Fire Tests/Data, Software/Models, Publications, FIREDOC (under Publications)</p> <p>Current Events/News http://www.firehouse.com/ http://www.fireengineering.com/ http://www.withthecommand.com/</p>	
Assessment:	<p>Students will be evaluated for mastery of learning objectives by methods of evaluation to be determined by the instructor.</p>	
NFPA Standards Addressed:	Unit(s)	Description
472-4-2.1 (1)	1	Identify the definition of hazardous materials
472-4-2.1 (5)	3	Identify typical occupancies and locations
472-7-4.1 (1)	6	Identify the role of the incident commander
472-7-4.1 (7)	11	Identify government agencies and private sector resources
1021-3-6.1 (1997)	4, 11	Produce operational plans
1521-4-5.3	9, 11	Provide input on risk assessment and member safety
Chief Fire Officer Designation Competencies Addressed:	<p>www.cfainet.org</p> <p>This course provides partial fulfillment of CFOD: Competency #16 Special Operations</p>	
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