



National Fire Academy

R0243 – Hazardous Materials Incident Management

Version: 5th Edition, 2nd Printing, August 2017

Quarter:

ACE Credit: In the lower-division baccalaureate/associate degree category, three semester hours in fire science, public safety management, emergency management, or public administration.

IACET Continuing Education Units: 3.6

Length of Course: 6 Days (34 hr., 45 min. contact hours, Sunday – Friday)

Prerequisite: Yes

Curriculum: Hazardous Materials

Training Specialist: Wayne Yoder

Instructor:

Instructor email/phone:

Classroom: J-

Meeting Time: 8 AM – 5 PM

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Course Description (Catalog)

R0243 – *Hazardous Materials Incident Management*. This six-day course focuses on the duties and responsibilities of the emergency response personnel who will assume the IC role in hazardous materials emergencies above the initial response and will implement a NIMS-based ICS. Based on the current requirements of 29 CFR 1910.120 and the applicable national standards and plans, the program follows three phases of an incident: preplanning, incident operations and post-incident responsibilities. This course meets the NIMS requirements for ICS-300.

Topics include negligence and liability, planning, NIMS ICS/Emergency Operations Center (EOC) interface, training requirements, and emergency response plans. The student will develop a hazard-based response using risk-based decision-making to develop an Incident Action Plan (IAP). The student's knowledge of the subject is evaluated through written tests and graded scenarios. Evening classes and projects are required.

Student Qualifications (Primary and Secondary Audience)

- Emergency response personnel who may be called upon to assume the duties of the IC at hazardous materials incidents as described in 29 CFR 1910.120.
- Safety Officers as described in 29 CFR 1910.120. **(See note below.)**
- Departmental training officers, chief officers, COs and regularly acting officers.
- Emergency management personnel who would interface with emergency response personnel through an EOC operation at a hazardous materials incident.

NOTE: While Safety Officers and training officers meet the acceptable criteria for this program, the program is not designed for technician-level personnel.

Course Scope (Goal)

Course Objectives (Course Learning Outcomes – TLOs)

After successfully completing this course, you will be able to accomplish the following:

- Explain the components of the standard of care and their implications for hazardous materials/weapons of mass destruction (hazmat/WMD) response.
- Explain the potential civil and criminal liability implications for the Incident Commander (IC) and other emergency responders during a hazmat/WMD incident.
- Demonstrate knowledge of Incident Command System (ICS)/ Emergency Operations Center (EOC) organization and operations at hazardous materials/weapons of mass destruction (hazmat/WMD) incidents to include the process of transfer of Command and the development/implementation of an effective Incident Action Plan (IAP).
- Define the use of classical and recognition-primed decision-making in the determination of appropriate incident objectives, strategies and tactics.
- Assess unique operational considerations associated with hazardous materials/weapons of mass destruction (hazmat/WMD) incidents.
- Identify emerging hazardous materials/weapons of mass destruction (WMD) issues and effectively develop appropriate incident actions for hazmat/WMD special operations incidents.

- Analyze information related to the incident, extrapolate the potential course and harm, and using a risk-based approach, determine objectives, strategies and tactics in order to develop a plan of action for each scenario, given several scenarios of varying complexities.
- Implement an effective Incident Command System (ICS) for the scenario.
- Manage a hazmat incident using their Incident Action Plan (IAP).

Course Delivery Method

The National Fire Academy (NFA) offers specialized training courses and advanced management programs of national impact in an academic classroom environment [on campus at the National Emergency Training Center \(NETC\) in Emmitsburg, Maryland](#). This classroom course is designed for the national level fire service officer from State and local fire service organizations. During this 6-day delivery, students will reside in dormitories provided on campus with classes conducted in classrooms designed for critical student/instructor interaction. All course materials are designed for interactive classroom environments, in either paper notebook or electronic formats.

Course Schedule

The purpose of the course schedule is to give you, at a glance, the required preparation, activities, and evaluation components of your course.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
AM	<p>Course Introduction</p> <p>Administration Information</p> <p>Facility Information</p> <p>Student Introductions</p> <p>Course Overview and Schedule</p> <p>Unit 0: Introduction and Overview</p> <p>Unit 1: Standard of Care</p> <p>Tunnel Fire Incident</p> <p>Standard of Care Introduction</p> <p>Legislative Basis</p>	<p>Unit 2: Incident Command System</p> <p>14 Essential Elements</p> <p>Unified Command</p> <p>Planning "P"</p> <p>Resources</p> <p>Incident Objective</p> <p>Hazmat Branch</p>	<p>Unit 2: Incident Command System (cont'd)</p> <p>ICS Forms</p>	<p>Unit 4: Operational Considerations</p>	<p>Unit 5: Hazmat Special Incident Considerations (cont'd)</p>	<p>Unit 6: Managing Hazardous Materials Incidents (cont'd)</p> <p>Examination</p>
Lunch						
PM	<p>Unit 1: Standard of Care (cont'd)</p> <p>Regulations Standards Liability</p>	<p>Unit 2: Incident Command System (cont'd)</p>	<p>Unit 3: Decision-Making</p>	<p>Unit 5: Hazmat Special Incident Considerations</p>	<p>Unit 6: Managing Hazardous Materials Incidents</p>	<p>Graduation</p>

Course Resources (Instructional Materials)

In order to be fully prepared, obtain a copy of the required textbooks and other instructional materials prior to the first day of class.

Required Readings

The student must complete required readings during the course to be able to thoughtfully participate in discussions and activities.

None.

Suggested Reading/Resources

Suggested readings and resources are not evaluated, but may enhance the student's understanding, serve as additional sources for citation and promote discussion of course material.

None.

Required Resources (Course Textbook)

Student Manual.

Supplemental Resources (Supplemental Course Textbook)

None.

Grading Methodology (Evaluation Procedures)

A minimum final grade of at least 70 percent is required to pass this course.

Numerical Score	Letter Grade
100-90	A
89-80	B
79-70	C
69 or below	F

Required Reading Assignments

Student completion of reading assignments will be done via evaluation of their class participation and will not be a separately graded activity.

Suggested Readings

Suggested readings are not evaluated, but may enhance the student's understanding and promote discussion of course material.

Course Outline

Unit 0: Introduction and Overview (Day 1)

Objectives

None.

Unit 1: Standard of Care (Day 1)

Objectives

Terminal Objectives

The students will be able to:

1. Explain the components of the standard of care and their implications for hazardous materials/weapons of mass destruction (hazmat/WMD) response.
2. Explain the potential civil and criminal liability implications for the Incident Commander (IC) and other emergency responders during a hazmat/WMD incident.

Enabling Objectives

The students will:

1. Define standard of care.
2. Differentiate among laws, regulations and standards.
3. Identify the legislative and regulatory basis for the hazmat/WMD standard of care.
4. Identify the three primary National Fire Protection Association (NFPA) standards that establish the basis for the hazmat/WMD emergency response.

5. Describe how using the National Incident Management System (NIMS)-compliant Incident Action Plans (IAPs), adhering to the standard of care, fully documenting decisions, and other actions can reduce their liability exposure.
6. Identify the following terms and their implications as they relate to hazmat/WMD response: sovereign immunity, negligence, gross negligence, intentional misconduct (malfeasance), tort, vicarious liability, and individual liability.

Unit 2: Incident Command System (Day 2)

Objectives

Terminal Objective

The students will be able to demonstrate knowledge of Incident Command System (ICS)/ Emergency Operations Center (EOC) organization and operations at hazardous materials/ weapons of mass destruction (hazmat/WMD) incidents to include the process of transfer of Command and the development/implementation of an effective Incident Action Plan (IAP).

Enabling Objectives

The students will:

1. Demonstrate the following:
 - a. Roles and responsibilities of Command and General Staff.
 - b. Single versus Unified Command.
 - c. ICS structure (Divisions/Groups/Branches).
 - d. First-arriving Incident Commander (IC).
 - e. Transfer of Command.
 - f. Safety Officer required.
 - g. Resources — Go/No Go.
2. Demonstrate competency/use of appropriate ICS forms needed to compile a safe and effective IAP that addresses the seven incident objectives/goals of hazmat/WMD incidents.
3. Explain the organization and interaction of both an Incident Command Post (ICP) and an EOC for hazmat/WMD incidents, and identify the following:

- a. Role of the ICP.
- b. Role of the EOC, to include how it's activated.
- c. Interaction of ICP with the EOC.

Unit 3: Decision-Making (Day 3)

Objectives

Terminal Objective

The students will be able to define the use of classical and recognition-primed decision-making in the determination of appropriate incident objectives, strategies and tactics.

Enabling Objectives

The students will:

1. Identify at least one linear decision-making model.
2. Identify at least one nonlinear decision-making model.
3. Identify the six model incident objectives for a hazardous materials/weapons of mass destruction (hazmat/WMD) incident.
4. For a simulated hazmat/WMD incident, implement appropriate incident objectives.

Unit 4: Operational Considerations (Day 4)

Objectives

Terminal Objective

The students will be able to assess unique operational considerations associated with hazardous materials/weapons of mass destruction (hazmat/WMD) incidents.

Enabling Objectives

The students will:

1. Identify at least three site control measures at a hazmat/WMD incident.

2. List three types of decontamination methods that can be implemented at a hazmat/WMD incident.
3. Choose appropriate site control measures, personal protective equipment (PPE), and decontamination operations when given a simulated hazmat/WMD incident.

Unit 5: Hazmat Special Incident Considerations (Day 4)

Objectives

Terminal Objective

The students will be able to identify emerging hazardous materials/weapons of mass destruction (WMD) issues and effectively develop appropriate incident actions for hazmat/WMD special operations incidents.

Enabling Objectives

The students will:

1. Describe at least three operational considerations to address multidisciplinary, clandestine, meth drug lab operations at a hazmat/WMD incident.
2. Describe at least three operational considerations to address multidisciplinary, crime-scene operations at a hazmat/WMD incident.
3. Describe at least three operational considerations to address multidisciplinary, white powder/unknown packages operations at a hazmat/WMD incident.
4. Describe at least three operational considerations to address multidisciplinary, chemical assisted/detergent suicide operations at a hazmat/WMD incident.
5. Describe at least three operational considerations to address multidisciplinary, suicide bombings/mass fatalities operations at a hazmat/WMD incident.

Unit 6: Managing Hazardous Materials Incidents (Day 5)

Objectives

Terminal Objectives

The students will be able to:

1. Analyze information related to the incident, extrapolate the potential course and harm, and using a risk-based approach, determine objectives, strategies and tactics in order to develop a plan of action for each scenario, given several scenarios of varying complexities.
2. Implement an effective Incident Command System (ICS) for the scenario.
3. Manage a hazmat incident using their Incident Action Plan (IAP).

Enabling Objectives

The students will:

1. Identify the presence of hazmat at a simulated incident.
2. Select appropriate emergency response actions for first responders at the operations technician response level.
3. Identify and develop appropriate safety measures to protect the responders, public and environment.
4. Develop an IAP for an incident with multiple operational periods.
5. Describe the process of termination and recovery for a simulated incident.

Policies

Class Attendance and Cancellation Policy

Attendance

- You are required to attend all sessions of the course. If you do not, you may not receive a certificate, and your stipend may be denied.

- If you need to depart campus early and miss any portion of the course and/or graduation, you must make the request in writing to the NFA training specialist. The training specialist, in collaboration with the superintendent, may waive the attendance requirement in order to accommodate you with extraordinary circumstances as long as you complete all course requirements. If you receive approval for departing early, you must forward the approval to the Admissions Office so your stipend reimbursement is not limited.

Student Substitutions

Substitutions for NFA courses are made from waiting lists; your fire department can't send someone in your place.

Cancellations or No-Shows

NFA's mission for delivery of courses is impaired significantly by cancellations and no-shows. It is very difficult and costly to recruit students at the last minute. Currently there is a two-year ban on student attendance for students who are no-shows or cancel within 30 days of the course start date without a valid reason. If you receive such a restriction, your supervisor needs to send a letter to our Admissions Office explaining the cancellation/no-show.

Course Failure

If you fail an on-campus course, you will not be issued a stipend for that course. You can reapply for the failed course or any other NFA course and go through the random selection process. You don't have to successfully complete the failed course before attending another NFA course.

Student Code of Conduct Policy

Students, instructors and staff are expected to treat each other with respect at all times. Inappropriate behavior will not be tolerated and may result in removal from campus and denial of stipends.

Writing Expectations

Student writing will conform to the generally accepted academic standards for college papers. Papers will reflect the original work of the student and give appropriate credit through citations for ideas belonging to other authors, publications or organizations. Student written work should be free of grammatical and syntax errors, free of profanity or obscene language or ideas, and reflect critical thinking related to the course subject matter.

Citation and Reference Style

Attention Please: Students will follow the APA, Sixth Edition as the sole citation and reference style used in written work submitted as part of coursework to NFA. Assignments completed in a narrative essay, composition format, abstract, and discussion posts must follow the citation style cited in the APA, Sixth Edition.

Late Assignments

Students are expected to submit classroom assignments by the posted due date (11:59 p.m. EDT/EST) and to complete the course according to the published class schedule. As adults, students, and working professionals, you must manage competing demands on your time. Discussion board postings submitted within 3 days after the submission deadline will receive up to a 20% deduction. Those that do not submit their discussion board postings within this timeline will receive a “0” grade for the week. Final assignment papers will not be accepted after the deadline. Any paper submitted after the deadline will receive a “0” grade for that assignment.

Netiquette

Online learning promotes the advancement of knowledge through positive and constructive debate – both inside and outside the classroom. Forums on the Internet, however, can occasionally degenerate into needless insults and “flaming.” Such activity and the loss of good manners are not acceptable in a professional learning setting – basic academic rules of good behavior and proper “Netiquette” must persist. Remember that you are in a place for the rewards and excitement of learning which does not include descent to personal attacks or student attempts to stifle the forum of others.

- **Technology Limitations.** While you should feel free to explore the full-range of creative composition in your formal papers, keep e-mail layouts simple. The NFA Online classroom may not fully support MIME or HTML encoded messages, which means that bold face, italics, underlining, and a variety of color-coding or other visual effects will not translate in your e-mail messages.
- **Humor Note.** Despite the best of intentions, jokes and especially satire can easily get lost or taken seriously. If you feel the need for humor, you may wish to add “emoticons” to help alert your readers: ;-), :), ☺ .

Disclaimer Statement

Course content may vary from the outline to meet the needs of this particular group.

Grading

Please review the following rubrics that explain how grades will be awarded.

Students who do not complete the entire course will be awarded an Incomplete (I) grade. In accordance with National Fire Academy academic policies, an Incomplete (I) grade must be removed by the end of the next semester following the course, or it automatically becomes a Failing (F) grade.

If you fail an on-campus course, you will not be issued a stipend for that course. You can reapply for the failed course or any other NFA course and go through the random selection process. You don't have to successfully complete the failed course before attending another NFA course.

https://www.usfa.fema.gov/training/nfa/admissions/student_policies.html

Academic Honesty

Students are expected to exhibit exemplary ethical behavior and conduct as part of the NFA community and society as a whole. Acts of academic dishonesty including cheating, plagiarism, deliberate falsification, and other unethical behaviors will not be tolerated.

Students are expected to report academic misconduct when they witness a violation. All cases of academic misconduct shall be reported by the instructor to the Training Specialist.

If a student is found to have engaged in misconduct and the allegations are upheld, the penalties may include, but are not limited to one or a combination of the following:

- expulsion,
- withholding of stipend or forfeiture of stipend paid,
- exclusion from future classes for a specified period; depending on the severity it could range from 1-10 years, and/or
- forfeiture of certificate for course(s) enrolled in at NETC.

Refer to NFA-specific Standard Operating Procedure 700.1 – *Academic Code of Conduct and Ethics* for more information.