

Hazardous Materials Technician–Hybrid 56 Hour Course Syllabus

Instructor Contact:

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Course Length: 6 Weeks + Final Evaluation Training Weekend

Delivery Format:

- 6 Weekly 2.5-hour Virtual Lecture
- 6 Weekly 1.5-hour In-Person Skill Drill
- 16 hrs of Independent Reading
- 16 hrs of In-Person Training

Textbook: Hazardous Materials: Managing the Incident, 5th Edition

Course Overview

This course provides foundational knowledge and practical skills for managing hazardous materials incidents. Through virtual instruction and in-person drills, students will develop proficiency in hazard recognition, site management, risk assessment, PPE selection, and decontamination, following the Eight Step Process. The course concludes with two in-person training days and a 100-question written exam. This course is designed for emergency responders and aligns with NFPA 472/1072 technician-level competencies.

Reading Expectations

Students are required to complete the assigned pre-reading prior to each week's virtual lecture. These readings are critical to understanding and participating in discussions, drills, and applied scenarios.

Course Completion Requirements

- Attendance and participation in all virtual lectures and in-person drills
- Completion of assigned pre-readings
- Attendance at two in-person training days following the 6-week lecture phase
- Passing a 100-question final exam based on the textbook with a score of 70% or higher
- All absences must be approved and any missed material must be made up at the discretion of the instructor.
- Missed virtual lectures will be available for viewing online until June 1
- Failure to complete all required portions of the course will result in not receiving a course certificate

Weekly Breakdown

Week 1 – Introduction to Hazmat Response and Safety

Pre-Reading: Chapters 1 and 2

Virtual Lecture Topics:

- Hazmat systems, regulations, and responder responsibilities
- Exposure risks, toxicology, and site safety
- PPE overview and safety program elements

In-Person Skill Drill:

- PPE show and tell (Hands- On)
- HazMat Rig Walkthrough

Week 2 – Incident Command and the Eight Step Process

Pre-Reading: Chapters 3 and 4

Virtual Lecture Topics:

- ICS roles and structure in hazmat response
- Command challenges and communication
- Overview of the Eight Step Process

In-Person Skill Drill:

- Basic monitor familiarization
- Monitoring demonstration and practice
- PPE donning and doffing (A)

Week 3 – Site Management and Hazard Identification

Pre-Reading: Chapters 5 and 6

Virtual Lecture Topics:

- Establishing control zones and staging areas
- Evacuation and shelter-in-place decisions
- Identifying hazardous materials: containers, markings, and documentation

In-Person Skill Drill:

- Container- placarding recognition and ID exercise
- Creating and mapping a basic site layout
- PPE donning and doffing (B)

Week 4 – Hazard Behavior and Risk Evaluation

Pre-Reading: Chapter 7

Virtual Lecture Topics:

- Properties of hazardous substances and risk principles
- Using reference tools (ERG, NIOSH, CAMEO, ERDSS)
- Developing an incident action plan

In-Person Skill Drill:

- Physical and chemical properties unknown classification drill
- Resources and references drill

Week 5 – PPE, Tactical Planning, and Coordination

Pre-Reading: Chapters 8, 9, and 10

Virtual Lecture Topics:

- PPE levels, materials, and respiratory protection
- Developing strategic and tactical goals
- Coordinating internal and external resources

In-Person Skill Drill:

- PPE Comfortability Drill
- HazMat Rig Scavenger Hunt

Week 6 – Decontamination, Termination, and Final Scenario

Pre-Reading: Chapters 11 and 12

Virtual Lecture Topics:

- Decontamination types and procedures
- Termination, documentation, and liability
- Full Eight Step Process® review and course wrap-up

In-Person Skill Drill:

- Decon Corridor set-up / takedown
- PPE Comfortability Drill

Final Evaluation Phase

Two In-Person Training Days

- Practical application and skills integration
- Scenario-based performance assessments

Final Written Exam

- 100 multiple-choice questions based on textbook content
- Minimum passing score: 70%