

# Program of Instruction

## Course Syllabus

**Course Title:**

HAZWOPER 40-hour Technician

**Course Duration:** 40 hours

**Program:** Hazardous Materials Program

**Level of Training:** Performance – Offensive (OSHA Technician)

**Course Prerequisites:**

24 hours of OSHA HAZWOPER Operations Training

**Recommended Prerequisites:**

Technical Rescue Awareness

**Course Description:** This course is designed to train individuals who respond to releases or potential releases of hazardous substances for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of the release in order to plug, patch, or otherwise stop the release of the hazardous substance. The course covers: implementation of the employer's emergency response plan, classification and identification of unknown materials using field survey instruments, functioning within the Incident Command System, selection and use of specialized chemical protective equipment, hazard and risk assessment techniques, performing advanced product control operations, implementation of decontamination procedures, understanding proper termination procedures, and understanding basic chemical and toxicological terminology.

This course meets or exceeds the requirements of OSHA 29 CFR 1910.120(q) for Hazardous Materials Technician Training. It is intended for industrial and private response teams, who in their normal course of duty would be responsible for responding to a release of a known product.

**This course does not meet all of the requirements of NFPA 472 and thus is not intended for public safety agencies (ie. fire, police, military, etc).**

## **Course Content:**

### **Module: 1**

Title: Laws and Regulations

#### Terminal Learning Objective:

At the conclusion of this module, the student will *explain* the laws, regulations and standards that apply to hazardous materials incidents.

### **Module: 2**

Title: Response Components

#### Terminal Learning Objective:

At the conclusion of this module, the student will *explain* the 5-step Isolate to Terminate process and how it affects the hazardous materials response.

### **Module: 3**

Title: Chemical and Physical Properties

#### Terminal Learning Objective:

At the conclusion of this module, the student will *apply* chemical and physical properties of a material to predict how hazardous materials respond in different situations.

### **Module: 4**

Title: Toxicology

#### Terminal Learning Objective:

At the conclusion of this module, the student will *explain* how hazardous materials enter the body and what their potential effects are.

### **Module: 5**

Title: Collecting & Interpreting Hazard & Response Information

#### Terminal Learning Objective:

At the conclusion of this module, the student will *utilize* a minimum of three resources to collect and interpret information concerning a hazardous material.

**Module: 6**

Title: Personal Protective Equipment

Terminal Learning Objective:

At the conclusion of this module, the student will *demonstrate* the proper selection, use, and maintenance of all four EPA ensemble classifications.

**Drill One – Suit Familiarization****Module: 7**

Title: Recognition and Identification

Terminal Learning Objective:

At the conclusion of this module, the student will *recognize* different types of containers and markings and *determine* the hazards associated with the materials transported or stored within the container.

**Module: 8**

Title: Monitoring

Terminal Learning Objective:

At the conclusion of this module, the student will *demonstrate* the use of monitoring equipment available to the hazardous materials Technician.

**Module: 9**

Title: Container Behavior

Terminal Learning Objective:

At the conclusion of this module, the student will *identify* factors that determine how hazardous materials containers will behave during an incident and *develop* a strategy for a response based on the analysis of the container and its behavior.

**Drill Two – Skill Stations in Level A****Module: 10**

Title: Control Functions

Terminal Learning Objective:

At the conclusion of this module, the student will *demonstrate* performing control functions, available to the Technician, in support of the Incident Action Plan.

**Module: 11**

Title: Site Safety Plan

Terminal Learning Objective:

At the conclusion of this module, the student will *demonstrate* the completion of a Site Safety Plan.

**Module: 12**

Title: Incident Management System

Terminal Learning Objective:

At the conclusion of this module, the student will *identify* the positions that make up the Incident Management System and how to use IMS, Unified Command and NIMS at a hazardous materials incident.

**Drill Three – Tech Level Skills in Level A****Module: 13**

Title: Decontamination

Terminal Learning Objective:

At the conclusion of this module, the student will *demonstrate* proper selection, set-up, operation, and tear down of a decontamination line.

**Module: 14**

Title: Standard Operating Guidelines and Emergency Response Plan

Terminal Learning Objective:

At the conclusion of this module, the student will *summarize* key information that should be contained in Standard Operating Guidelines (SOG) and Emergency Response Plans for hazardous materials incidents.

**Module: 15**

Title: Termination

Terminal Learning Objective:

At the conclusion of this module, the student will *explain* procedures to be followed at the termination of a hazardous materials incident.

## Tabletop – Site Specific

## Final Incident – Site Specific

### Textbook:

Noll, Gregory, Michael Hildebrand and James Yvorra. *Hazardous Materials: Managing the Incident 3<sup>rd</sup> Ed.* IFSTA. Red Hat Publishing Co., 2005

### Evaluation Strategy:

Written and practical skills testing are conducted at the end of the course. In addition, simulated evolutions involving various hazardous materials situations are conducted throughout the course.

### References:

National Fire Protection Association Standard 472 *Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008.

Noll, Gregory, Michael Hildebrand and James Yvorra. *Hazardous Materials: Managing the Incident 3<sup>rd</sup> Ed.* IFSTA. Red Hat Publishing Co., 2005

United States Department of Homeland Security. *National Incident Management System, 2004.* Washington D.C., 2004.

U.S. Department of Labor, *Code of Federal Regulations: Labor 29 CFR 1910.120.* Washington, D.C., Office of the Federal Register, National Archives and Records Administration, 1996.

U.S. Department of Labor, *Code of Federal Regulations: Transportation 49 CFR Parts 100 to 77.* Washington, D.C., Office of the Federal Register, National Archives and Records Administration, 1995.

# Course Schedule

## DAY ONE

**Start Time: 0800**

<u>Event</u>	<u>Duration</u>
Orientation and Introductions	15 minutes
Module 1: Laws and Regulations	30 minutes
Module 2: Response Components	45 minutes
Module 3: Chemical/Physical Properties	1 hour
Module 4: Toxicology	1 hour
Module 5: Collecting & Interpreting	1 hour
<b>Lunch</b>	
Module 6: Personal Protective Equipment	1 hour
<b>Drill One: Suit Familiarization</b>	2 hour and 30 min

## DAY TWO

**Start Time: 0800**

<u>Event</u>	<u>Duration</u>
Module 7: Recognition and Identification	1 hour and 30 min
Module 8: Monitoring	1 hour
<b>Monitoring Practical</b>	1 hour and 30 min
<b>Lunch</b>	
Module 9: Container Behavior	1 hour
<b>Drill Two: Skill Stations in Level A</b>	3 hours

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**DAY THREE**

**Start Time: 0800**

<b><u>Event</u></b>	<b><u>Duration</u></b>
Module 10: Control Functions	4 hours
<b>Lunch</b>	
Module 11: Site Safety Plan	30 minutes
Module 12: Incident Management System	1 hour
<b>Drill Three: Tech Level Skills in Level A</b>	2 hours and 30 min

## DAY FOUR

**Start Time: 0800**

<u>Event</u>	<u>Duration</u>
Module 13: Decontamination	1 hour and 30 min
<b>Decontamination Practical</b>	2 hours and 30 min
<b>Lunch</b>	
Module 14: Standard Operating Guidelines and Emergency Response Plans	1 hour
Module 15: Termination	1 hour
<b>Table Top Exercise</b> (Site Specific)	2 hours

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**DAY FIVE**

**Start Time: 0800**

<b><u>Event</u></b>	<b><u>Duration</u></b>
<b>Final Incident</b> (Site Specific)	4 hours
<b>Lunch</b>	
Review & CEQ's	1 hour
Test	3 hours