Course Title: Statewide WMD Response: Structural Collapse Rescue Operations

Course Duration: 45 hours

Program: Technical Rescue Program

Level of Training: Operations

Course Prerequisites:
- CPR and First Aid Certification
- Firefighter II Certification
- Statewide WMD Response: Technical Rescue Awareness
- Statewide WMD Response: Rope Rescue Operations
- Statewide WMD Response: Rope Rescue Technician
- Statewide WMD Response: Confined Space Rescue Operations
- Statewide WMD Response: Confined Space Rescue Technician
- Statewide WMD Response: Trench Rescue Operations
- Statewide WMD Response: Trench Rescue Technician

Course Description: The scope of this course is to prepare responders to operate as a local member of a regional team within the NIMS at a CBRNE (Chemical, Biological, Radiological, Nuclear, or Explosive) WMD event requiring statewide response that has resulted in the failure of a building constructed of wood, masonry, or pre-fabricated light metal materials. This course is extensively hands-on and prepares the student to operate safely and efficiently at a building collapse incident involving WMD. It offers practice in cutting, breaching, lifting, stabilizing, searching, shoring, packaging, and removing victims from a simulated collapse environment. This course is intense and physically demanding, but the competence and confidence that is gained is worth the sweat that is lost.
Classroom Content:

Module: C-1
Title: Destructive Forces
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module the student will differentiate the various destructive forces based on how they may affect buildings and structures.

Module: C-2
Title: Force Types
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will distinguish the types of forces that are exerted on materials used in building construction.

Module: C-3
Title: Structural Members and Load Systems
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will categorize the fundamental concepts of structural members as they are used in building construction.

Module: C-4
Title: Building Types
Duration: 1 hour and 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will relate general characteristics, hazards, principal weaknesses, and properties of the various building types.

Module: C-5
Title: Building Assessment
Duration: 20 Minutes

Terminal Learning Objective:
At the conclusion of this module, the student will apply building assessment principles to a collapsed structure.
Module: C-6
Title: Marking Systems
Duration: 20 Minutes

Terminal Learning Objective:
At the conclusion of this module, the student will use the different marking systems utilized during a structural collapse incident.

Module: C-7
Title: Rescue
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will explain the various elements of rescue operations.

Module: C-8
Title: Safety
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will explain how operations at the structural collapse incident can be made safer.

Module: C-9
Title: First-In Officer and Rescue Team
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will state the duties of those responding to a structural collapse incident.

Module: C-10
Title: Tools
Duration: 20 minutes

Terminal Learning Objective:
At the conclusion of this module, the student will explain the proper use of various tools used at a structural collapse incident.
**Module: C-11**  
Title: Shoring Systems  
Duration: 4 hours

**Terminal Learning Objective:**  
At the conclusion of this module, the student will explain the applications of the various shoring systems.

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**Module: C-12**  
Title: Victim Assessment and Patient Packaging  
Duration: 20 Minutes

**Terminal Learning Objective:**  
At the conclusion of this module, the student will summarize the emergency medical care considerations specific to structural collapse operations.

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**Module: C-13**  
Title: Incidents involving weapons of mass destruction (WMD)  
Duration: 20 Minutes

**Terminal Learning Objective:**  
At the conclusion of this module, the student will be able to perform their Operations level duties at a structural collapse incident involving the use of weapons of mass destruction (WMD).
Practical Content:

**Module: P-14**  
**Title:** Wood Cutting Station  
**Duration:** 1 Hour

**Terminal Learning Objective:**  
At the conclusion of this module, the student will *demonstrate* the proper use of the various tools utilized for cutting wood.

**Module: P-15**  
**Title:** Metal Cutting & Burning Station  
**Duration:** 1 Hour

**Terminal Learning Objective:**  
At the conclusion of this module, the student will *demonstrate* the proper and safe use of various tools utilized for cutting metal.

**Module: P-16**  
**Title:** Breaching & Breaking Station  
**Duration:** 1 Hour

**Terminal Learning Objective**  
At the conclusion of this module, the student will *demonstrate* the proper operation for completing a breach for entry.

**Module: P-17**  
**Title:** Specialty Tools Station  
**Duration:** 1 Hours

**Terminal Learning Objective:**  
At the conclusion of this module, the student will *demonstrate* the use of various specialty tools that may be utilized during a structural collapse rescue.

**Module: P-18**  
**Title:** Rescue Shoring Station  
**Duration:** 10 Hours

**Terminal Learning Objective:**  
At the conclusion of this module, the student will *utilize* various shoring systems to stabilize a collapsed structure.
Module: P-19  
Title: Lifting and Stabilizing Station  
Duration: 1 hour and 30 minutes

Terminal Learning Objective:  
At the conclusion of this module, the student will lift and stabilize selected objects.

Module: P-20  
Title: Void Search Station  
Duration: 1 hour and 30 minutes

Terminal Learning Objective:  
At the conclusion of this module, the student will remove a victim from a collapse environment.

Module: P-21  
Title: Breaching & Breaking in a Confined Space Station  
Duration: 3 Hours

Terminal Learning Objective:  
At the conclusion of this module, the student will create a series of breaches large enough and so configured for entry.

Module: P-22  
Title: Void Search Final Scenario  
Duration: 8 Hours

Terminal Learning Objective:  
At the conclusion of this module, the student will operate in a large rubble pile as a member of a rescue team assigned to various functions within a collapse rescue scenario.

Module: P-23  
Title: House Final Scenario  
Duration: 8 Hours

Terminal Learning Objective:  
At the conclusion of this module, the student will operate in a collapsed structure as a member of a rescue team assigned to various functions within a collapse rescue scenario.

Evaluation Strategy:  
Written and practical skill testing is conducted at the completion of the course. In addition, simulated rescue evolutions involving various rescue problems are conducted throughout the course.
References:

Emergency Response to Terrorism Basic Concepts-Student Manual FEMA 2002

FEMA National Urban Search and Rescue Response System: Incident Command System for Structural Collapse Incidents


National Fire Protection Association Standards 1006 Standard for Rescue Technician Professional Qualifications

National Fire Protection Association Standards 1670 Standard on Operations and Training for Technical Search and Rescue Incidents


United States Army Corps of Engineers: Urban Search and Rescue Structures Specialist Field Operations Guide
## Course Schedule

### DAY ONE

**Start Time:** 0800

<table>
<thead>
<tr>
<th>Event</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Destructive Forces</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Force Types</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Structural Members and Load Systems</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Building Types</td>
<td>1 hour and 20 min</td>
</tr>
<tr>
<td><strong>Break</strong></td>
<td></td>
</tr>
<tr>
<td>Building Assessment</td>
<td>20 minutes</td>
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<tr>
<td>Marking Systems</td>
<td>20 minutes</td>
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<tr>
<td><strong>Lunch</strong></td>
<td></td>
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<tr>
<td>Rescue</td>
<td>20 minutes</td>
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<tr>
<td>Safety</td>
<td>20 minutes</td>
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<tr>
<td>First-In Officer and Rescue Team</td>
<td>20 minutes</td>
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<tr>
<td>Tools</td>
<td>20 minutes</td>
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<tr>
<td><strong>Break</strong></td>
<td></td>
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<tr>
<td>Shoring Systems</td>
<td>4 hours</td>
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<tr>
<td><strong>Break</strong></td>
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<tr>
<td>Victim Assessment and Patient Packaging</td>
<td>20 minutes</td>
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<tr>
<td>Incidents Involving Weapons of Mass Destruction</td>
<td>20 minutes</td>
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</table>
## DAY TWO

Start Time: 0800

<table>
<thead>
<tr>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Wood Cutting Station</td>
<td>1 hour</td>
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<tr>
<td>Metal Cutting &amp; Burning Station</td>
<td>1 hour</td>
</tr>
<tr>
<td>Breaching &amp; Breaking Station</td>
<td>1 hour</td>
</tr>
<tr>
<td>Specialty Tools Station</td>
<td>1 hour</td>
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</table>

**Lunch**

<table>
<thead>
<tr>
<th>Event</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Rescue Shoring Station</td>
<td>5 hours</td>
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<tr>
<td>Window and Door Shoring System</td>
<td></td>
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<tr>
<td>T-Spot &amp; Vertical Shoring Systems</td>
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<tr>
<td>Solid Raker Shoring System</td>
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<tr>
<td>Split Raker Shoring System</td>
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</tbody>
</table>
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<table>
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<th>Event</th>
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<tbody>
<tr>
<td>Rescue Shoring Station</td>
<td>5 hours</td>
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<tr>
<td>Laced Post Shoring System</td>
<td></td>
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<tr>
<td>Sloped Floor Shoring System</td>
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<tr>
<td>Horizontal Shoring System</td>
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<tr>
<td>Raked Raker Shoring System</td>
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<tr>
<td><strong>Lunch</strong></td>
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<tr>
<td>Lifting and Stabilizing Station</td>
<td>1.5 hours</td>
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<tr>
<td>Void Search Station</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Breaching &amp; Breaking in a Confined Space Station</td>
<td>3 hours</td>
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## DAY FOUR

**Start Time:** 0800

<table>
<thead>
<tr>
<th>Event</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Void Search Final Scenario</td>
<td>8 hours</td>
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## DAY FIVE

**Start Time:** 0800

<table>
<thead>
<tr>
<th>Event</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>House Final Scenario</td>
<td>8 hours</td>
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