

Program of Instruction

Course Syllabus

Course Title: Structural Collapse Rescue Operations – Level I

Course Duration: 46 hours

Program: Special Operations Training Program

Course Prerequisites:

None

Required for National Certification (ProBoard):

Rope Rescue Operations – Level I

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.

Course Requirements and/or Recommendations: These can be divided into three categories: those completed prior to arriving in class (Pre-Course Work), those completed during class, such as homework assignments and quizzes (Course Work), and requirements completed after class but prior to receiving a certificate of completion. (Post-Course Work)

Summary of Directions

Pre-Course Work: 5 question Questionnaire and 15 question Pretest

Course Work: Attend and participate in all lectures and practicals

Post-Course Work: None

Course Policies:

Attendance Policy: IFSI requires students to attend (100%) or make up all course content that leads to certification. Students are expected to attend on time and to remain in class for the duration of the course. Students **MUST COMPLETE** all portions of a certification course, both classroom and practical, to be eligible to receive their certification.

If a student misses any portion of class with an accumulated absence of 20% or less of scheduled class time, it will be the student's responsibility to arrange the make-up of the missed course content with the instructor(s) or program manager. The student must make up the specific course content that s/he missed, not just the hours. Make-ups are limited to 20% of scheduled class time. Make-ups must be documented on the class roster. If a student's absence is greater than 20% refer to "True Emergences" section of the IFSI Examination Policy.

Safety Policy: Students shall understand and follow all instructions pertaining to operational safety, as stated by instructors or as written in course materials. Instructors and students shall be mindful of safety at all times. Conduct judged to be unsafe shall be grounds for dismissal from the course.

Academic Integrity Policy: IFSI has the responsibility for maintaining academic integrity so as to protect the quality of the education provided through its courses, and to protect those who depend upon our integrity. It is the responsibility of the student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Any violation of the code of conduct is grounds for immediate dismissal from the course.

Grading Policy: Decisions regarding certificates of course completion shall be made solely by the lead instructor of the course. All grading of exams shall be conducted by the Curriculum/Testing Office. All grading of practical exercises shall be based upon the standards set by the regulatory agency referenced in the course material and IFSI.

American Disabilities Act: As guaranteed in the Vocational Rehabilitation Act and in the American Disabilities Act, if any student needs special accommodations they are to notify their instructor and provide documentation as soon as possible so arrangements can be made to provide for the student's needs. If arrangements cannot be made at the class site, the student will test at an alternative time and place where the special accommodations can be made.

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.

Course Content:

Module: C-1

Title: Destructive Forces

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

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

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

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

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

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

Terminal Learning Objective:

At the conclusion of this module, the student will *explain* the various elements of rescue operations.

Module: C-8

Title: Safety

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

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

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

Terminal Learning Objective:

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

Module: C-12

Title: Victim Assessment and Patient Packaging

Terminal Learning Objective:

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

Module: C-13

Title: Incidents involving weapons of mass destruction (WMD)

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).

Module: P-14

Title: Wood Cutting Station

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

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

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

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

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

Terminal Learning Objective:

At the conclusion of this module, the student will *lift and stabilize* selected objects.

Module: P-20

Title: Void Search Station

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

Terminal Learning Objective:

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

Reference List:

- FEMA National Urban Search and Rescue Response System: Incident Command System for Structural Collapse Incidents
- FEMA National Urban Search and Rescue Response System: National US&R Response System Operational Systems Description US&R Safety Program and Search Procedures
- FEMA National Urban Search and Rescue Response System: Rescue Specialist Training Manual, Vol. 1 and 2.
- FEMA National Urban Search and Rescue Response System: US&R Safety Program and Search Procedures
- Illinois Office of the State Fire Marshal: Structural Collapse Operations
Structural Collapse Operations Practical Skills Sheets
- 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

<u>Event</u>	<u>Duration</u>
Introduction	5 minutes
Module C1 - Destructive Forces	25 minutes
Module C2 - Force Types	20 minutes
Module C3 - Structural Members and Load Systems	20 minutes
Module C4 - Building Types	1 hour and 20 min
Break	
Module C5 - Building Assessment	50 minutes
Module C6 - Marking Systems	30 minutes
Lunch	
Module C7 - Rescue	20 minutes
Module C8 - Safety	20 minutes
Module C9 - First-In Officer and Rescue Team	30 minutes
Module C10 - Tools	20 minutes
Break	
Module C11 - Shoring Systems	4 hours
Break	
Module C12 - Victim Assessment and Patient Packaging	20 minutes
Module C13 - Incidents Involving Weapons of Mass Destruction	20 minutes

DAY TWO

<u>Event</u>	<u>Duration</u>
Module P14 - Wood Cutting Station	1 hour
Module P15 - Metal Cutting & Burning Station	1 hour
Module P16 - Breaching & Breaking Station	1 hour
Module P17 - Specialty Tools Station	1 hour
Lunch	
Module P18 - Rescue Shoring Station	5 hours
Window and Door Shoring System	
T-Spot & Vertical Shoring Systems	
Solid Raker Shoring System	
Split Raker Shoring System	

DAY THREE

<u>Event</u>	<u>Duration</u>
Module P18 - Rescue Shoring Station	5 hours
Laced Post Shoring System	
Sloped Floor Shoring System	
Horizontal Shoring System	
Raked Raker Shoring System	
Lunch	
Module P19 - Lifting and Stabilizing Station	1.5 hours
Module P20 - Void Search Station	1.5 hours
Module P21 - Breaching & Breaking Confined Space Station	3 hours

DAY FOUR

Event

Duration

Void Search Final Scenario

8 hours

DAY FIVE

Event

Duration

House Final Scenario

8 hours