



Title: Confined Space Operations	Program Duration: 40 hours
Type: Campus Training Program (CTP)	Coordinator: R. Chapman

Course Description

NIPSTA's Confined Space Operations program is designed to exceed the requirements outlined by the Illinois Office of the State Fire Marshal (OSFM), and provides students with the basic knowledge and skills needed to perform confined space rescue at the NFPA 1006 Operations level. Students will leave prepared to operate as a member of a regional team capable of responding to statewide emergencies involving where basic confined space rescue may be needed.

Prerequisites

The purpose of prerequisite course work is to ensure students have sufficient backgrounds to understand the terminology, tactics and practical applications presented in NIPSTA programs. At a minimum, NIPSTA requires successful completion of the following:

- Member of recognized fire department/brigade
- Basic Operations Firefighter
- Rope Rescue Operations

Attendance

In order to receive a certificate of completion for courses, NIPSTA requires students to be present for all lectures, demonstrations and evolutions.

Safety

NIPSTA Instructors will ensure hazards have been identified and addressed prior to the start of each program. All course safety guidelines are discussed prior to operations and at a minimum, a one (1) to six (6) instructor to student ratio will be maintained at all times. Unsafe actions or behaviors will not be tolerated and will be grounds for dismissal.

Academic Integrity

NIPSTA aspires to the highest possible standards of academic honesty and integrity in all programs as key tenants of the NIPSTA experience. NIPSTA Instructors set forth clear ethical expectations, promote consistency of standards, and encourage reporting of dishonest and unsafe behaviors. While education through participation is the central goal for every NIPSTA program, it is only possible when honesty and integrity are part of the overall mission.

Performance Testing & Evaluation

NIPSTA employs multiple methods of measuring competency subject matter including cognitive and performance skill testing. Cognitive skills will be measured by utilizing a comprehensive written exam at the conclusion of the course. Students must achieve a minimum 70% score to successfully pass the written exam. Performance skill tests measure an individual's ability to perform specific tasks or applications based on given or known JPRs. Unless otherwise specified, performance skill tests will be measured on a pass or fail basis.

ADA Compliance

Students with a documented disabilities, as that term is used in the American with Disabilities Act (ADA), may qualify for reasonable accomidations as defined in section 504 of the Rehabilitation Act of 1973.

Textbook

The following Textbook is required for NIPSTA's Cofined Space Operations course.

- Title: CMC Confined Space Entry and Rescue Manual, Revised 2nd Ed
 - ISBN: 9780961833749
- Title: The Essential Technical Rescue Field Operations Guide, 5th Edition
 - ISBN: 9780692901533

Pre-course Assignments

The purpose of pre-course assignments is to ensure candidates are prepared to succeed at the onset of the program. The pre-course assignments for NIPSTA's Confined Space Operations course are as follows:

- Review The following documents
 - OSHA CFR 1910.146 (viewable at osha.gov)
 - *"The Essential Technical Rescue Field Operations Guide"* 5th Edition
- Read the following text book sections
 - *Confined Space Entry and Rescue Manual*", Revised 2nd Edition: Chapters 1 - 7

Course Content

Course content is broken into subject area modules or "Mods". NIPSTA's Confined Space program is comprised of the following Mods:

Mod: Introduction & Orientation

Mod: Safety & Hazard Identification

Mod: Rescue Knots & Hitches

Mod: Lock-out/Tag-out Procedures

Mod: Con Space Anchors & Tripods

Mod: Winches & M/A Systems

Mod: Two-rope Systems

Mod: Tri-pod Anchor Systems

Mod: Gear Mastery: Rescue Harness

Mod: Victim Casualty Care & Packaging

Mod: SCBA vs SAR Systems

Mod: Atmospheric Monitoring Equip

Mod: Ventilation Equipment & Use

Mod: Size-up & Reconnaissance

Mod: Confined Space ICS & IAPs

Mod: Operations Level Entries

Mod: Mechanical Advantage Systems

Mod: Gear Mastery: Rescue Pulleys

Mod: Horizontal Rescue Entries

Mod: Fall Arrestor Devices

Mod: Decent and Load Mgmt. Devices

Mod: Vertical Rescue Entries

Mod: Non-permit Confined Spaces

Mod: Permit Required Confined Spaces

Mod: Tripod Rigging Techniques

Mod: Pre-rigged M/A Systems

Mod: Terminating Rescue Operations

Mod: Course Final Exam

Mod: Mechanical Rescue Winches

Mod: Aerial & Tower Ladder Anchoring

Mod: Practical Skill Evaluations

Mod: Final Rescue Scenario

Mod: Equipment Inspection & Inventory

Mod: Course Review & Evaluations

Rope Operations Course Schedule

Day 1

Morning

Mod: Introduction & Orientation
Mod: Confined Space Safety & Hazard Identification
Mod: Con Space Rescue Knots & Hitches
Mod: Lock-out/Tag-out Procedures
Mod: Con Space Anchors & Tripods
Mod: Winches and Mechanical Advantage Systems
Mod: Two-rope Systems (main/belay & twin tension)

Afternoon

Mod: Tri-pod Anchor Systems (Vortex, TerrAdaptor, Skedco/Industrial)
Mod: Gear Mastery: Rescue Harness
Mod: Confined Space Casualty Care & Packaging
Mod: SCBA vs SAR Systems (victim & rescuer)
Mod: Atmospheric Monitoring Equipment & Techniques
Mod: Confined Space Ventilation Equipment & Techniques

Day 2

Morning

Mod: Day 1 & Knot Review
Mod: Size-up & Reconnaissance (Permit vs Non-permit)
Mod: Confined Space ICS & Incident Action Plans (IAPs)
Mod: Operations Level Entries (NFPA 1006 Operations vs Technician)
Mod: Non-permit Confined Spaces
Mod: Mechanical Advantage Systems
Mod: Gear Mastery: Rescue Pulleys
Mod: Horizontal Rescue Entries (non-permit)

- Non-entry Rescue
- No Packaging Rescue (grab & go)
- Patient Packaged Rescue

Afternoon

Mod: Gear Mastery: Fall Arrestors (Petzl ASAP)
Mod: Gear Mastery: Decent and Load Management Devices (Petzl I'D & Clutch)
Mod: Vertical Rescue Entries (non-permit)

- Non-entry Rescue of Entrant
- Entry Rescue With Patient Packaging

Day 3

Morning

- Mod:** Day 2 & Knot Review
- Mod:** Permit Required Confined Spaces
- Mod:** Tripod Rigging Techniques
- Mod:** Gear Mastery: Pre-rigged Systems (Aztek Kit)
- Mod:** Horizontal Rescue Entries (permit required)
 - Monitoring & Ventilation Operations
 - SCBA Procedures

Afternoon

- Mod:** Gear Mastery: Pre-rigged Systems (CMC CRS System)
- Mod:** Vertical Rescue Entries (permit required)
 - Monitoring & Ventilation Operations
 - SCBA Procedures

Day 4

Morning

- Mod:** Day 3 Review
- Mod:** Terminating Confined Space Rescue Operations
- Mod:** Course Final Exam
- Mod:** Mechanical Rescue Winches
- Mod:** Aerial Truck & Tower Ladder Anchoring
- Mod:** Practical Skill Evaluations
 - Confined Space Rescue Knots
 - Tri-pod Anchor System Procedures
 - Mechanical Advantage System Procedures
 - Atmospheric Monitoring & Ventilation Procedures

Afternoon

- Mod:** Practical Skill Evaluations
 - Comprehensive Final Rescue Scenario
- Mod:** Equipment Inspection & Inventory
- Mod:** Course Review & Evaluation

Reference List

Confined Space Entry and Rescue Manual: 2nd rev. ed. (2013). Santa Barbara, CA: CMC Rescue.

Pendley, T. (2017). *The Essential Technical Rescue Field Operations Guide, 5th edition.* Phoenix, Az.: Desert Rescue Research.

NIOSH Pocket Guide to Chemical Hazards. (2012).: Books Express Publishing.

NFPA 1006, *Standard for Rescue Technician Professional Qualifications*, 2021 Edition

U.S. Department of Labor, Occupational Safety Health Administration, 29 CFR 1910.120

U.S. Department of Labor, Occupational Safety Health Administration, 29 CFR 1910.134

U.S. Department of Labor, Occupational Safety Health Administration, 29 CFR 1910.146

U.S. Department of Labor, Occupational Safety Health Administration, 29 CFR 1910.147

U.S. Department of Labor, Occupational Safety Health Administration, 29 CFR 1910.1000

U.S. Department of Labor, Occupational Safety Health Administration, 29 CFR 1926