	Northeastern Illinois Public Safety Training Academy	
	Course Syllabus	**204**

Title: Confined Space Technician	**Program Duration:** 32 hours
Type: Campus Training Program (CTP)	**Coordinator:** R. Chapman

Course Description

NIPSTA's Confined Space Technician program is designed to exceed the requirements outlined by the Illinois Office of the State Fire Marshal (OSFM), and provides students with the advanced knowledge and skills needed to perform confined space rescue at the NFPA 1006 Technician level. Students will leave prepared to operate as a member of a regional team capable of responding to statewide emergencies where advanced 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 a recognized fire department or brigade
- Basic Operations Firefighter
- Confined Space 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 though 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 Rehabiltation 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 Rope Rescue Technician course are as follows:

- **Review: "**The Essential Technical Rescue Field Operations Guide, 5th Edition"

Rope Operations Course Content

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

Mod: Introduction & Orientation
Mod: Safety & Hazard Identification
Mod: Con Space Incident Pre-planning
Mod: Rescue Ropes & Knots Review
Mod: Lock out/Tag out Review
Mod: Mechanical Advantage Review
Mod: Tripods & Anchors Review
Mod: Confined Space Tripod Operation
Mod: Casualty Care & Pt. Packaging
Mod: Supplied Air Breathing Systems
Mod: Victim Retrieval Systems
Mod: Ventilation & Monitoring
Mod: Size-up & Reconnaissance
Mod: Confined Space Entry
Mod: Hazard Specific PPE Use
Mod: Rope Grab Devices
Mod: Rescue Pulleys
Mod: Con Space Entries – Horizontal
Mod: Fall Arrest Devices
Mod: Decent & Load Mgmt. Devices
Mod: Confined Space Entries – Vertical
Mod: Permit Required Confined Spaces
Mod: Tripod Rigging Techniques
Mod: Pre-rigged M.A. Systems
Mod: Horizontal Entries (permit required)
Mod: Vertical Entries (permit required)
Mod: Course Final Exam
Mod: Mechanical Rescue Winches
Mod: Aerial Truck & Tower Anchoring
Mod: Practical Skill Evaluation
Mod: Equipment Inspection & Inventory
Mod: Course Review & Evaluation

Following the conclusion of these modules, students will be familiar with the requisite knowledge and skills needed to perform as a member of a rope rescue team. Written and practical evaluations will be conducted at the completion of this course.

40 Hour Course Schedule

DAY 1

Morning

Mod: Introduction & Orientation
Mod: Confined Space Safety & Hazard Identification
Mod: Confined Space Incident Pre-planning
Mod: Confined Space Rescue Ropes & Knots Review
Mod: Confined Space Lock out/Tag out Review
Mod: Confined Space Mechanical Advantage Review
Mod: Confined Space Tripods & Anchors Review

Afternoon

Mod: Confined Space Tripod operation (Vortex, TerrAdaptor, Skedco/industrial)
Mod: Confined Space casualty care & patient packaging
Mod: Gear Mastery: Supplied Air Breathing Systems
Mod: Victim Retrieval Systems (hasty/webbing harness, Sked & SpecPak)
Mod: Ventilation & Monitoring Operations (con-space fans, 4 & 5 gas meters)

DAY 2

Morning

Mod: Day 1 & Knot Review
Mod: Confined Space Size-up & Reconnaissance
Mod: Confined Space Entry (Operations vs Technician level, permit vs non-permit)
Mod: Operating in Hazard Specific Confined Space PPE
Mod: Rope Grab Devices (Prusick knot and mechanical)
Mod: Gear Mastery: Rescue Pulleys
Mod: Confined Space Entries – Horizontal

- Non-entry rescue of entrant
- Entry rescue, no packaging (grab & go)
- Entry rescue, with patient packaging

Afternoon

Mod: Gear Mastery**:** Fall Arrestors (Petzl ASAP)
Mod: Gear Mastery: Decent and Load Management Devices (Petzl I'D & Clutch)
Mod: Confined Space Entries – Vertical

- 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: Confined Space Entries – Horizontal (permit required)

- Ventilation, monitoring, SCBA & SABA

Afternoon

Mod: Gear Mastery: Pre-rigged Systems (CMC CRS System)
Mod: Confined Space Entries – Vertical (permit required)

- Ventilation, monitoring, SCBA & SABA

DAY 4

Morning

Mod: Day 3 & Knot Review
Mod: Course Final Exam
Mod: Mechanical Rescue Winches
Mod: Aerial Truck & Tower Ladder Anchoring
Mod: Practical Skill Evaluation

- Confined Space Rescue Knots
- Confined Space Mechanical Advantage Procedures
- Confined Space Monitoring & Ventilation Procedures
- Confined Space Tripod Anchor 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*, 2017 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