



COURSE INFORMATION AND REQUIRED MATERIALS

PO Box 944246, Sacramento CA 94244-2460

Course: Rope Rescue Technician (2011) FSTEP

Hours: 40

Designed For: All emergency response personnel

Description: This course will prepare participants to undergo competency testing for high angle rescue. The goal of the program is to familiarize participants with the high angle environment and experience; and for them to safely participate in the engineering and operation of simple to complex rescue systems.

Prerequisites: LARRO and RS-1

Certification: None

Class Size: Student/instructor ratio: 12:1

Restrictions: Training site with appropriate site requirements tools and equipment.

REQUIRED STUDENT MATERIALS		EDITION	VENDORS
▪ Student Manual (under development)		2011	SFT
REQUIRED INSTRUCTOR MATERIALS			
▪ Instructor Guide (under development)		2011	SFT
▪ Powerpoint Slide Show (under development)		2011	SFT
VENDORS			
SFT	State Fire Training Bookstore (916-445-8158)		http://sft.fire.ca.gov
CONFINED SPACE RESCUE TECHNICIAN COURSE OUTLINE			

Course Objectives:

CHAPTER 1: COURSE INTRODUCTION

TERMINAL OBJECTIVE

The student will understand the course goals, planned activities to achieve those goals, and the requirements for successfully completing the course.

ENABLING OBJECTIVES

1. Describe the course objectives and overview.
2. Demonstrate rescuer and victim safety during all Rope Rescue Technician exercises.
3. Use all personal protective equipment.
4. Describe the student evaluation process.

CHAPTER 2: ROPE RESCUE EQUIPMENT

TERMINAL OBJECTIVE

The student will demonstrate the proper use of all equipment used in the Rope Rescue Technician course.

ENABLING OBJECTIVES

1. Describe the use/misuse of the rope rescue equipment.
2. Describe the inspection/maintenance of the rope rescue equipment.
3. Use, inspect, and maintain all rope rescue equipment.

CHAPTER 3: RESCUE KNOTS AND HITCHES

TERMINAL OBJECTIVE

The student will identify and properly tie all required rescue knots and hitches.

ENABLING OBJECTIVES

1. Demonstrate learned knowledge, skills, and abilities from the prerequisite Low Angle Rope Rescue Operational (LARRO) course and Rescue Systems 1 (RS1) Rope Module.
2. Describe the components of knots and hitches.
3. Tie the required knots and hitches.

CHAPTER 4: ANCHOR SYSTEMS

TERMINAL OBJECTIVE

The student will demonstrate anchor selection and anchor system construction required for Rope Rescue Technician (RRT) skills.

ENABLING OBJECTIVES

1. Describe considerations when selecting anchors.
2. Describe the types of anchors.



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3. Construct the required anchor systems.

CHAPTER 5: RESCUER AND VICTIM PACKAGING

TERMINAL OBJECTIVE

The student will demonstrate how to properly package rescuers and victims to safely and effectively complete a rope rescue operation.

ENABLING OBJECTIVES

1. Describe the rescue harnesses and rescuer packaging.
2. Don a class III harness.
3. Package a victim in commercial victim harness.
4. Package a victim in a hasty pelvic and chest harness.
5. Secure a victim to a rescue litter.

CHAPTER 6: SYSTEM ATTACHMENTS AND FALL RESTRAINT

TERMINAL OBJECTIVE

The student will demonstrate several methods of system attachments for rescuers and victims.

ENABLING OBJECTIVES

1. Describe system attachments and fall protection.
2. Attach a rescuer to a rope rescue system.
3. Attach an ambulatory victim to a rope rescue system.
4. Attach a rescue litter to a rope rescue system with and without an attendant.
5. Attach a rescuer to a fall restraint system.

CHAPTER 7: BELAY/SAFETY LINE SYSTEMS

TERMINAL OBJECTIVE

The student will demonstrate the importance of using a back-up line to catch the load in the event of a failure of the main line.

ENABLING OBJECTIVE

1. Define key points regarding the operation of a belay/safety line.
2. Construct and operate a belay/safety line.
3. Catch a falling load with a belay/safety line.

CHAPTER 8: LOWER AND RAISE MAIN LINE SYSTEMS

TERMINAL OBJECTIVE

The student will demonstrate how to construct a lowering system and convert to a mechanical advantage (MA) system to be used in a raising operation.

ENABLING OBJECTIVES

1. Describe safety factors, critical angles, and force multipliers.
2. Construct and operate a lowering system.
3. Convert a lowering system to a raising system.
4. Construct and operate a "pig rig".
5. Construct and operate a compound mechanical advantage system.

CHAPTER 9: LOAD RELEASING METHODS

TERMINAL OBJECTIVE

The student will demonstrate the difficulties encountered when using prusik brakes and provide a solution for these situations.

ENABLING OBJECTIVES

1. Demonstrate how to construct and operate a load releasing device.

CHAPTER 10: RESCUE SCENE ORGANIZATION AND MANAGEMENT

TERMINAL OBJECTIVE

The student will demonstrate the implementation of a command structure, giving clear objectives and assignments, and coordinating the activities of the various responders.

ENABLING OBJECTIVES

1. Implement rescue scene organization and management.
2. Use command and control in rope rescue operations.



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3. Staff rope rescue positions.
4. Implement ICS during rope rescue operations.

CHAPTER 11: KNOT PASSING

TERMINAL OBJECTIVE

The student will demonstrate the difficulties encountered when passing knots and pass a knot during rope rescue operations.

ENABLING OBJECTIVES

1. Pass a knot during a lowering/raising operation.
2. Pass a knot during an ascending/descending operation.

CHAPTER 12: ASCENDING AND DESCENDING

TERMINAL OBJECTIVE

The student will demonstrate how to properly ascend and descend a fixed rope.

ENABLING OBJECTIVES

1. Ascend a fixed rope.
2. Convert an ascending system to a descending system.
3. Descend a fixed rope.

CHAPTER 13: PICK-OFFS

TERMINAL OBJECTIVE

The student will demonstrate the proper techniques used to secure a victim in various rope rescue situations.

ENABLING OBJECTIVE

1. Perform a pick-off of a supported victim.
2. Perform a pick-off of an unsupported victim.

CHAPTER 14: PROTECTED CLIMB

TERMINAL OBJECTIVE

The student will demonstrate the proper techniques used to climb a manmade structure to gain access to a victim.

ENABLING OBJECTIVES

1. Climb a manmade structure.
2. Use proper safety techniques.

CHAPTER 15: HIGH ANGLE LITTER TENDING

TERMINAL OBJECTIVE

The student will demonstrate the proper techniques used when tending a rescue litter in a high-angle environment.

ENABLING OBJECTIVES

1. Function as a litter attendant.
2. Negotiate obstacles and manipulate the occupied litter while being raised or lowered.
3. Move an occupied litter up and over an edge.
4. Construct and operate a mechanical advantage system used to lower and raise the foot of the rescue litter.

CHAPTER 16: HIGHLINES

TERMINAL OBJECTIVE

The student will demonstrate how to construct and operate a highline system to move rescuers, victims, and equipment from one elevated location to another.

ENABLING OBJECTIVES

1. Construct and operate a highline system.
2. Move rescuers, victims, and equipment from one elevated location to another above an obstacle or projection.
3. Move an occupied litter with an attendant from one location to another.
4. Perform a mid-point drop.

Course Objectives: To provide the student with...

- Information on regulations and standards for entry into confined spaces
- Information to identify confined spaces and permit-required confined spaces
- Information to identify the hazards associated with confined spaces



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- Techniques to perform confined space rescue on incidents involving terrorism or weapons of mass destruction
- Information and techniques to select and use atmospheric monitoring equipment and the equipment necessary to control hazards in confined spaces
- Information and techniques to identify, select, and use personal protective equipment
- Information and techniques to use various types of victim removal and packaging systems
- Information and techniques to construct rope rescue systems for confined space rescue
- The information necessary to plan, organize, operate, and command at confined space rescue incidents
- The opportunity to apply the principles of confined space rescue through directed rescue scenarios

Course Content..... 40:00

ADVANCED ROPE RESCUE SITE REQUIREMENTS

An Advanced Rope Rescue training site has facilities, structures, work areas, materials, props, tools, and equipment of adequate size, type, and quantity to fully and safely support the cognitive and psychomotor training required to deliver the curriculum.

MINIMUM SITE REQUIREMENTS

The accredited RS1 Rescue Training Site assumes all responsibility, liability, and maintenance for the engineering design, strength, stability, and adequacy of all props, including anchor points and tie offs. The requesting agency further assumes all responsibility, liability, and maintenance for all tools, equipment, and supplies used at the site for the delivery of a RS1 class. This includes, but is not limited to, ladders, ropes, rescue hardware, shoring, and cribbing materials. The facilities and props for each module should be in close proximity to each other to facilitate timeframes.

Facilities

- Classroom of adequate size and capability (including audiovisual equipment) to support cognitive training
- Wash areas
- Bathrooms
- Rehabilitation area
- Safe and adequate parking

Rope Rescue Module

- An actual or simulated high angle environment in which the load is predominately supported by the rope rescue system
- A minimum vertical distance of 20' (6.1m) for high angle evolutions
- A minimum horizontal travel distance of 20' and vertical height of 20' from measured from the ground to loaded mid span for highline evolutions
- Minimum ascending distance of 20'
- Minimum 20' protected climb
- Obstacles that the attendant must negotiate
- An edge problem that the team must negotiate for the litter tender

EQUIPMENT STANDARDS

Student safety is of paramount importance when conducting the type of high-risk training associated with this course. The equipment listed below is the minimum for each class. The equipment is in compliance with or exceeds the standards listed in NFPA 1983, Standard on Fire Service Life Safety Rope, Harness, and Hardware. Student safety and is of paramount importance when conducting the type of high-risk training associated with this course. All PPE shall be the responsibility of the student and shall meet agency and site requirements. Lumber list does not include lumber required to construct props.



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Minimum Equipment List for a Single Squad Class

- This list is considered a minimum. Your site and evolutions may require additional equipment.

Item	Amount
Anchor Plate	6
Backboard	1
DCD's	8
Carabiners	40
Commercial Class III Harness	12 (various sizes)
Commercial Victim Seat Harness	1
Edge Protection	
Ascender	2
Load Release Device	6 (plus dedicated carbiners)
Low stretch/static kernmantle rope	2 X300 foot
Low stretch/static kernmantle rope	4-X150 foot
Steel Pickets	Optional
Prusik loop, short	10
Pulley	13 (5 of which must be PMP)
Rescue Litter	1
Rescue Litter Pre-Rig	1
Sledge Hammer	Optional
Spider Straps	Optional
Tie Ropes	12 units 1" X 15 foot
Webbing, blue	12 units 1" x 15'
Webbing, yellow	12 units 1 x 12'
Webbing, green	12 units 1 x 5'
Webbing, orange	12 units 1 x 20'
Knot passing pulley	1
Pick off strap	1
Etriers (can be commercial or pre-made)	2
Double bypass lanyard	Optional
If performing a litter scoop, you will need a mini MA system to raise and lower the foot end of the litter.	Optional