



Course Information



Course Code: FR200
 Course: **Technical Rescue- Rope Operations Level**
 Hours: 40
 Designed For: Fire Department and Technical Rescue Personnel
 Prerequisites: Firefighter 1, Firefighter 2, Hazardous Materials Operations or equivalent, First Responder, EMT, or Paramedic
 Must be in excellent physical condition and provide doctor approval form
 Classification: Technical Rescue
 Class Size: Maximum 15
 Restrictions: Must be over 18 years of age with previous rope experience and training

Course Description: This 40-hour class teaches personnel how to safely conduct basic rope rescue operations. This course focuses on the various knots, rescue hardware, auxiliary equipment, personal protection equipment, rope care and maintenance and standards governing basic rope rescue operations. This course meets or exceeds the general requirements for NFPA 1670 Standard on Operations and Training for Technical Rescue Incidents, Awareness and Operations Level for Rope Rescue. This course serves as a prerequisite for Rope Rescue Technician Level

Course Goals: The purpose of this course is to provide firefighters, EMTs and rescue personnel with an understanding of basic hardware of rope rescue, as well as the knowledge that affords the rescuer the versatility and flexibility to safely accomplish diverse rescue tasks. Subjects include:

- Rescue team organization and function
- Incident Command
- Rescue hardware and equipment
- Rope technology and construction
- Patient packaging and handling
- Anchor systems
- Belay systems
- Lowering systems
- Raising (hauling) systems

- Low-angle rescue operations
- Size Up
- Hazard assessment

REQUIRED STUDENT MATERIALS

Each student must provide the following. All equipment will be inspected prior to use to ensure serviceability:

Climbing or fire helmet

Coveralls or heavy clothing

Boots, Leather climbing that provides excellent ankle support

Leather gloves, in new condition suitable for climbing and rope activities

Book: *Technical Rescue, Rope Levels 1 and 2, Jeff Mathews*

REQUIRED INSTRUCTOR MATERIALS

Instructor Resource Kit *Technical Rescue, Rope Levels 1 and 2, Jeff Mathews*

Trailer Equipment (see attached equipment list)

TFACA NFPA Compliance Check Lists

REFERENCES

National Fire Protection Association Standard (NFPA) 1006, *Standard for Technical Rescuer Professional Qualifications, 2008 Edition*

National Fire Protection Association Standard (NFPA) 1670 *Standard on Operations and Training for Technical Search and Rescue Incidents*

METHOD OF EVALUATION

Written Examination, not less than 50 questions. Passing grade min. 75%

Practical Examination and Skills to the satisfaction of the instructor

COURSE CORE OBJECTIVES DEFINED

After completing this training program, students will, in accordance with NFPA standards, demonstrate their ability to:

- Identify the needed support resources, given a specific type of rescue incident, so that a resource cache is managed, scene lighting is provided for the tasks to be undertaken, environmental concerns are managed, personnel rehabilitation is facilitated, and the support operation facilitates rescue operational objectives. *(NFPA 1006, 5.2.1)*
- Size up a rescue incident, given background information and applicable reference materials, so that the type of rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained. *(NFPA 1006, 5.2.2)*
- Manage incident hazards, given scene control barriers, personal protective equipment, requisite equipment, and available specialized resources, so that all hazards are identified, resource application fits the operational requirements, hazard isolation is considered, risks to rescuers and victims are minimized, and rescue time constraints are taken into account. *(NFPA 1006, 5.2.3)*
- Manage resources in a rescue incident, given incident information, a means of communication, resources, tactical worksheets, personnel accountability protocol, applicable references, and standard operating procedures, so that references are utilized, personnel are accounted for, deployed resources achieve desired objectives, incident actions are documented, rescue efforts are coordinated, the command structure is established, task assignments are communicated and monitored, and actions are consistent with applicable regulations. *(NFPA 1006, 5.2.4)*
- Conduct a search, given hazard-specific personal protective equipment, equipment pertinent to search mission, an incident location, and victim investigative information, so that search parameters are established, victim profile is established, the entry and exit of all people either involved in the search or already within the search area are questioned and the information is updated and relayed to command, the personnel assignments match their expertise, all victims are located as quickly as possible, applicable technical rescue concerns are managed, risks to searchers are minimized, and all searchers are accounted for. *(NFPA 1006, 5.2.5)*

- Perform ground support operations for helicopter activities, given a rescue scenario/incident, helicopter, operational plans, personal protective equipment, requisite equipment, and available specialized resources, so that rescue personnel are aware of the operational characteristics of the aircraft and demonstrate operational proficiency in establishing and securing landing zones and communicating with aircraft personnel until the assignment is complete. *(NFPA 1006, 5.2.6)*
- Terminate a technical rescue operation, given an incident scenario, assigned resources, and site safety data, so that rescuer risk and site safety are managed, scene security is maintained and custody transferred to a responsible party, personnel and resources are returned to a state of readiness, record keeping and documentation occur, and post event analysis is conducted. *(NFPA 1006, 5.2.7)*
- Triage victims, given triage tags and local protocol, so that rescue versus recovery factors are assessed, triage decisions reflect resource capabilities, severity of injuries is determined, and victim care and rescue priorities are established in accordance with local protocol. *(NFPA 1006, 5.3.1)*
- Move a victim in a low-angle environment, given victim transport equipment, litters, other specialized equipment, and victim removal systems specific to the rescue environment, so that the victim is moved without undue further injuries, risks to rescuers are minimized, the integrity of the victim's securement within the transfer device is established and maintained, the means of attachment to the rope rescue system is maintained, and the victim is removed from the hazard. *(NFPA 1006, 5.3.2)*
- Transfer a victim to emergency medical services (EMS), given local medical protocols, so that all pertinent information is passed from rescuer to EMS provider, and the victim can be transported to a medical care facility. *(NFPA 1006, 5.3.3)*
- Inspect and maintain hazard-specific personal protective equipment, given clothing or equipment for the protection of the rescuers, including respiratory protection, cleaning and sanitation supplies, maintenance logs or records, and such tools and resources as are indicated by the manufacturer's guidelines for assembly or disassembly of components during repair or maintenance, so that damage, defects, and wear are identified and reported or repaired, equipment functions as designed, and preventive maintenance has been performed and documented consistent with the manufacturer's recommendations. *(NFPA 1006, 5.4.1)*

- Inspect and maintain rescue equipment, given maintenance logs and records, tools, and resources as indicated by the manufacturer's guidelines, equipment replacement protocol, and organizational standard operating procedure, so that the operational status of equipment is verified and documented, all components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement protocol are correctly disposed of and changed. *(NFPA 1006, 5.4.2)*
- Tie knots, bends, and hitches, given ropes and webbing, so that the knots are dressed, recognizable, and backed up as required. *(NFPA 1006, 5.5.1)*
- Construct a single-point anchor system, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, meets or exceeds the expected load, and does not interfere with rescue operations, an efficient anchor point is chosen, the need for redundant anchor points is assessed and used as required, the anchor system is inspected and loaded prior to being placed into service, and the integrity of the system is maintained throughout the operation. *(NFPA 1006, 5.5.2)*
- Place edge protection, given life safety rope or webbing traversing a sharp or abrasive edge, edge protection, and other auxiliary rope rescue equipment, so that the rope or webbing is protected from abrasion or cutting, the rescuer is safe from falling while placing the edge protection, the edge protection is secure, and the rope or webbing is securely placed on the edge protection. *(NFPA 1006, 5.5.3)*
- Construct a simple rope mechanical advantage system, given life safety rope, carabiners, pulleys, rope grab devices, and auxiliary rope rescue equipment, so that the system constructed can accommodate the load, is efficient, and is connected to an anchor system and the load. *(NFPA 1006, 5.5.4)*
- Direct a team in the operation of a simple rope mechanical advantage system in a low-angle raising operation, given rescue personnel, a minimum load haul distance of 3 m (10 ft), an established rope rescue system incorporating a simple rope mechanical advantage system, a load to be moved, and an anchor system, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, commands are used to direct the operation, and potential problems are identified, communicated, and managed. . *(NFPA 1006, 5.5.5)*
- Direct a team in the operation of a simple rope mechanical advantage system in a high-angle raising operation, given rescue personnel, an established rope rescue system incorporating a simple rope mechanical advantage system, a

minimum load haul distance of 3 m (10 ft), a load to be moved, and an anchor system, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, commands are used to direct the operation, and potential problems are identified, communicated, and managed. . (NFPA 1006, 5.5.6)

- Function as a litter tender in a low-angle lowering or hauling operation, given a rope rescue system, a minimum lower or haul distance of 6.1 m (20 ft), life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, the means of attachment to the rope rescue system is secure, and the terrain is negotiated while minimizing risks to equipment or persons. . (NFPA 1006, 5.5.7)
- Construct a lowering system, given an anchor system, life safety rope(s), descent control device, and auxiliary rope rescue equipment, so that the system can accommodate the load, is efficient, is capable of controlling the descent, is capable of holding the load in place or lowering with minimal effort over the required distance, and is connected to an anchor system and the load. . (NFPA 1006, 5.5.8)
- Direct a lowering operation in a low-angle environment, given rescue personnel, an established lowering system, a minimum load travel distance of 3 m (10 ft), and a load to be moved, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, rope commands are used to direct the operation, and potential problems are identified, communicated, and managed. . (NFPA 1006, 5.5.9)
- Direct a lowering operation in a high-angle environment, given rescue personnel, an established lowering system, a minimum load travel distance of 3 m (10 ft), and a load to be moved, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, rope commands are used to direct the operation, and potential problems are identified, communicated, and managed. . (NFPA 1006, 5.5.10)
- Construct a belay system, given life safety rope, anchor systems, personal protective equipment, and rope rescue equipment, so that the system is capable of arresting a fall, a fall will not result in system failure, the system is not loaded unless actuated, actuation of the system will not injure or otherwise incapacitate the belayer, the belayer is not rigged into the equipment components of the system, and the system is suitable to the site and is connected to an anchor system and the load. . (NFPA 1006, 5.5.11)

- Operate a belay system during a lowering or raising operation in a high-angle environment, given an operating lowering or hauling system, a minimum load travel distance of 3 m (10 ft), a belay system, and a load, so that the belay line is not loaded during operation of the primary rope rescue system, the belay system is prepared for actuation at all times during the operation, the belayer is attentive at all times during the operation, the load's position is continually monitored, and the belayer moves rope through the belay device as designed. . (*NFPA 1006, 5.5.12*)
- Belay a falling load in a high-angle environment, given a belay system and a dropped load, so that the belay line is not taut until the load is falling, the belay device is actuated when the load falls, the fall is arrested, the belayer utilizes the belay system as designed, and the belayer is not injured or otherwise incapacitated during actuation of the belay system. . (*NFPA 1006, 5.5.13*)
- Conduct a system safety check, given a rope rescue system and rescue personnel, so that a physical/visual check of the system is made to ensure proper rigging, a load test is performed prior to life-loading the system, and verbal confirmation of these actions is announced and acknowledged before life-loading the rope rescue system. . (*NFPA 1006, 5.5.14*)