



Pennsylvania State Fire Academy

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Minimum Standard for Accreditation (MSA)

Revised April 2010

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Course Title: Ice Rescue and Emergency Response – NFPA 1670 Technician Level

SFA Course Code: IRER (old FCIR)

Length of Course: 16 Hours

Lecture/Lab Breakdown: 8/8

Prerequisites: WRER (Water Rescue & Emergency Response – NFPA 1670 Operations Level)

Referenced Texts: Ice Rescue and Emergency Response Instructor's Manual

Course Goal: This program is designed to familiarize the rescuer with the safest and most effective method of dealing with an ice emergency.

Description of Course: Classroom and practical hands-on training includes: how to evaluate and respond to ice related emergencies, how to identify ice conditions, use of ice rescue equipment and ice rescue techniques (self, shore, boat, and direct contact).

Description of Methodology: Audiovisual presentation, lecture, demonstration, pool & outdoor practical exercises.

Student Equipment/Supply Needs: Note taking material, USCG approved PFD, water rescue helmet, appropriate PPE (dry suit or ice rescue suit if available) and thermal layering.

Equipment/Audiovisual/Supply requirements: Classroom, screen, and digital projector. Harnesses, boat, ice staffs, ice awls, throwbags, chainsaw, webbing, carabiners, and ring buoys.

Special Notes & Conditions: The training site shall be a pond or lake with sufficient depth that students do not touch the bottom while performing their skills. *Never utilize moving bodies of water*

Enrollment/Instructor Requirements:

Two (2) instructors shall be present for each 12 students in a class. (i.e 1-12 students = 2 instructors; 12-16 students = 3 instructors). Additional safety, logistic and medical personnel highly recommended for course support during practical exercises.

Minimum 18 years of age.

COURSE OUTLINE

| | <u>Topic</u> | <u>Time</u> |
|---------|----------------------------------|--------------------|
| Unit 1: | Introduction | 2:00 |
| Unit 2: | Ice Characteristics | 1:00 |
| Unit 3: | Personal Equipment | 1:00 |
| Unit 4: | Ice Rescue Equipment Techniques | 2:00 |
| Unit 5: | Medical Considerations | 1:00 |
| | Test, Pool and Outdoor Practical | 9.00 |
| | Total Time | 16:00 |

Competency Evaluation Mechanism: Complete all risk management legal forms, attend all course components, meet swim standard requirements, participate in and demonstrate all skills as detailed on the Advanced Line Systems Rescue Skill Sheet and score of 80% of the written exam.

Course Objectives:

- Discuss five planning considerations a department should consider when preparing for an ice rescue emergency.
- Analyze an ice related emergency and discuss how planning was or was not involved.
- Identify the temperature water must reach to become isothermic.
- Cite five factors that influence ice formation.
- Describe why ice does not form a universal thickness on a body of water.
- Identify four ice types/conditions that identify weak ice.
- List the recommended thickness guideline necessary to support one person on clear ice.
- Describe the principle of dressing in layers.
- Identify how the head, hands and feet should be protected.
- Properly don a cold-water exposure suit or dry suit.
- Identify four pieces of personal protection equipment used for ice safety and travel.
- Explain the importance of wearing a customized PFD and helmet.
- List three hazards of using a specialized rescue vest.
- List four types of personal protective equipment (PPE) for blood borne pathogens.
- Identify two types of hypothermia.
- List four methods of body heat loss.
- Discuss the care guidelines for hypothermia treatment.

- List three medical concerns associated with water related emergencies
- Cite five factors that increase a person's chance of survival when in cold water.
- Define drowning and identify the three types
- Cite three patient evacuation techniques.
- Describe how to package a patient with hypothermia.
- Cite four factors to assess before determining which rescue technique to employ.
- List the rescue sequence from the safest to the most dangerous technique.
- Identify two advantages and disadvantages for the following equipment:
 - Throw bags/heaving line
 - Ring buoy
 - Ice awls and staff
 - Boats
 - Exposure suits
- Describe three types of equipment used for:
 - Shore based rescue
 - Boat based rescue
 - Ice based or direct contact rescue
- Tie a figure eight loop and water knot.
- Properly tie and tether a rescuer with a harness system

Questions/Comments: Contact the PA Fish & Boat Commission