

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF EMERGENCY MANAGEMENT
SEARCH AND RESCUE PROGRAM'S
STANDARDS FOR
FIELD TEAM MEMBER (FTM)

I. PURPOSE

- A. The Field Team Member (FTM) standards were developed to define the minimum requirements necessary to perform the following functions in the general environment of the Commonwealth of Virginia.
 - 1. Missing person search
 - 2. General investigation related to missing person search
 - 3. Non-technical Stokes litter evacuation
- B. The FTM should be capable of performing these functions anytime of the year, day or night, and in all weather conditions experienced in the Commonwealth. In order to accomplish this, the FTM should be able to:
 - 1. Understand the search and rescue system used in the Commonwealth
 - 2. Navigate accurately on land
 - 3. Survive an unexpected wilderness emergency

II. COURSE ADMISSION CRITERIA

A. Age

Minimum age for FTM is 16, with parental consent.

B. Affiliation and Experience

Applicants for FTM training should hold active membership in a professional SAR group, or an established emergency services organization such as a law enforcement agency, a rescue squad, or a fire department. First consideration for training

will be given to these applicants. Additional factors such as prior experience, potential for use of training, number of SAR missions per year and other criteria may be considered.

III. KNOWLEDGE AND PERFORMANCE EXPECTATIONS

The FTM will demonstrate an understanding of the items listed under each subject. Some items may require the performance of manual skills.

A. SAR Operations

1. Describe how search missions are originated.
2. List several factors that may result in an aircraft being listed as missing.
3. List several resources that might be utilized during a SAR event.
4. Describe the basic principles of the Incident Command System and define the major staff functions.
5. Describe proper searcher conduct as it relates to law enforcement, family of the missing subject(s) and the media.
6. Describe general safety considerations in SAR operations, including dealing with critical stress.

B. Legal Aspects of Search and Rescue

1. Describe responsibilities for search and rescue as defined by the National SAR Plan.
2. Describe responsibilities at the state level.
3. Demonstrate an understanding of the basic provisions of the "Good Samaritan" law.
4. Define the terms "implied consent," "expressed consent," "informed consent" and "abandonment."
5. Define several factors necessary to prove negligence.
6. Describe several methods of reducing liability exposure.
7. Describe the circumstances when entry upon private property may be justified.
8. Define the problems involved with this action and possible solutions.

C. Personal Equipment

1. Explain the basic principles of clothing selection for the following items:
 - a. Choice of clothing material as it relates to the body's needs and environmental conditions
 - b. Wetproof, windproof
 - c. Layering
 - d. Loft

2. Explain the selection principles for these items.
 - a. Boots
 - b. Sleeping bag
 - c. Ground protection and insulation
 - d. Backpack/daypack
 - e. Tents and emergency shelters
 - f. Personal safety items
 - g. Fire starting aids
 - h. Items for signaling and navigation
 - i. Light sources and batteries
 - j. Food and water

D. Wilderness Survival

1. Define short-term vs. long-term survival.
2. Describe several problems commonly encountered on SAR missions that may lead to a survival situation.
3. Describe the psychological factors that may affect survival ability.
4. Explain the "energy reserve" concept.
5. Define average daily food and water requirements.
6. Describe the body's physiologic response to both cold and heat stress.
7. Define the following environmentally-related problems and their recognition, treatment and prevention.
 - a. Hypothermia
 - b. Hyperthermia
 - c. Frostbite
 - d. Dehydration
8. Describe several ways to help prevent environmental emergencies.
9. Be able to develop an action plan for a given wilderness emergency scenario.
10. Demonstrate the ability to bivouac in any type weather conditions, without significantly affecting

functional ability.

E. Land Navigation

1. Define the following terms or concepts.
 - a. Latitude and longitude
 - b. Degrees, minutes and seconds
 - c. True north and magnetic north
 - d. Declination
2. Demonstrate the ability to read and interpret topographic map border information, colors and symbols.
3. Describe the various parts of the compass and demonstrate the ability to use it to plot a course on a map, including northing and declination correction.
4. Define the following plotting methods or grid systems and demonstrate the ability to use them to determine the coordinates for a given point.
 - a. UTM
 - b. ASRC
5. Demonstrate the ability to perform the following navigational functions.
 - a. Obtain and follow a simple compass bearing.
 - b. Determine a reciprocal.
 - c. Move around obstacles.
 - d. Measure distance by pacing.
 - e. Determine position by terrain feature identification.
6. Describe how to use these orienteering concepts.
 - a. Catching features
 - b. Collecting features
 - c. Attack points
 - d. Aiming off

F. Search Skills

1. Demonstrate an understanding of these search tactics.
 - a. Attraction
 - b. Containment
 - c. Survey search
 - d. Scratch search (Hasty search)
 - e. Sweep search (Open grid search)
 - f. Line search (Closed grid search)
 - g. Sign cutting
 - h. Interviewing

2. Describe techniques for increasing clue awareness.
3. Describe procedures for working with search dogs, tracking/trailing dogs and mantrackers.
4. Describe the primary phases of a SAR event.
5. Define the functions of these field team positions.
 - a. Field Team Member
 - b. Field Team Leader
 - c. Medical Officer
 - d. Rescue Specialist
 - e. Radio Operator

G. Incident Site Procedures

1. Define the proper approach to an incident site.
2. Describe the proper methods of use to adequately secure an incident site.
3. Explain the importance of clue preservation at both an aircraft crash site and a possible crime scene.
4. Explain the importance of the accurate documentation of events at an incident site.
5. Describe several hazards commonly associated with an aircraft crash site.

H. Ropes and Technical Hardware

1. Describe the several types of rope commonly used in wilderness rescue work, their construction, use and care.
2. Demonstrate the ability to correctly tie these knots.
 - a. Simple overhead
 - b. Overhand bend (Ring bend, water knot)
 - c. Simple Figure 8
 - d. Figure 8 loop
 - e. Figure 8 bend (follow through)
 - f. Square knot
 - g. Prusik
 - h. Double fisherman or barrel bend

I. Litter Techniques

1. Demonstrate these litter techniques with appropriate calls.
 - a. Patient loading
 - b. Lift, lower and carry
 - c. Rotation
 - d. Laddering, including toe nailing

J. Helicopter Operations

1. Describe the hazards to ground personnel working around a helicopter.
2. Describe the considerations for selecting and preparing an LZ.

K. Field Communications

1. Describe the use and dangers of these signaling devices.
 - a. Aerial flares
 - b. Smoke
 - c. Signal mirrors
 - d. Fires
2. Define the special problems associated with the field use of portable radios and list some possible solutions.
3. Describe basic radio procedures including courtesy, security, brevity, use of the phonetic alphabet and problems with 10 codes.

IV. TEST METHODS

A. Written test

1. The test consists of at least 100 multiple choice questions representative of the material presented in the course.
2. The test is administered at the beginning of the course as a pre-test, and again at the end of the course as a post-test. Students who pass the pre-test are not required to take the post-test.

Passing score is 80 percent.

3. Failure of the post-test constitutes failure of the course.

B. Practical test

1. The practical test consists of several stations that test certain skills presented in the course. Students are requested to perform those skills in the presence of an examiner.
2. Each station has specific requirements and well defined criteria for pass/fail.
3. A student who fails a practical station(s) may repeat

that station(s) once on the same day. Failure of a second attempt constitutes failure of the course.

C. Retesting

1. Students who complete the required training, but fail either the written or practical test, are eligible for retesting.
2. Each student is responsible for making arrangements for retesting with the course coordinator on an individual basis.
3. If a student fails any portion of a retest, the record reverts to inactive and the course must be repeated or challenged.

V. CERTIFICATION PROCEDURES

A. The following criteria must be met in order to qualify for certification as a Field Team Member.

1. Attend a complete FTM training course
2. Pass the FTM written test with a score of at least 80 percent
3. Pass the FTM practical test within the limits defined for each station

B. Equivalent Training and/or Experience

1. Those individuals who, by virtue of past training and experience, possess the necessary knowledge and skills may be permitted to challenge the written and practical exams and be certified as an FTM, provided all prerequisite requirements are met.
2. Members of recognized search and rescue organizations who receive their training from that organization and who hold a valid organizational certification may apply for DES certification as an FTM, provided the organization's training standards meet or exceed the DES program standards for FTM certification. These applications will be processed on a case-by-case basis.

C. Certification

1. Upon successful completion of training, a certificate will be issued to the trainee by DES. This certificate does not constitute a license to practice the skills taught in the training program, but signifies only that the person holding the certificate has met an established standard of knowledge and performance and should be able to function in a competent manner at the level indicated on the certificate.

2. Certification will be valid for three (3) years from date of issue.

VI. RECERTIFICATION PROCEDURES

A. Notification of Expiration of Certification

1. Six (6) months prior to the expiration date, a letter will be sent noting the expiration date and defining the recertification procedure.
2. A second letter will be sent during the expiration month stating that if recertification is not accomplished within six (6) months of expiration, certification will be dropped.
3. Six (6) months after expiration, the record will revert to inactive.

B. Procedure

1. Certification may be renewed by successfully completing the written and practical tests, and meeting any other requirements for certification for Field Team Member that exist at the time of recertification.
 2. Each person is responsible for making individual arrangements for recertification testing with the DES SAR Coordinator.
 3. Certification will be valid for (3) years from date of issue.
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APPENDIX A

FIELD TEAM MEMBER (FTM) PERSONAL EQUIPMENT LIST

1. Windshell jacket with hood
2. Waterproof jacket or parka with hood
(A Gore-Tex or similar jacket can serve for both items 1 and 2.)
3. Rain chaps or rain pants
(Add gaitors for winter.)
4. Heavy wool shirts or sweaters as required
5. Wool pants
6. Long underwear of wool, silk, polypro or other suitable synthetic material

- (Cotton thermal underwear is not acceptable.)
7. Wool stocking cap or balaclava
(A scarf is recommended if a stocking cap is used.)
 8. Heavy wool socks with lighter-weight liner socks
 9. Leather gloves with wool liners
(Mittens required for extremely cold weather.)
 10. Heavy weight backpacking or mountaineering boots with a suitable lug sole recommended
(Combat-type boots are acceptable.)
 11. Backpack large enough for day pack use
 12. One quart minimum canteen or water bottle
 13. Pocket knife
 14. Whistle
 15. Orienteering-type compass
 16. Flashlight or headlamp with alkaline batteries, spare batteries and spare bulb (Headlamp preferred.)
 17. Waterproof matches or disposable lighter
 18. Personal first aid kit
 19. Storm shelter: Tube tent, space blanket, lightweight tarp
 20. At least one (1) 30-gallon leaf bag
 21. A sleeping bag, an Ensolite or similar sleeping pad, and a suitable shelter will be needed for overnight bivouacs.
 22. At least a one-day supply of quick-energy food
 23. Suggested additional pack items:

Zip-lock bags
Parachute cord
Toilet paper
Wet wipes
Moleskin
Disposable space blanket
Backpacking stove
Mess kit
Signal mirror
Signal smokes
Aerial flares
Small note book and pen
Insect repellent
Iodine-type water purification tablets