To: Ronny J. Coleman, Chairman  
Statewide Training and Education Advisory Committee

From: Andrew Henning, Division Chief, State Fire Training

Subject/Agenda Action Item: Fire Fighter I Professional Qualifications and Curriculum Update

Recommended Actions: Motion to Approve Update to Fire Fighter I Curriculum

Background Information:


State Fire Training is required to update to the latest edition of NFPA standards within 2 years of publication, based on our accreditation with National Professional Qualifications Board (Pro Board). The 2016 edition of NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications was published on December 4, 2015.

Analysis/Summary of Issue:

State Fire Training Staff evaluated the changes between the 2012 and 2016 editions of NFPA 1051 to determine if the wildland fire fighter portion of the Fire Fighter I curriculum needed to be revised based on changes to the professional qualifications. After a staff review there were only editorial changes to the Fire Fighter I professional qualifications. SFT updated all referenced documents (CIRM, Course Plan, Task Book, CTS Guide) to reflect the edition changes due to NFPA 1051. SFT staff did not find any changes that would increase the course time or cost.

The following table shows the changes that were made in the CTS Guide and the Course Plan:

“The Department of Forestry and Fire Protection serves and safeguards the people and protects the property and resources of California.”
<table>
<thead>
<tr>
<th>Certification:</th>
<th>Wildland Fire Fighter I</th>
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<tbody>
<tr>
<td>CTS:</td>
<td>5-1</td>
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<td>Block:</td>
<td>RKS</td>
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<tr>
<td>Change:</td>
<td>Added item 7:</td>
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<td></td>
<td>7. Describe first aid as referenced in NFES 1077, Incident Response Pocket Guide (IRPG), and NFES 2943, Wildland Fire Incident Management Field Guide</td>
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<td>JPR</td>
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<tr>
<td>Change:</td>
<td>Modify Item 1:</td>
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<tr>
<td></td>
<td>1. Recognize hazards and unsafe situations, <em>promptly</em> communicate hazard(s) and unsafe condition(s) to a supervisor, and take appropriate action.</td>
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<tr>
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<td>Modify Item 2 and 4:</td>
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<tr>
<td></td>
<td>2. Identify safety considerations <em>when burning out</em></td>
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<td></td>
<td>4. Use basic ignition devices <em>only under direct supervision</em></td>
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</table>

In 2013, State Fire Training coordinated the development of this CTS guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this CTS guide for adoption by the Office of the State Fire Marshal (OSFM).

The CTS guide and supporting documents were revised in 2017 to reflect the changes in the 2016 edition of NFPA 1051.
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State Fire Training

Mission
To enable the California Fire Service to safely protect life and property through education, training, and certification.

The California Fire Services Training and Education System
The California Fire Service Training and Education System (CFSTES) were established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California fire service. The authority for the central coordination of this effort is vested in the Training Division of the California State Fire Marshal’s Office with oversight provided by the State Board of Fire Services.

CFSTES facilitates, coordinates, and assists in the development and implementation of standards and certification for the California fire service. CFSTES:
1. Administers the California Fire Academy System
2. Provides accredited courses leading to certification and approved standardized training programs for local and regional delivery
3. Administers the national accreditation process in California
4. Publishes certification training standards, course plans, and a capstone task book for each certified level in the California fire service

CFSTES is a fire service system developed by the fire service, for the fire service. It is only as successful and effective as the people involved in it.
Acknowledgments

State Fire Training appreciates the hard work and accomplishments of those who built the solid foundation on which this program continues to grow.

State Fire Training gratefully acknowledges the following individuals and organizations for their diligent efforts and contributions that made the development and publication of this document possible.

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**Mike Richwine**  
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*Sacramento State*
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Partners

State Fire Training also extends special acknowledgement and appreciation to the Conference and Training Services Unit with the College of Continuing Education at California State University, Sacramento, for its ongoing meeting logistics and curriculum development support, innovative ideas, and forward-thinking services. This collaboration is made possible through an interagency agreement between CAL FIRE and Sacramento State.

2017 Update

Laura Garwood  
*Editor*  
*Sacramento State*
How to Read a CTS Guide

State Fire Training develops a Certification Training Standards (CTS) Guide for a variety of job functions in the fire service such as fire fighter, driver/operator, fire instructor, and company officer. The CTS guide lists the requisite knowledge and skills and the job performance requirements a person is expected to complete in order to become certified in a specific function. CTS guides are appropriate for fire service personnel and individuals in related occupations pursuing State Fire Training certification.

Each CTS guide serves as a foundation for the certification programs recommended for adoption by the Office of the State Fire Marshal. Any certification program must be based on job-related knowledge and measurable performance standards. To master the knowledge and skills needed for specialized operations, individuals will require additional training to augment the performance standards included in the CTS guide.

Within the CTS guide, it is impossible to capture the different policies and procedures of each organization in the California fire service. Individuals aspiring to meet State Fire Training’s certification training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own departments or jurisdictions.

Format

Each certification training standard included in the CTS guide includes the following:

Section Heading
The section heading describes a general category for a group of training standards. For example, the Fire Marshal CTS includes the following sections: Administration, Risk Management, Community Relations, Professional Development, Regulatory Programs, Fire and Life Safety, and Investigation. Each section contains one or more individual training standards.

Training Standard Title
The training standard title provides a general description of the performance requirement contained within the standard.

Authority
The CTS guide references each standard with one or more paragraphs of the corresponding National Fire Protection Association (NFPA) Professional Qualifications. This ensures that each fire service function within California's certification system meets or exceeds NFPA standards.
When California requirements exceed the NFPA standard, the CTS guide cites the Office of the State Fire Marshal as the authority and prints the corresponding information in *italics*.

**Given**
This section lists the objects, equipment, materials, or facilities an individual needs in order to acquire the requisite knowledge and skills or to accomplish the job performance requirement(s) within a training standard.

**Requisite Knowledge and Skills**
This section lists the knowledge and skills that an individual must acquire in order to accomplish the job performance requirement(s) within a training standard.

This section does not include NFPA requisite knowledge or skills that are too general to teach or that individuals should develop through life experiences. For example, a training standard would not list “communicate orally and in writing” or “ability to relate interpersonally” unless they specifically apply to a job performance requirement about acquiring communication skills or developing interpersonal relationships.

**Job Performance Requirements**
This section includes one or more written statements that describe a specific job-related task and define measurable or observable outcomes. After an individual completes all coursework and requisite requirements, the capstone task book process verifies completion of job performance requirements.

**Content**
In addition to the individual certification training standards, the CTS guide also includes State Fire Training Content and Supplemental Tracking History pages.

**State Fire Training Content**
This table documents any significant revisions made by State Fire Training to the NFPA standards in the development of this CTS guide. This table is used to justify content additions and advise the course plan development team.

**Supplemental Tracking History**
This table documents any revisions made to the CTS guide since the documents oriental creation. This will include changes due to new editions of NFPA professional qualifications, or changes made outside of the five-year NFPA revision cycle.
Fire Fighter I

Section 1: General

1-1: General Knowledge Requirements

Authority
1. NFPA 1001 Standard for Fire Fighter Professional Qualifications 2013
   - Paragraph 5.1.1
2. Office of the State Fire Marshal

Given
1. None identified

Requisite Knowledge and Skills
1. Describe the organization of the fire department
2. Define the role of Fire Fighter I in the organization
3. Describe the mission of the fire service
4. Describe fire department standard operating procedures and rules and regulations as they apply to the Fire Fighter I
5. Discuss the value of fire and life safety initiatives in support of the fire department mission to reduce fire fighter line of duty injuries and fatalities
6. Identify the role of other agencies as they relate to the fire department
7. Identify aspects of the fire department’s member assistance program
8. Discuss the importance of physical fitness and a healthy lifestyle to the performance and duties of a fire fighter
9. Define the critical aspects of NFPA 1500, Standard on Fire Department Occupational Safety and Health Program
10. Locate information in departmental documents and standard or code materials

Job Performance Requirements
There are no job performance requirements identified for this training standard.
1-2: Operating in a Confined Space

Authority
1. Office of the State Fire Marshal
   • CCR Title 8, Section 5157 & 5158

Given
1. A confined space

Requisite Knowledge and Skills
1. Describe the codes that affect operations within confined spaces
2. Identify confined spaces and permit required confined spaces
3. Identify hazards associated with confined spaces
4. Identify equipment and procedures required to deal with confined space rescue safely and legally
5. Describe operational positions and their responsibilities as set forth by Cal/OSHA

Job Performance Requirements
1. Operate at a confined space or permit-required confine space and identify when a confined space is present, hazards are recognized and mitigated, equipment is secured, procedures are followed, and Cal/OSHA position are utilized.
1-3: Operating Within the Incident Command System

Authority
1. Office of the State Fire Marshal
   • Title 19. Public Safety, Chapter 1. Standardized Emergency Management System (SEMS)

Given
1. An incident
2. An incident action plan

Requisite Knowledge and Skills
1. Describe the application of the Incident Command System
2. Explain Incident Command System organizational principles and elements
3. Identify Incident Command System positions and responsibilities
4. Identify Incident Command System facilities and functions
5. Describe the Incident Command System planning process
6. Describe the basic National Incident Management System

Job Performance Requirements
1. Operate within the Incident Command System on an incident so that organizational elements are recognized, positions and responsibilities are identified, facility needs are met, and the incident is managed.
Section 2: Fire Department Communications

2-1: Initiating Response to an Emergency

Authority
   • Paragraph 5.2.1
2. Office of the State Fire Marshal

Given
1. The report of an emergency
2. Fire department standard operating procedures
3. Communications equipment

Requisite Knowledge and Skills
1. Explain the procedures for reporting an emergency
2. Identify department standard operating procedures for taking and receiving alarms
3. Identify radio codes, procedures, and clear text for communications
4. List information needs of dispatch center
5. Identify the different types of fire department communications equipment
6. Operate fire department communications equipment
7. Relay information
8. Record information

Job Performance Requirements
1. Initiate the response to a reported emergency, obtain all necessary information, correctly operate all communications equipment, and promptly and accurately relay information to the dispatch center.
2-2: Operating a Phone in a Non-emergency Situation

Authority
- Paragraph 5.2.2

Given
1. A fire department phone

Requisite Knowledge and Skills
1. Describe fire department procedures for answering non-emergency phone calls
2. Operate fire station telephone and intercom equipment

Job Performance Requirements
1. Receive a telephone call using correct procedures for answering the phone and relaying information.
2-3: Operating Fire Department Radios

Authority
   - Paragraph 5.2.3
2. Office of the State Fire Marshal

Given
1. A fire department radio
2. Fire department *standard* operating procedures

Requisite Knowledge and Skills
1. *Describe fire department* procedures and etiquette for routine *radio* traffic
2. *Describe fire department* procedures and etiquette for emergency *radio* traffic
3. *Describe fire department procedures and etiquette* for emergency *radio* evacuation signals
4. *Identify basic types and operations of fire department radios*
5. *Identify the difference* between routine and emergency *radio* traffic
6. *Operate fire department* radio equipment

Job Performance Requirements
1. Transmit and receive messages via the fire department radio and relay accurate, clear information within the time established by the AHJ.
2-4: Activating an Emergency Call for Assistance

Authority
   - Paragraph 5.2.4
2. Office of the State Fire Marshal

Given
1. Vision-obscured conditions
2. Personal protective equipment
3. Fire department standard operating procedures

Requisite Knowledge and Skills
1. Identify different personnel accountability systems
2. Identify emergency communication procedures
3. Initiate an emergency call in accordance with the AHJ’s procedures
4. Use other methods of emergency calls for assistance

Job Performance Requirements
1. Activate an emergency call for assistance to locate and rescue the fire fighter.
Section 3: Fireground Operations

3-1: Using Structural Personal Protective Ensemble

Authority
   • Paragraph 5.1.2
2. Office of the State Fire Marshal

Given
1. Structural personal protective ensemble

Requisite Knowledge and Skills
1. Identify the components of structural personal protective ensemble
2. Describe the protection provided by structural personal protective ensemble
3. Explain the importance of standards for structural personal protective ensemble
4. Describe the limitations of structural personal protective ensemble
5. Identify the proper method for inspecting, cleaning, and maintaining structural personal protective ensemble
6. Don structural personal protective ensemble
7. Doff structural personal protective ensemble
8. Prepare structural personal protective ensemble for reuse

Job Performance Requirements
1. Don structural personal protective ensemble so that all elements of the ensemble are worn according to manufacturer guidelines, within 60 seconds.
3-2: Operating a Self-Contained Breathing Apparatus

Authority

• Paragraph 5.3.1

Given
1. Self-contained breathing apparatus
2. Other personal protective equipment

Requisite Knowledge and Skills
1. Identify conditions requiring respiratory protection
2. Describe the uses and limitations of a self-contained breathing apparatus
3. Identify the components of a self-contained breathing apparatus
4. Describe different donning procedures
5. Describe different breathing techniques
6. Describe indications for and emergency procedures used with a self-contained breathing apparatus
7. Describe operational inspection for a self-contained breathing apparatus
8. Identify physical requirements of the self-contained breathing apparatus wearer
9. Demonstrate different controlled breathing techniques
10. Replace self-contained breathing apparatus air cylinders
11. Use a self-contained breathing apparatus to exit through restricted passages
12. Initiate and complete emergency procedures in the event of self-contained breathing apparatus failure or air depletion
13. Perform operational inspection for self-contained breathing apparatus
14. Complete donning procedures

Job Performance Requirements
1. Use a self-contained breathing apparatus during emergency operations, correctly don and activate a self-contained breathing apparatus within 60 seconds, use controlled breathing techniques, activate emergency techniques and procedures if the self-contained breathing apparatus fails, recognize low-air warnings, avoid intentionally compromising respiratory protection, and exit hazardous areas prior to air depletion.
3-3: Responding on an Apparatus

Authority
  • Paragraph 5.3.2

Given
1. Personal protective clothing
2. Other necessary personal protective equipment
3. An apparatus

Requisite Knowledge and Skills
1. Describe mounting and dismounting procedures for riding a fire apparatus
2. Identify hazards and ways to avoid hazards associated with riding an apparatus
3. Describe prohibited practices
4. Identify different types of department personal protective equipment and their uses
5. Use each piece of provided safety equipment

Job Performance Requirements
1. Respond on an apparatus to an emergency scene, correctly mount and dismount the apparatus, use seat belts while the vehicle is in motion, and correctly use other personal protective equipment.
3-4: Operating at an Emergency Scene

Authority
  •  Paragraph 5.3.3

Given
1. *Personal* protective equipment
2. Traffic and scene control devices
3. Structure fire and roadway emergency scenes
4. Traffic hazards
5. Downed electrical wires
6. An assignment
7. Standard operating procedures
8. *An apparatus*

Requisite Knowledge and Skills
1. *Identify* potential hazards involved in operating on emergency scenes including vehicle traffic, utilities, and environmental conditions
2. *Describe* proper procedures for *mounting and* dismounting an apparatus in traffic
3. *Describe* procedures for safe operation at emergency scenes
4. *Identify* the protective equipment available for members’ safety on emergency scenes and work zone designations
5. Use personal protective clothing
6. Deploy traffic and scene control devices
7. Dismount an apparatus
8. Operate in the protected work areas as directed

Job Performance Requirements
1. Establish and operate in work areas at emergency scenes, follow procedures, wear protective equipment, establish protected work areas as directed using traffic and scene control devices, and perform assigned tasks only in established protected work areas.
3-5: Forcing Entry into a Structure

Authority
  • Paragraph 5.3.4

Given
1. Personal protective equipment
2. Tools
3. An assignment
4. Doors, windows, and walls

Requisite Knowledge and Skills
5. Describe basic construction of typical doors, windows, and walls within the department’s community or service area
6. Describe types and uses of hand and power tools
7. Describe the operation of doors, windows, and locks
8. Identify the dangers associated with forcing entry through doors, windows, and walls
9. Transport and operate hand and power tools
10. Force entry through doors, windows, and walls using assorted methods and tools

Job Performance Requirements
1. Remove barriers and produce an opening that is safe and ready for use by forcing entry into a structure using tools as designed.
3-6: Operating in a Hazardous Area

Authority
   - Paragraph 5.3.5
2. Office of the State Fire Marshal

Given
1. Vision-obscured conditions
2. Personal protective equipment

Requisite Knowledge and Skills
1. Describe emergency evacuation methods for fire fighter survival
2. Define what constitutes a safe haven
3. Identify elements that create or indicate a hazard
4. Identify emergency procedures for loss of air supply
5. Demonstrate emergency evacuation methods for fire fighter survival
6. Operate as a team member in vision-obscured conditions
7. Locate and follow a guide line
8. Evaluate areas for hazards
9. Identify a safe haven

Job Performance Requirements
1. As a team, exit a hazardous area without endangering others, maintain team integrity, and find a safe haven before the air supply is exhausted.
3-7: Working with Ground Ladders

Authority
   - Paragraph 5.3.6
2. Office of the State Fire Marshal

Given
1. Single and extension ladders
2. An assignment
3. Team members, if needed
4. Personal protective equipment

Requisite Knowledge and Skills
1. Identify the uses of ground ladders
2. Identify the types, parts and construction features of ground ladders
3. Identify types of lifts and carries
4. Describe methods used to secure ground ladders
5. Describe proper climbing techniques
6. Describe methods to safely work off ground ladders
7. Describe the hazards associated with setting up ladders
8. Define what constitutes a stable foundation for ladder placement
9. Identify different angles for various tasks
10. Describe safety limits to the degree of angulation
11. Describe what constitutes a reliable structural component for top placement
12. Lift and carry ladders
13. Tie off a halyard
14. Raise and move ladders
15. Extend and lock flies
16. Secure ground ladders
17. Determine that a wall and roof will support the ladder
18. Judge extension ladder height requirements
19. Place the ladder to avoid obvious hazards
20. Demonstrate proper methods to safely work off ground ladders
21. Demonstrate proper climbing techniques

Job Performance Requirements
1. Set up ground ladders, assess hazards, ensure ground ladders are stable and their angles are correct for climbing, extend extension ladders to the necessary height and lock their flies, place the tops of the ladders against reliable structural components, and accomplish the assignment.
3-8: Extinguishing Passenger Vehicle Fires

Authority
   • Paragraph 5.3.7
2. Office of the State Fire Marshal

Given
1. Personal protective equipment
2. Attack line (1½ inch or larger)
3. Hand tools
4. Passenger vehicle

Requisite Knowledge and Skills
1. Describe principles of fire streams as they relate to fighting passenger vehicle fires
2. Identify precautions to be followed when advancing hose lines toward a passenger vehicle
3. List observable results that a fire stream has been properly applied
4. Identify the hazards associated with alternative fuels in passenger vehicle fires
5. Describe dangerous conditions created during a passenger vehicle fire
6. Describe common types of accidents or injuries related to fighting passenger vehicle fires and how to avoid them
7. Describe how to access locked passenger, trunk, and engine compartments
8. Identify methods for overhaul ing a passenger vehicle
9. Identify passenger vehicle fuel types
10. Assess and control fuel leaks
11. Open, close, and adjust the flow and pattern on nozzles
12. Apply water for maximum effectiveness while maintaining flash fire protection
13. Advance 1½-inch or larger diameter attack lines
14. Expose hidden fires by opening all passenger vehicle compartments

Job Performance Requirements
1. Operating as a member of a team, attack a passenger vehicle fire, avoid hazards, identify and control leaking flammable liquids, maintain protection from flash fires, overhaul all vehicle compartments, and extinguish the fire.
3-9: Extinguishing Exterior Fires

Authority
   - Paragraph 5.3.8
2. Office of the State Fire Marshal

Given
1. Fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior
2. Attack lines
3. Hand tools
4. Master stream devices
5. An assignment
6. Personal protective equipment

Requisite Knowledge and Skills
1. Describe the types of attack lines and water streams appropriate for attacking stacked, piled materials, and outdoor fires
2. Identify dangers, such as collapse, associated with stacked and piled materials
3. Describe various extinguishing agents and their effect on different material configurations
4. Identify tools and methods to use in breaking up various types of materials
5. Describe the difficulties related to complete extinguishment of stacked and piled materials
6. Identify water application methods for exposure protection and fire extinguishment
7. Describe dangers such as exposure to toxic or hazardous materials associated with storage building and container fires
8. Identify obvious signs of origin and cause
9. List techniques for the preservation of fire cause evidence
10. Recognize inherent hazards related to the material's configuration
11. Operate handlines or master streams
12. Break up material using hand tools and water streams
13. Evaluate and modify water application for maximum penetration
14. Search for and expose hidden fires
15. Assess patterns for origin determination
16. Evaluate for complete extinguishment

Job Performance Requirements
1. Extinguish fires in exterior Class A materials, protect exposures, stop the spread of fire, avoid collapse hazards, effectively apply water, extinguish the fire, and preserve signs of the origin area(s) and arson.
3-10: Conducting Search and Rescue Operations

Authority
• Paragraph 5.3.9

Given
1. An assignment
2. Vision-obscured conditions
3. Personal protective equipment
4. A flashlight
5. Forcible entry tools
6. Hose lines or guide lines
7. Ladders, when necessary
8. Thermal imaging camera

Requisite Knowledge and Skills
1. Describe the use of forcible entry tools during rescue operations
2. Describe the use of thermal imaging cameras and other search tools
3. Describe the use of ground ladders for rescue operations
4. Identify psychological effects of operating in obscured conditions and ways to manage them
5. Describe methods to determine if an area is tenable
6. Define primary and secondary search techniques
7. Identify team members’ roles and goals in search and rescue operations within a structure
8. Define methods to use and indicators of finding victims
9. Describe victim removal methods (including various carries)
10. Set up and use different types of ladders for various types of rescue operations
11. Rescue a fire fighter whose respiratory protection is not functioning
12. Rescue a person who has no respiratory protection
13. Assess areas to determine tenability

Job Performance Requirements
1. Operating as a member of a team, conduct search and rescue in a structure, maintain team integrity, correctly place ladders when used, search all assigned areas, locate and remove all victims, and avoid compromising team members' safety, including respiratory protection.
3-11: Conducting Structural Fire Fighting Operations

Authority
   - Paragraph 5.3.10
2. Office of the State Fire Marshal

Given
1. An attack line (1½ inch or larger)
2. Ladders, when needed
3. Personal protective equipment
4. Tools
5. An assignment

Requisite Knowledge and Skills
1. Identify types, designs, and uses of fire hoses
2. Identify fittings, tools, and appliances
3. Describe common building materials and construction types
4. Identify the principles of fire streams
5. Describe types, design, operation, nozzle pressure effects, and flow capabilities of nozzles
6. Identify precautions to be followed when advancing hose lines to a fire
7. Describe observable results that a fire stream has been properly applied
8. Identify dangerous building conditions created by fire
9. Identify principles of exposure protection
10. Describe potential long-term consequences of exposure to products of combustion
11. List physical states of matter in which fuels are found
12. List common types of accidents or injuries and their causes
13. Describe the application of each size and type of attack line
14. Define the role of the backup team in fire attack situations
15. Describe attack and control techniques for below, at, and above grade level fires
16. Identify methods for locating and exposing hidden fires
17. Prevent water hammer when shutting down nozzles
18. Open, close, and adjust nozzle flow and patterns
19. Apply water using direct, indirect, and combination attacks
20. Advance charged and uncharged hand lines (1½-inch diameter or larger) up ladders and up and down interior and exterior stairways
21. Extend hose lines
22. Replace burst hose sections
23. Operate charged hand lines of 1½-inch diameter or larger while secured to a ground ladder
24. Couple and uncouple various handline connections
25. Carry hose
26. Attack fires at grade level and above and below grade levels
27. Locate and suppress interior wall and subfloor fires

**Job Performance Requirements**
1. Operating as a member of a team, attack an interior structure fire, maintain team integrity, deploy the attack line for advancement, correctly place ladders when used, gain access into the fire area, effectively apply water, correctly approach the fire using attack techniques that facilitate suppression given the level of the fire, locate and control hidden fires, maintain the correct body posture, recognize and manage hazards, and bring the fire under control.
3-12: Performing Horizontal Ventilation Operations

Authority
- Paragraph 5.3.11

Given
1. An assignment
2. Personal protective equipment
3. Ventilation tools
4. Equipment
5. Ladders

Requisite Knowledge and Skills
1. Describe the principles, advantages, limitations, and effects of horizontal, mechanical, and hydraulic ventilation
2. Describe safety considerations when venting a structure
3. Describe fire behavior in a structure
4. List the products of combustion found in a structure fire
5. Identify the signs, causes, effects, and prevention of backdrafts
6. Describe the relationship of oxygen concentration to life safety and fire growth
7. Transport and operate ventilation tools and equipment and ladders
8. Break windows and door glass and remove obstructions

Job Performance Requirements
1. As a part of a team, perform horizontal ventilation on a structure, free ventilation openings of obstructions, use tools as designed, place ladders and ventilation devices correctly, and clear structure of smoke.
3-13: Performing Vertical Ventilation Operations

Authority
   - Paragraph 5.3.12
2. Office of the State Fire Marshal

Given
1. An assignment
2. Personal protective equipment
3. Ground and roof ladders
4. Ventilation tools

Requisite Knowledge and Skills
1. Describe the methods of heat transfer
2. Describe the principles of thermal layering within a structure on fire
3. List the techniques and safety precautions for venting flat roofs, pitched roofs, and basements
4. Describe basic indicators of potential collapse or roof failure
5. Identify the effects of construction type and elapsed time under fire conditions on structural integrity
6. Describe the advantages and disadvantages of vertical and trench/strip ventilation
7. Transport and operate ventilation tools and equipment
8. Hoist ventilation tools to a roof
9. Cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements and retreat from the area as a team when ventilation is accomplished
10. Sound a roof for integrity
11. Clear an opening with hand tools
12. Deploy roof ladders on pitched roofs while secured to a ground ladder for vertical ventilation

Job Performance Requirements
1. As part of a team, perform vertical ventilation on a structure, position ladders for ventilation, create a specified opening, remove all ventilation barriers, avoid compromising structural integrity, release products of combustion from the structure, and retreat from the area as a team when ventilation is accomplished.
3-14: Performing Overhaul

Authority
   • Paragraph 5.3.13
2. Office of the State Fire Marshal

Given
1. Personal protective equipment
2. Attack line
3. Hand tools
4. A flashlight
5. An assignment

Requisite Knowledge and Skills
1. Describe types of fire attack lines and water application devices most effective for overhaul
2. Discuss water application methods for extinguishment that limit water damage
3. Identify types of tools and methods used to expose hidden fire
4. Discuss dangers associated with overhaul
5. Describe obvious signs of area of origin or arson
6. Identify reasons for protection of fire scene
7. Deploy and operate an attack line for overhaul
8. Remove flooring, ceiling, and wall components to expose void spaces without compromising structural integrity
9. Apply water for maximum effectiveness
10. Expose and extinguish hidden fires in walls, ceilings, and subfloor spaces
11. Recognize and preserve obvious signs of area of origin and arson
12. Evaluate for complete extinguishment
13. Separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination (NFPA 1001: 5.3.14)

Job Performance Requirements
1. Overhaul a fire scene without compromising structural integrity, discover all hidden fires, preserve fire cause evidence, and extinguish the fire.
3-15: Performing Property Conservation Operations

Authority
   - Paragraph 5.3.14
2. Office of the State Fire Marshal

Given
1. Salvage tools and equipment
2. An assignment
3. Personal protective equipment

Requisite Knowledge and Skills
1. Discuss the purpose of property conservation and its value to the public
2. Describe methods used to protect property
3. List types of and uses for salvage covers
4. Describe operations at properties protected with automatic sprinklers
5. Discuss how to stop the flow of water from an automatic sprinkler head
6. Identify the main control valve on an automatic sprinkler system
7. Describe procedures for protecting possible areas of origin and potential evidence
8. Describe forcible entry issues related to salvage
9. Cluster furniture
10. Deploy covering materials
11. Roll and fold salvage covers for reuse
12. Construct water chutes and catchalls
13. Remove water
14. Cover building openings, including doors, windows, floor openings, and roof openings
15. Stop the flow of water from a sprinkler with sprinkler wedges or stoppers
16. Operate a main control valve on an automatic sprinkler system

Job Performance Requirements
1. As a member of a team, conserve property so that the building and its contents are protected from further damage.
3-16: Establishing Water Supply

Authority
  • Paragraph 5.3.15

Given
1. Supply or intake hose
2. Hose tools
3. A fire hydrant, portable water tank, or static water source
4. An apparatus
5. Personal protective equipment

Requisite Knowledge and Skills
1. Describe types and components of municipal and rural water systems
2. Discuss loading and off-loading procedures for a mobile water supply apparatus
3. Describe fire hydrant operations
4. Identify suitable static water supply sources
5. Describe procedures and protocol for connecting to various water sources
6. Hand lay a supply hose
7. Connect and place hard suction hose for drafting operations
8. Deploy portable water tanks as well as the equipment necessary to transfer water between and draft from them
9. Make hydrant-to-engine hose connections for forward and reverse lays
10. Connect a supply hose to a hydrant
11. Fully open and close a hydrant

Job Performance Requirements
1. As a member of a team, connect a fire department engine to a water supply, ensuring tight connections and an unobstructed water flow.
3-17: Operating Portable Extinguishers

Authority
  •  Paragraph 5.3.16

Given
1. A selection of portable fire extinguishers
2. Personal protective equipment

Requisite Knowledge and Skills
1. Describe the classifications of fire
2. Identify the types of, rating systems for, and risks associated with each class of fire extinguisher
3. Discuss the operating methods and limitations of portable extinguishers
4. Select an appropriate extinguisher based on the size and type of fire
5. Safely carry portable fire extinguishers
6. Approach fire with portable fire extinguishers
7. Operate portable fire extinguishers

Job Performance Requirements
1. Choose the correct extinguisher and follow the correct extinguisher-handling techniques to completely extinguish incipient Class A, Class B, and Class C fires.
3-18: Operating Portable Electrical Equipment

Authority
  • Paragraph 5.3.17

Given
1. Fire service electrical equipment
2. An assignment

Requisite Knowledge and Skills
1. Discuss safety principles and practices for portable electrical equipment
2. Identify power supply capacity and limitations
3. Describe light deployment methods
4. Operate department power supply and lighting equipment
5. Deploy cords and connectors
6. Reset ground-fault interrupter (GFI) devices
7. Locate lights for best effect

Job Performance Requirements
1. Illuminate designated areas of the emergency scene and operate all illumination equipment within the manufacturers’ listed safety precautions.
3-19: Securing Utilities

Authority
- Paragraph 5.3.18

Given
1. Tools
2. An assignment
3. Personal protective equipment

Requisite Knowledge and Skills
1. Describe properties, principles, and safety concerns for electricity systems
2. Describe properties, principles, and safety concerns for gas systems
3. Describe properties, principles, and safety concerns for water systems
4. Identify utility disconnect methods
5. Discuss dangers associated with utility disconnect methods
6. Describe use of required safety equipment
7. Identify utility control devices
8. Operate control valves or switches
9. Assess for related hazards

Job Performance Requirements
1. Turn off building utilities in order to safely complete an assignment.
3-20: Working with Ropes and Knots

**Authority**
   - Paragraph 5.3.20
2. Office of the State Fire Marshal

**Given**
1. Personal protective equipment
2. Tools
3. Ropes
4. Webbing
5. An assignment

**Requisite Knowledge and Skills**
1. Identify the types and uses of ropes
2. Identify the types and uses of knots
3. Describe the difference between life safety and utility rope
4. Identify reasons for placing rope out of service
5. List types of knots to use for given tools
6. List types of knots to use for given ropes
7. Describe types of knots to use for given situations
8. Describe hoisting methods for tools and equipment
9. Discuss the use of rope(s) to support response activities
10. Tie knots
11. Hoist tools using specific knots based on the type of tool

**Job Performance Requirements**
1. Tie a knot appropriate for hoisting tools securely and as directed.
Section 4: Preparedness and Maintenance

4-1: Cleaning and Maintaining Tools and Equipment

Authority
• Paragraph 5.5.1

Given
1. Cleaning tools
2. Cleaning supplies
3. An assignment

Requisite Knowledge and Skills
1. Describe types of cleaning methods for various tools and equipment
2. Discuss the correct use of cleaning solvents
3. Identify manufacturers’ or departmental guidelines for cleaning equipment and tools and removal from service
4. Select correct tools to maintain various parts and pieces of equipment
5. Complete recording and reporting procedures

Job Performance Requirements
1. Clean and maintain ladders, ventilation equipment, a self-contained breathing apparatus, ropes, salvage equipment, and hand tools according to manufacturers’ or departmental guidelines; record equipment maintenance; and place equipment in a ready state or report otherwise.
4-2: Cleaning and Maintaining Hose

Authority
   - Paragraph 5.5.2
2. Office of the State Fire Marshal

Given
1. Washing equipment
2. Water
3. Detergent
4. Tools
5. Replacement gaskets

Requisite Knowledge and Skills
1. Describe departmental procedures for inspecting a hose according to manufacturer’s guidelines, noting any defects, and removing it from service
2. Discuss cleaning and maintenance methods
3. Describe types of hose rolls and loads
4. Clean different types of hose
5. Operate hose washing and drying equipment
6. Mark defective hose
7. Replace coupling gaskets
8. Roll hose
9. Reload hose

Job Performance Requirements
1. Clean, inspect, and place fire hose in a ready state for service, and note and correct any damage.
Section 5: Wildland Suppression

5-1: Utilizing Wildland Personal Protective Equipment

Authority
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
   • Paragraph 4.1.1
   • Paragraph 4.1.2
2. Office of the State Fire Marshal

Given
1. Wildland personal protective clothing
2. New generation fire shelter

Requisite Knowledge and Skills
1. Describe the use and limitations of required wildland personal protective clothing
2. Describe the use, limitations, inspection, and care of new generation fire shelter
3. Discuss agency policy on fire shelter use
4. Don wildland personal protective ensemble
5. Deploy new generation fire shelter
6. Describe basic verbal communications
7. Describe first aid as referenced in NFES 1077, Incident Response Pocket Guide (IRPG), and NFES 2943, Wildland Fire Incident Management Field Guide

Job Performance Requirements
1. Don wildland personal protective ensemble within 60 seconds so that all elements of the ensemble are worn according to the manufacturer’s guidelines, and deploy a new generation fire shelter within 30 seconds, while using basic verbal communications.
5-2: Cleaning and Maintaining Wildland Personal Protective Clothing

**Authority**
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
   - Paragraph 4.3.2
2. Office of the State Fire Marshal

**Given**
1. *Wildland personal protective clothing*

**Requisite Knowledge and Skills**
1. *Describe* maintenance of *wildland* personal protective *clothing*
2. *Describe* the inspection of *wildland* personal protective *clothing*
3. Recognize unserviceable items among *wildland* personal protective *clothing*
4. Demonstrate the proper cleaning procedures for *wildland* personal protective *clothing*

**Job Performance Requirements**
1. Maintain wildland personal protective clothing so that it is serviceable and available for use on the fireline; recognize defects and report them to a supervisor.
5-3: Maintaining Wildland Hand Tools and Equipment

Authority
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
   • Paragraph 4.3.3
2. Office of the State Fire Marshal

Given
1. Tools
2. Equipment
3. Agency maintenance specifications

Requisite Knowledge and Skills
1. Describe the inspection of tools
2. Describe the inspection of assigned suppression equipment
3. Recognize unserviceable items
4. Perform required maintenance techniques
5. Sharpen assigned suppression equipment
6. Perform other maintenance techniques for assigned suppression equipment
7. Use required maintenance equipment

Job Performance Requirements
1. Maintain assigned suppression hand tools and equipment so that assigned equipment is serviceable; recognize defects and report them to a supervisor.
5-4: Responding to an Incident

Authority
NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
  • Paragraph 4.5.2

Given
1. An assembly location
2. An assignment
3. Incident location
4. Mode of transportation
5. Time requirements

Requisite Knowledge and Skills
1. Identify equipment requirements
2. Discuss agency time standards
3. Identify special transportation considerations (weight limitations)
4. Discuss agency safety response guidelines
5. Describe operational procedures for various transportation modes

Job Performance Requirements
1. Assemble and prepare for response so that arrival at the incident with the required personnel and equipment meets agency guidelines.
5-5: Recognizing Hazards and Unsafe Situations during Wildland Suppression

**Authority**
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications 2016
   - Paragraph 4.5.3
2. Office of the State Fire Marshal

**Given**
1. A wildland or wildland urban interface fire
2. Standard safety policies and procedures of the AHJ

**Requisite Knowledge and Skills**
1. *Describe* basic wildland fire safety
2. *Describe* basic wildland fire behavior
3. *Describe* basic wildland suppression methods

**Job Performance Requirements**
1. Recognize hazards and unsafe situations, communicate hazard(s) and unsafe condition(s) to a supervisor, and take appropriate action.
5-6: Constructing a Fireline

Authority
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications 2016
   • Paragraph 4.5.4
   • Paragraph 5.3.19
3. Office of the State Fire Marshal

Given
1. A wildland fire
2. Agency line construction standards
3. Suppression tools
4. Water or other suppression agents
5. Equipment

Requisite Knowledge and Skills
1. Describe the principles, techniques, and standards of fireline construction
2. Use hand tools correctly
3. Apply fire streams
4. Apply fire fighting agents

Job Performance Requirements
1. Construct a fireline that conforms to the construction standard.
5-7: Reinforcing a Fireline

Authority
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
   • Paragraph 4.5.5
2. Office of the State Fire Marshal

Given
1. A wildland fire
2. Suppression tools, water, or other suppression agents
3. Equipment

Requisite Knowledge and Skills
1. Describe line improvement techniques
2. Identify safety considerations
3. Describe the types of basic ignition devices
4. Use basic ignition devices only under direct supervision

Job Performance Requirements
1. Locate and abate burning materials and unburned fuels that threaten the fireline’s integrity.
5-8: Operating in the Wildland Urban Interface

Authority
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
   • Paragraph 4.5.6
2. Office of the State Fire Marshal

Given
1. A wildland/urban interface fire
2. Suppression tools
3. Equipment

Requisite Knowledge and Skills
1. Describe wildland fire behavior within the wildland urban interface
2. Describe wildland fuel removal for structure preparation
3. Identify structure defense methods
4. Identify equipment and personnel capabilities within the wildland urban interface
5. Conduct structure defense within the wildland urban interface

Job Performance Requirements
1. Describe methods of reducing the threat of fire exposure to improved properties in order to protect them.
5-9: Conducting Mop-up Operations

Authority
NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
• Paragraph 4.5.7

Given
1. A wildland fire
2. Suppression tools
3. Water or other suppression agents
4. Equipment

Requisite Knowledge and Skills
1. Describe principles, techniques, and standards for mop-up
2. Use basic tools to perform mop-up operations
3. Use basic techniques to perform mop-up operations

Job Performance Requirements
1. Mop up a fire area, locating and extinguishing burning fuels that threaten escape.
5-10: Conducting Patrols

Authority
1. NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications (2016)
   • Paragraph 4.5.8
2. Office of the State Fire Marshal

Given
1. A wildland fire
2. Suppression tools
3. Equipment

Requisite Knowledge and Skills
1. Describe the principles, techniques, and standards of patrol

Job Performance Requirements
1. Patrol and maintain control of the fire area.
Section 6: Hazardous Materials for Fire Fighters

6-1: Recognizing Hazardous Materials/WMDs

Authority
   - Chapter 4
   - Chapter 5
2. Office of the State Fire Marshal

Given
1. A hazardous materials/WMD incident
2. The DOT Emergency Response Guidebook or equivalent guide
3. Shipper/manufacturer papers and contacts
4. Material safety data sheets
5. An assignment

Requisite Knowledge and Skills
1. Define hazardous materials (4.2.1-1)
2. Describe the risks associated with hazardous materials (4.2.1-3)
3. Recognize the presence of hazardous materials in an emergency (4.2.1; 4.2.2; 4.1.1.1)
4. Identify the hazardous materials involved (4.2.3; 4.2.2)
5. Recognize the presence of WMDs (4.2.1)
6. Identify procedures in the event of a WMD incident (4.4.1)
7. Identify the potential outcomes associated with an emergency when hazardous materials are present (5.1.2.2)
8. Identify the types of additional resources for a hazardous materials response (4.4.1-5)
9. Identify mandatory notifications in accordance with AHJ (4.4.2)
10. Describe the role of the fire fighter in the AHJ’s emergency response plan, including site security and control zones (4.4.1)
11. Describe the components of the DOT Emergency Response Guidebook or equivalent guide (4.2.1-3)
12. Identify shipper/manufacturer papers and contacts (4.2.1-10)
13. Identify hazardous materials, their potential hazards, and appropriate personal protective actions using material safety data sheets (4.2.1-10; 5.2.2)
14. Describe the process to preserve evidence (5.4.2)
15. Initiate protective actions to secure the area (4.4.1)
16. Make appropriate notifications as directed by the AHJ (4.1.2.2; 4.2.3)
17. Use the DOT Emergency Response Guidebook or equivalent guide (4.2.1-10)
18. *Use material safety data sheets to identify hazardous materials, their potential hazards, and appropriate personal protective actions (5.4.2)*

**Job Performance Requirements**

1. *Recognize the presence of hazardous materials and the indicators of a hazardous materials incident, correctly identify the materials involved, take personal protective actions, initiate the appropriate notification process, and secure the area.*
6-2: Identifying and Analyzing a Hazardous Materials/WMD Incident

Authority
   - Chapter 3
   - Chapter 5
2. Office of the State Fire Marshal

Given
1. A hazardous materials incident
2. Recognized hazardous materials
3. Fire department standard operating procedures
4. Equipment readily available to personnel
5. An assignment

Requisite Knowledge and Skills
1. Define basic hazardous materials terms (3.3; 3.4)
2. Define health hazards and physical and chemical properties of hazardous materials (5.2.3)
3. Describe basic hazard and risk assessment techniques (5.2.1; 5.2.3; 5.2.4)
4. Describe procedures for initial hazardous materials/WMD response (5.3.1; 5.3.2)
5. Describe the incident command system used in hazardous materials incidents (5.4.3)
6. Discuss standard operating procedures according to AHJ (5.1.2.2)
7. Identify the containers and materials involved using the DOT Emergency Response
   Guidebook or equivalent guide (5.2.1.1)
8. Identify damaged containers and the effects of release (5.2.3)
9. Describe the process of evacuation and/or shelter in place (5.4.1)
10. Determine if these materials have been released (5.2.1)
11. Evaluate the status of each incident response objective at a hazardous materials/WMD
    incident (5.5.1)
12. Communicate the status of a hazardous materials/WMD incident (5.5.2)
13. Limit access to the area (5.4.1)

Job Performance Requirements
1. Protect persons, property, and the environment from further harm, initiate the appropriate
   communications process, and secure the area.
6-3: Performing Emergency Decontamination

Authority
   • Chapter 5
2. Office of the State Fire Marshal

Given
1. A hazardous material incident
2. An individual contaminated by a hazardous material that can be decontaminated by fire fighters in personal protective equipment
3. Equipment readily available to fire fighters
4. Standard operating procedures
5. An assignment

Requisite Knowledge and Skills
1. Identify capabilities and limitations of the personal protective equipment provided by the AHJ (5.3.3; 5.4.4)
2. Identify ways that people, personal protective equipment, apparatus, tools, and equipment become contaminated (5.3.4)
3. Explain the importance and limitations of emergency decontamination procedures (5.3.4)
4. Describe standard operating procedures for emergency decontamination (5.3.4)
5. Prepare an emergency decontamination area (5.3.4)
6. Perform emergency decontamination (5.3.4; 5.4.1)

Job Performance Requirements
1. Perform emergency decontamination procedures, use appropriate personal protective equipment based on the hazard, protect exposures, avoid hazards, decontaminate victims and responders, and identify contaminated items and products of contamination for subsequent control.
6-4: Mitigating a Hazardous Materials/WMD Incident

Authority
   - Chapter 6
2. Office of the State Fire Marshal

Given
1. A hazardous materials incident
2. Recognized hazardous materials
3. Department standard operating procedures
4. Equipment readily available to personnel
5. An assignment
6. Personal protective equipment

Requisite Knowledge and Skills
1. Describe product control operations including absorption, adsorption, damming, diking, dilution, retention, remote valve shutoff, and vapor dispersion (6.6.3.1)
2. Identify tools and equipment for product control (6.6.4.1)
3. Explain the technical decontamination process, according to AHJ (6.4.2.2)
4. Perform basic control, containment, and confinement operations within the capabilities of the AHJ’s resources and personal protective equipment (6.6.4.1)

Job Performance Requirements
Perform basic control, containment, and confinement techniques to control hazardous materials release, and protect fire fighters from contamination.
Supplemental Tracking History

Code Key

Blocks
- G = Given
- RKS = Requisite Knowledge and Skills
- JPR = Job Performance Requirements
- NCTS = New certification training standard

Sources
- [ACRONYM = Title]
- [ACRONYM = Title]
- [ACRONYM = Title]

Certification: Fire Fighter I

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Changes
- New text shown in underline.
- Deleted text shown in strikeout.

September 2017

The September 2017 changes reflects updates based upon the 2014 edition of NFPA 1031 Standard for Professional Qualifications for Fire Inspector and Plan Examiner. The staff review determined the changes were editorial in nature only.

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<td>2. Identify safety considerations when burning out</td>
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<td>4. Use basic ignition devices only under direct supervision</td>
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Course Details

Certification: Fire Fighter I

CTS Guide: Fire Fighter I Certification Training Standards Guide

Description: This course provides the skills and knowledge needed for the entry level fire fighter, career or volunteer, to perform his/her duties safely, effectively, and competently. The curriculum is based on the 2013 edition of NFPA 1001 Standard for Fire Fighter Professional Qualifications, the 2016 edition of NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications, and the 2013 edition of NFPA 472 Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. The seven overarching themes of the California State Fire Fighter I curriculum are: general knowledge germane to the profession, fire department communications, fireground operations, rescue operations, preparedness and maintenance, wildland suppression activities, and hazardous materials/WMD.

Designed For: Entry level fire fighter

Prerequisites: Minimum of Public Safety First Aid and CPR (CA Health and Safety Code 1797.182)

Corequisites: *Only the classroom version will be accepted for the courses below:  
Confined Space Awareness (CA Code of Regulations, Title 8, Section 5157)  
Introduction to the Incident Command System (ICS-100), FEMA  
National Incident Management System, An Introduction (IS-700.A), FEMA

Standard: Complete all activities and formative tests.  
Complete all summative tests with a minimum score of 80%.  
Complete all mandatory skills testing.
Fire Fighter I

Hours: Lecture: 118:30
Activities/Skills: 240:00*
Testing: 36:00
- Fire Fighter I: 24:00
- Wildland Fire Fighter I: 8:00
- Hazardous Materials/WMD: 4:00

Hours (Total): 394:30
Maximum Class Size: 50
Instructor Level: Training Instructor 1A and 1B
Instructor/Student Ratio: 1:50 (Lecture); 1:10 (Skills)
Restrictions: None
SFT Designation: CFSTES

*Note: Skills and activity time will vary depending on the number of students in the program. It is important to remember that the suggested skill hours are for up to 50 students. The following is a breakdown of what a program might look like if there were fewer students. These are just estimates, times may need to be adjusted based on student abilities.

40 – 50 Students 240 hours
30 – 40 Students 180 hours
20 – 30 Students 120 hours
1 – 20 Students 60 hours
Required Resources

Instructor Resources

To teach this course, instructors need:

- Fundamentals of Fire Fighter Skills (Includes Instructor’s Toolkit DVDs)  
  *Optional Companion Reference:* Hazardous Materials: Awareness and Operations (Jones 
  OR  
  Essentials of Fire Fighting and Fire Department Operations  
  (Stowell, Frederick M., Murnane, Lynne, Brady Publishing, a division of Pearson 
  OR  
  Fire Engineering’s Handbook for Fire Fighter I and Fire Fighter II (Includes Instructor 
  Guide and Sample Skills Drills DVDs)  
- Firefighters Handbook on Wildland Firefighting  
- IS-100 Introduction to Incident Command System, I-100, Instructor Guide  
  ([https://training.fema.gov/is/coursematerials.aspx?code=is-700](https://training.fema.gov/is/coursematerials.aspx?code=is-700))

Online Instructor Resources

The following instructor resources are available online at  
([http://osfm.fire.ca.gov/training/SFTCurriculum.php](http://osfm.fire.ca.gov/training/SFTCurriculum.php))

- Skill Sheets  
- Course plan  
- Website

Student Resources

To participate in this course, students need:

- Fundamentals of Fire Fighter Skills  
  (Jones and Bartlett Learning, Third Edition, ISBN: 978-1-4496-7085-6),  
  OR
Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

- **Appliances and tools:** 1 ½-inch fog nozzle, 2 ½ - 1 ½/8-inch straight tip nozzle, wildland nozzles and appliances, cap, double female fittings, double male fittings, hose clamps, hose jacket, hose roller, hose strap, rope, or chain, nozzle selection as determined by AHJ, plug, master stream device, traffic and scene control devices, reducer or increaser (fittings), Siamese, spanner wrenches, and gated wye

- **Extinguishers and supplies:** Dry chemical extinguisher, (ordinary base or multi-purpose) 20 pounds, CO₂ extinguisher, pump tank water extinguisher, Class A fuel for live burns, Class B fuel for live burns, and metal pan – minimum 16 square feet

- **Hose:** 1-, 1 ½- or 1 ¾-inch fire hose (300-foot minimum), 2 ½- or 3-inch fire hose (500-foot minimum), large diameter hose (LDH) (300-foot minimum), handline with fog nozzle, hard suction (intake) hose and strainer, hose and nozzles capable of flowing a minimum of 95 GPM, and soft suction hose

- **Hand tools:** Bolt cutters, crowbar/pry bar, flat head axe, halligan tool, hand saw, hydrant wrench, K-tool, pick-head axe, pike pole (8 feet), sledgehammer, flashlight, and wildland hand tools and equipment

- **Ladders:** 10-foot folding ladder, 14-foot roof ladder, 24-foot extension ladder, 35-foot extension ladder, and two straight ladders

- **Power tools:** Electric and gasoline powered fan, chain saw, gasoline powered circular saw, and a generator

- **Protective equipment/clothing:** Full set of protective clothing for structural fire fighting for each trainee, including bunker pants, bunker coat, bunker boots, gloves, helmet, hood, and face piece, self-contained breathing apparatus with charged air cylinder, (one
extra fully charged air cylinder), personal alert safety system (P.A.S.S.), safety harness, manufacturer approved cleaning agent (for SCBA), manufacturer approved cleaning equipment (for SCBA), and manufacturer approved sanitizing agent (for SCBA)

- **Rope:** ½-inch rope, safety line, webbing, various lengths and diameters of utility rope, various lengths and diameters of synthetic rope, and various lengths of 1-person or 2-person life safety rope

- **Salvage equipment/materials:** Brooms, buckets, tubs, mops, objects to cover, salvage covers, squeegees, sprinkler stop, and water vacuums

- **Simulation equipment/materials:** Burn building as recommended in NFPA 1403: *Standard on Live Fire Training*, wood roof prop, smoke-generating equipment, training tower, minimum of two stories in height, gas, water, and electric service cut-off, vehicle fire prop, and a simulated breaching/restricted passageway prop

- **Other supplies/equipment needed:** Fire hydrant, pitot tube and gauge, portable radio, thermal imaging camera, standard above ground fall protection, minimum of two apparatuses equipped with pump and two separate water supplies, fuel and supplies for power equipment, cleaning supplies and equipment, portable lighting equipment, two portable tanks with water transfer equipment and appliances
Unit 1: Introduction

Topic 1-1: Orientation and Administration

Terminal Learning Objective
At the end of this topic, a student will be able to identify facility and classroom requirements and identify course objectives, events, requirements, assignments, activities, resources, evaluation methods, and participation requirements in the course syllabus.

Enabling Learning Objectives
1. Identify facility requirements
   • Restroom locations
   • Food locations
   • Smoking locations
   • Emergency procedures
2. Identify classroom requirements
   • Start and end times
   • Breaks
   • Electronic device policies
   • Special needs and accommodations
   • Other requirements as applicable
3. Review course syllabus
   • Course objectives
   • Calendar of events
   • Course requirements
   • Student evaluation process
   • Assignments
   • Activities
   • Required student resources
   • Class participation requirements

Discussion Questions
1. What is a formative test? What is a summative test?

Activities
1. To be determined by the instructor.

Topic 1-2: Fire Fighter I Certification Process

Terminal Learning Objective
At the end of this topic, a student will be able to identify different levels in the Fire Fighter I certification track, the courses and requirements for Fire Fighter I certification, and be able to describe the certification task book and testing process.

Enabling Learning Objectives
1. Identify the different levels of certification in the Fire Fighter I certification track
   • Fire Fighter I
• Wildland Fire Fighter I

2. Identify the courses required for Fire Fighter I
• Fire Fighter I
• Wildland Fire Fighter I
• First Responder Operations
• Confined Space Awareness
• IS-100 Introduction to Incident Command System
• IS-700A National Incident Management System, An Introduction

3. Identify any other requirements for Fire Fighter I

4. Describe the certification task book process
• Complete all prerequisites and course work
• Submit application and fees to request certification task book
• Complete all job performance requirements included in the task book
• Must have identified evaluator verify individual task completion via signature
• Must have Fire Chief or authorized representative verify task book completion via signature
• Must be employed by a California Fire Agency in the position prior to submitting completed task book to State Fire Training

5. Describe the certification examination process
• Complete course work
• Schedule online certification exam
• Schedule skills evaluation exam

Discussion Questions
1. How many levels are there in the Fire Fighter I certification track? What are they?

Activities
1. To be determined by the instructor.

Topic 1-3: General Knowledge Requirements

Terminal Learning Objective
At the end of this topic, a student, given AHJ policies and procedures, will be able to define the role of Fire Fighter I in the fire department, identify the mission of the fire service, follow standard operating procedures and rules and regulations of the fire department, and access the department’s member assistance program.

Enabling Learning Objectives
1. Describe the organization of the fire department
   • Equal Employment Opportunity
   • Harassment
   • Diversity
2. Define the role of Fire Fighter I in the organization
3. Describe the mission of the fire service
4. Describe fire department standard operating procedures and rules and regulations as they apply to the Fire Fighter I
5. Identify the role of other agencies as they relate to the fire department
6. Identify aspects of the fire department’s member assistance program
7. Locate information in departmental documents and standard or code materials

Discussion Questions
1. What is an employee assistance program?
2. How would you define the role of a fire fighter in today’s fire service?

Activities
1. Ask students to develop a mission statement for a fire department.

CTS Guide Reference:
1-1
Topic 2-1: Health and Safety

Terminal Learning Objective
At the end of this topic, a student, given an assignment, will be able to identify common types of accidents and injuries, ways to maintain a healthy and physically fit lifestyle, and maintain life safety initiatives in the line of duty.

Enabling Learning Objectives
1. List common types of accidents or injuries and their causes
2. Discuss the importance of physical fitness and a healthy lifestyle to the performance and duties of a fire fighter
3. Define the critical aspects of NFPA 1500, Standard on Fire Department Occupational Safety and Health Program
4. Discuss the value of fire and life safety initiatives in support of the fire department’s mission to reduce fire fighter line-of-duty injuries and fatalities

Discussion Questions
1. What is the importance of physical fitness as it pertains to the duties of a fire fighter?
2. What are the components of physical fitness as it pertains to the job of a fire fighter?
3. What is the importance of a nutritious diet as it pertains to the performance of a fire fighter?
4. What is the importance of psychological stability in the fire service?
5. What are the benefits of grief counseling in the event of a line-of-duty death, serious injury, etc.?

Activities
1. Ask students to prepare a physical fitness plan.
2. Ask students to develop a nutritious menu plan for one week.

CTS Guide Reference:
1-1; 3-11

Topic 2-2: Structural Personal Protective Ensemble

Terminal Learning Objective
At the end of this topic, a student, given structural personal protective ensemble, will be able to don a structural personal protective ensemble so that all elements of the ensemble are worn according to manufacturers’ guidelines, within 60 seconds.

Enabling Learning Objectives
1. Identify the components of structural personal protective ensemble
2. Describe the protection provided by structural personal protective ensemble
3. Explain the importance of standards for structural personal protective ensemble
4. Describe the limitations of structural personal protective ensemble
5. Identify the proper method for inspecting, cleaning, and maintaining structural personal protective ensemble
6. Don structural personal protective ensemble
7. Doff structural personal protective ensemble and prepare for reuse

Discussion Questions
1. What are the different components of a structural personal protective ensemble and its importance as it pertains to safety?
2. What are the safety features of a structural personal protective ensemble?
3. What is the importance of knowing your equipment as it pertains to the structural personal protective ensemble?
4. What are the limitations of the structural personal protective ensemble?
5. What are the benefits of inspecting, cleaning, and maintaining structural personal protective ensemble?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-1

Topic 2-3: Self-Contained Breathing Apparatus

Terminal Learning Objective
At the end of this topic, a student, given a self-contained breathing apparatus and other personal protective equipment, will be able to use a self-contained breathing apparatus during emergency operations, correctly don and activate a self-contained breathing apparatus within 60 seconds, use controlled breathing techniques, activate emergency techniques and procedures if the self-contained breathing apparatus fails, recognize low-air warnings, avoid intentionally compromising respiratory protection, and exit hazardous areas prior to air depletion.

Enabling Learning Objectives
1. Identify conditions requiring respiratory protection
   • NFPA 1500
   • Code of Federal Regulations 29, 1910.134
   • California Code of Regulations Title 8, 5144K
2. Describe potential long-term consequences of exposure to products of combustion
3. Describe the uses and limitations of a self-contained breathing apparatus
4. Identify the components of a self-contained breathing apparatus
5. Describe operational inspection for a self-contained breathing apparatus
6. Describe different donning procedures
7. Describe different breathing techniques
8. Describe indications for and emergency procedures used with a self-contained breathing apparatus
9. Identify physical requirements of the self-contained breathing apparatus wearer
10. Demonstrate different controlled breathing techniques
11. Replace self-contained breathing apparatus air cylinders
12. Use a self-contained breathing apparatus to exit through restricted passages
13. Initiate and complete emergency procedures in the event of self-contained breathing apparatus failure or air depletion
14. Perform operational inspection for a self-contained breathing apparatus
15. Complete donning procedures to include:
   • Coat
   • Over-the-head
   • Seat mounted

Discussion Questions
1. What conditions require respiratory protection?
2. What are the limitations of the self-contained breathing apparatus?
3. What are the major components of the self-contained breathing apparatus and their functions?
4. What are some possible human errors and equipment failures of the self-contained breathing apparatus?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-2; 3-11

Topic 2-4: Responding on an Apparatus

Terminal Learning Objective
At the end of this topic, a student, given personal protective clothing, other necessary personal protective equipment, and an apparatus, will be able to respond on an apparatus to an emergency scene, correctly mount and dismount the apparatus, use seat belts while the vehicle is in motion, and correctly use other personal protective equipment.

Enabling Learning Objectives
1. Describe mounting and dismounting procedures for riding an apparatus
2. Identify hazards associated with riding an apparatus and ways to avoid them
3. Describe prohibited practices
4. Identify different types of department personal protective equipment and their use(s)
   • Hearing protection
   • Seat belts
   • Safety gates
5. Use each piece of provided safety equipment

Discussion Questions
1. What safety equipment is used when riding on an apparatus?
2. What is the importance of using safety equipment to protect against hearing and vision loss?
3. What are some outcomes when safety equipment is not used?
Activities

1. To be determined by the instructor.

CTS Guide Reference:

3-3

Topic 2-5: Operating at an Emergency Scene

Terminal Learning Objective

At the end of this topic, a student, given personal protective equipment, traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards, downed electrical wires, an assignment, standard operating procedures, and an apparatus, will be able to establish and operate in work areas at emergency scenes, follow procedures, wear protective equipment, establish protected work areas as directed using traffic and scene control devices, and perform assigned tasks in established protected work areas.

Enabling Learning Objectives

1. Identify potential hazards involved in operating on emergency scenes including vehicle traffic, utilities, and environmental conditions
2. Describe proper procedures for mounting and dismounting an apparatus in traffic
3. Describe procedures for safe operation at emergency scenes
4. Identify the personal protective equipment available for members’ safety on emergency scenes and work zone designations
5. Use personal protective equipment
6. Deploy traffic and scene control devices
7. Dismount an apparatus
8. Operate in protected work areas as directed

Discussion Questions

1. What are some potential hazards to fire fighters while operating at an emergency incident and how can they limit exposure and injury?
2. What are the different types of personal protective equipment used by fire fighters on the scene of an emergency and what are their uses?
3. What are the hazards of mounting and dismounting a fire apparatus?

Activities

1. Given a simulated incident, ask students to develop an emergency scene work zone.

CTS Guide Reference

3-4

Unit 3: Communications

Topic 3-1: Operating a Phone in a Non-emergency Situation

Terminal Learning Objective

At the end of this topic, a student, given a fire department phone, will be able to receive a telephone call using correct procedures for answering the phone and relaying information.
Fire Fighter I

Enabling Learning Objectives
1. Describe fire department procedures for answering non-emergency phone calls
2. Operate fire station telephone and intercom equipment

Discussion Questions
1. What are the different fire station telephone and intercom equipment?
2. What are some proper ways of answering a business phone at the fire station?

Activities
1. Ask students to answer a fire department phone and relay specific information to another person who is not on the call.

CTS Guide Reference:
2-2

Topic 3-2: Initiating a Response to an Emergency

Terminal Learning Objective
At the end of this topic, a student, given the report of an emergency, fire department standard operating procedures, and communications equipment, will be able to initiate the response to a reported emergency, obtain all necessary information, correctly operate all communications equipment, and promptly and accurately relay information to the dispatch center.

Enabling Learning Objectives
1. Explain the procedures for reporting an emergency
2. Identify department standard operating procedures for taking and receiving alarms
3. Identify radio codes, procedures, and clear text for communications
4. List information needs of dispatch center
5. Identify the different types of fire department communications equipment
6. Operate fire department communications equipment
7. Relay information
8. Record information

Discussion Questions
1. What are the different types of emergency and non-emergency calls?
2. What is the information needed to dispatch a call and why is it needed?

Activities
1. Ask students to take a report from a reporting party and transfer the information to a simulated dispatch center.

CTS Guide Reference:
2-1

Topic 3-3: Operating Fire Department Radios

Terminal Learning Objective
At the end of this topic, a student, given a fire department radio and fire department standard operating procedures, will be able to transmit and receive messages via the fire
department radio and relay accurate, clear information within the time established by the AHJ.

**Enabling Learning Objectives**

1. Describe fire department procedures and etiquette for routine radio traffic
2. Describe fire department procedures and etiquette for emergency radio traffic
3. Describe fire department procedures and etiquette for emergency radio evacuation signals
4. Identify basic types and operations of fire department radios
5. Operate fire department radios and equipment
6. Identify the difference between routine and emergency radio traffic

**Discussion Questions**

1. What are the different components of a fire department radio?
2. What are the different uses for fire department radios?
3. What is the proper etiquette for routine and emergency radio traffic?
4. What are the emergency evacuation signals and when are they used?
5. What is emergency traffic and in what situations would it be used?

**Activities**

1. Given simulated situations, ask students to find different channels on a fire department radio.

**CTS Guide Reference:**

2-3

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**Unit 4: Fire Tools and Equipment**

**Topic 4-1: Ropes and Knots**

**Terminal Learning Objective**

At the end of this topic, a student, given personal protective equipment, tools, ropes, webbing, and an assignment, will be able to tie a knot appropriate for hoisting tools securely and as directed.

**Enabling Learning Objectives**

1. Identify the types and uses of ropes
2. Identify the types and uses of knots
3. Describe the difference between life safety and utility rope
4. Identify reasons for placing rope out of service
5. List types of knots to use for given tools
6. List types of knots to use for given ropes
7. Describe types of knots to use for given situations
8. Describe hoisting methods for tools and equipment
9. Discuss the use of rope(s) to support response activities
10. Tie knots
   - Overhand
   - Half hitch
• Clove hitch
• Beckett bend
• Bowline
• Figure 8
• Figure 8 on a bight
• Figure 8 follow through
• Water
• Handcuff
11. Hoist tools using specific knots based on the type of tool
  • Axe
  • Pike pole
  • Roof ladder
  • Charged hoseline
  • Uncharged hoseline

Discussion Questions
  1. What are three situations when ropes are applicable for use on the fire ground?
  2. What is the difference between static and dynamic rope and which is preferred in the fire service?
  3. What are two common uses for rope?
  4. What are three common knots and their uses?
  5. What are the three parts of a rope?

Activities
  1. To be determined by the instructor.

CTS Guide Reference:
  3-20

Topic 4-2: Hand and Power Tools

Terminal Learning Objective
  At the end of this topic, a student, given various hand and power tools, will be able to safely transport, operate, and maintain them.

Enabling Learning Objectives
  1. Describe types of and uses for hand and power tools
  2. Transport and operate hand and power tools

Discussion Questions
  1. What are the differences between a two stroke and a four stroke engine and how are they each identified?
  2. What are some examples of prying tools?
  3. What are some examples of striking tools?
  4. What are some examples of pushing and pulling tools?
  5. What are some examples of cutting tools?
Activities
1. Given various tools contained within an engine company toolbox, ask students to identify each tool and its use.

CTS Guide Reference:
3-5

Topic 4-3: Portable Electric and Lighting Equipment

Terminal Learning Objective
At the end of this topic, a student, given fire service electrical equipment and an assignment, will be able to illuminate designated areas of the emergency scene and operate all illumination equipment within the manufacturers’ listed safety precautions.

Enabling Learning Objectives
1. Discuss safety principles and practices for portable electrical equipment
2. Identify power supply capacity and limitations
3. Describe light deployment methods
4. Operate department power supply and lighting equipment
5. Deploy cords and connectors
6. Reset ground-fault interrupter (GFI) devices
7. Locate lights for best effect

Discussion Questions
1. What is the purpose of portable lighting at an emergency scene?
2. What are some limitations of portable lighting?
3. What are some safety concerns when using portable lighting at an emergency scene?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-18

Topic 4-4: Maintenance

Terminal Learning Objective
At the end of this topic, a student, given cleaning tools, cleaning supplies, and an assignment, will be able to clean and maintain ladders, ventilation equipment, self-contained breathing apparatuses, ropes, salvage equipment, and hand tools according to manufacturers’ or departmental guidelines, record equipment maintenance, and place equipment in a ready state or report otherwise.

Enabling Learning Objectives
1. Describe types of cleaning methods for various tools and equipment
   - Ladders
   - SCBAs
   - Ventilation equipment
   - Hand tools
   - Salvage equipment
• Ropes
2. Discuss the correct use of cleaning solvents
3. Identify manufacturer or departmental guidelines for cleaning equipment and tools, and removal from service
4. Select correct tools to maintain various parts and pieces of equipment
5. Complete recording and reporting procedures

Discussion Questions
1. What is the purpose of inspecting, cleaning, and maintaining fire service tools and equipment?
2. Why is attention to small details important when inspecting fire service tools and equipment?

Activities
1. Given tools that have been taken out of service due to safety concerns, ask students to inspect the tools/equipment and identify their deficiencies.

CTS Guide Reference:
4-1

Unit 5: Structural Fire Suppression

Topic 5-1: Building Construction and Related Hazards

Terminal Learning Objective
At the end of this topic, a student, given personal protective equipment, tools, ladders (when needed), and an assignment, will be able to describe common building materials and construction types, and identify dangerous building conditions created by fire.

Enabling Learning Objectives
1. Describe common building materials and construction types
2. Identify the effects of each construction type and elapsed time under fire conditions on structural integrity
3. Identify dangerous building conditions created by fire
4. Describe basic construction of typical doors, windows, walls, and roofs within the department’s community or service area

Discussion Questions
1. Why is it important for fire fighters to understand building construction?
2. What are some indicators of potential building collapse?
3. What is the difference between legacy and modern construction/conventional and lightweight?

Activities
1. Locate a building under construction and complete a walk through, while identifying different components of building construction.
2. Identify different structural components on a given diagram.

CTS Guide Reference:
3-5; 3-11; 3-12
**Topic 5-2: Fire Behavior**

**Terminal Learning Objective**
At the end of this topic, a student, given a fire within a structure, will be able to identify and mitigate dangerous fire behavior conditions, while ensuring fire fighter safety.

**Enabling Learning Objectives**
1. List physical states of matter in which fuels are found
2. Describe the stages of fire
3. Describe the classifications of fire
4. Describe the methods of heat transfer
5. Describe the relationship of oxygen concentration to life safety and fire growth
6. Describe fire behavior in a structure
   - Energy efficient buildings
   - High rise structures
   - Below-grade structures
   - Wind-driven environments
7. Describe the principles of thermal layering within a structure fire
8. List the products of combustion found in a structure fire
9. Identify the signs, causes, effects, and prevention of backdraft/smoke explosion
10. Identify the signs, causes, effects, and prevention of flashover

**Discussion Questions**
1. What are the components of the fire tetrahedron?
2. What are the stages of fire growth and what are some indicators of each stage?
3. What are signs of flashover, backdraft, and smoke explosion?
4. How have modern building materials contributed to an increase of rapid fire development?
5. How does wind affect fire in a structure?

**Activities**
1. To be determined by the instructor.

**CTS Guide Reference:**
3-11, 3-12, 3-13, 3-17

**Topic 5-3: Fire Extinguishers**

**Terminal Learning Objective**
At the end of this topic, a student, given a selection of portable fire extinguishers and personal protective equipment, will be able to choose the correct extinguisher and follow the correct handling techniques to completely extinguish incipient Class A, Class B, and Class C fires.

**Enabling Learning Objectives**
1. Identify the types of, rating systems for, and risks associated with, each class of fire extinguisher
2. Discuss the operating methods and limitations of portable extinguishers
3. Operate portable fire extinguishers
• Stored water pressure
• Dry chemical
• CO₂
4. Select an appropriate extinguisher based on the size and type of fire
5. Safely carry portable fire extinguishers
6. Approach fire with portable fire extinguishers

Discussion Questions
1. Why does the fire service use different types of fire extinguishers?
2. What does “P.A.S.S.” stand for?
3. What does the rating “2A/10BC” represent?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-17

Topic 5-4: Water Supply Systems

Terminal Learning Objective
1. At the end of this topic, a student, given supply or intake hose, hose tools, a fire hydrant, portable water tank, or static water source, an apparatus, and personal protective equipment, will be able to connect a fire department engine to a water supply, ensuring tight connections and an unobstructed water flow, as a member of a team.

Enabling Learning Objectives
1. Describe types and components of municipal and rural water systems
2. Discuss loading and off-loading procedures for a mobile water supply apparatus
3. Describe fire hydrant operations
4. Identify suitable static water supply sources
5. Describe procedures and protocols for connecting to various water sources
6. Deploy portable water tanks and the equipment necessary to transfer between and draft from them
7. Fully open and close the hydrant

Discussion Questions
1. What are the different water sources available to fire departments?
2. What are the components of a water supply system?
3. What are three ways water is collected for a water supply system?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-16

Topic 5-5: Fire Hose
Terminal Learning Objective
At the end of this topic, a student, given tools, a hose, nozzles, personal protective equipment, and an engine, will be able to place a hose into service on an assigned engine according to AHJ procedures, place nozzles on attack lines, and inspect, maintain, and place hose in or out of service.

Enabling Learning Objectives
1. Identify the principles of fire streams
2. Describe different types, design, operation, nozzle pressure effects, and flow capabilities of nozzles
3. Identify types, designs, and uses of fire hoses
4. Identify fittings, tools, and appliances
5. Describe the application of each size and type of attack line
6. Describe types of hose rolls, loads, and deployments
7. Describe departmental procedures for inspecting a hose according to the manufacturer's guidelines, noting any defects, and removing it from service
8. Discuss cleaning and maintenance methods
   - Hose
   - Nozzles
   - Appliances
9. Identify precautions to be followed when advancing hose lines to a fire
10. Describe observable results that a fire stream has been properly applied
11. Open, close, and adjust nozzle flow and patterns
12. Prevent water hammer when shutting down nozzles
13. Couple and uncouple various handline connections
   - Coupling hose – One firefighter foot tilt method
   - Coupling hose – Two fire fighters
   - Uncoupling hose knee press
   - Uncoupling hose – Two fire fighter stiff-arm
14. Roll hose
   - Single roll
   - Donut roll
   - Twin donut roll
   - Self-locking twin donut roll
15. Carry hose
   - Deploy minute-man load
   - Deploy triple fold
   - Deploy preconnected flat load
   - Deploy working line drag method
   - Deploy shoulder load method
   - Deploy hose bundle (agency specific)
   - Deploy wyed lines
16. Reload hose
Fire Fighter I

- Flat load
- Minute-man load
- Triple fold
- Accordion
- Horse shoe
- Hose bundles (agency specific)

17. Replace burst hose sections
18. Hand lay a supply hose
19. Connect a supply hose to a hydrant
20. Make hydrant-to-engine hose connections for forward and reverse lays
21. Connect and place hard suction hose for drafting operations
22. Clean different types of hose
23. Operate hose washing and drying equipment
24. Replace coupling gaskets
25. Mark defective hose

Discussion Questions
1. What are the different types of hose used by the fire department?
2. Why is it important to clean, inspect, load, roll, and store fire hose?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-11, 3-16, 4-2

Topic 5-6: Utility Control at Emergencies

Terminal Learning Objective
At the end of this topic, a student, given tools and personal protective equipment, will be able to turn off building utilities in order to safely complete an assignment.

Enabling Learning Objectives
1. Describe properties and principles of, and safety concerns for, electricity systems
   - Primary electrical service
   - Secondary electrical service
   - Alternative energy services
2. Describe properties and principles of, and safety concerns for, gas systems
3. Describe properties and principles of, and safety concerns for, water systems
4. Identify utility disconnect methods
5. Discuss associated dangers with utility disconnect methods
6. Describe use of required safety equipment
7. Identify utility control devices
8. Operate control valves or switches
9. Assess for related hazards

Discussion Questions
1. What are some safety considerations at electrical emergencies?
2. What are some safety considerations at gas/propane emergencies?

Activities
1. Complete a survey of the community so students can observe control techniques for gas, propane, electrical, and photovoltaic utilities.

Instructor Notes
1. Fundamentals of Photovoltaics for the Fire Service, California State Fire Training

CTS Guide Reference:
3-19

Topic 5-7: Ground Ladder Operations

Terminal Learning Objective
At the end of this topic, a student, given single and extension ladders, an assignment, team members (if needed), and personal protective equipment, will be able to set up ground ladders, assess hazards, ensure ground ladders are stable and their angles are correct for climbing, extend extension ladders to the necessary height and lock their flies, place the tops of the ladders against reliable structural components, and accomplish the assignment.

Enabling Learning Objectives
1. Identify the types, parts, and construction features of ground ladders
2. Identify the uses of ground ladders
3. Identify types of lifts and carries
   • High shoulder – Single/two fire fighter
   • Low shoulder – Single/two/three fire fighter
   • Flat shoulder method – Three/four fire fighter
   • Suitcase or arms length carry – Single/two fire fighter
4. Describe methods used to secure ground ladders
5. Describe proper climbing techniques
6. Describe safety limits to the degree of angulation
7. Identify different angles for various tasks
8. Describe methods to safely work off ground ladders
9. Describe the hazards associated with setting up ladders
10. Define what constitutes a stable foundation for ladder placement
11. Describe what constitutes a reliable structural component for top placement
12. Tie off a halyard
13. Lift and carry ladders
   • High shoulder – Single fire fighter
   • Low shoulder – Single/two/three fire fighter
   • Flat shoulder method – Three/four fire fighter
   • Suitcase or arms length carry – Single/two fire fighter
14. Raise and move ladders
   • Flat raise – Single/two/three/four fire fighter
   • Beam raise – Single/two/three fire fighter
   • High shoulder – Single fire fighter
15. Extend and lock flies
16. Demonstrate proper climbing techniques
17. Demonstrate proper methods to safely work off ground ladders
18. Demonstrate leg lock method
19. Secure ground ladders
20. Determine that a wall and roof will support the ladder
21. Judge extension ladder height requirements
22. Place the ladder to avoid obvious hazards

Discussion Questions
1. What are some of the general uses of ground ladders?
2. How would you place a ladder on a building for rescue, search, or ventilation purposes?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-7

Topic 5-8: Forcible Entry

Terminal Learning Objective
At the end of this topic, a student, given personal protective equipment, tools, an assignment, and doors, windows, and walls, will be able to remove barriers and produce an opening that is safe and ready for use by forcing entry into a structure using tools as designed.

Enabling Learning Objectives
1. Describe basic construction of typical doors, windows, and walls within the department’s community or service area
   - Residential
   - Commercial
2. Describe types and uses of hand and power tools used in forcible entry
3. Describe operation of doors, windows, and locks
4. Identify the dangers associated with forcing entry through doors, windows, and walls
5. Transport and operate hand and power tools used in forcible entry
6. Force entry through doors, locks, windows, and walls using assorted methods and tools

Discussion Questions
1. How would you size up a door for forcible entry purposes?
2. What are indicators of an inward versus an outward swinging door?
3. What are appropriate tools used to force entry through a residential door versus a roll-up door at a commercial structure?
4. What are some safety considerations during forcible entry operations?

Activities
1. To be determined by the instructor.
CTS Guide Reference:
3-5

Topic 5-9: Structure Fire Search and Rescue Operations

Terminal Learning Objective
At the end of this topic, a student, given an assignment, obscured-vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines or guide lines, a thermal imagine camera, and ladders (when necessary), will be able to conduct search and rescue in a structure, maintain team integrity, correctly place ladders when used, search all assigned areas, locate and remove all victims, and avoid compromising team members’ safety, including respiratory protection, operating as a member of a team.

Enabling Learning Objectives
1. Define primary and secondary search techniques
2. Describe the use of thermal imaging cameras and other search tools
3. Identify team members’ roles and goals in search and rescue operations within a structure
4. Identify considerations related to respiratory protection
5. Describe methods to determine if an area is tenable
6. Define methods to use and indicators of finding victims
7. Identify psychological effects of operating in obscured conditions and ways to manage them
8. Describe the use of forcible entry tools during rescue operations
9. Describe the use of ground ladders for rescue operations
10. Describe victim removal methods (including various carries)
11. Use a self-contained breathing apparatus to exit through restricted passages
12. Set up and use different types of ladders for various types of rescue operations
   • Balcony
   • Fire escape
   • Roof
   • Window
13. Remove the victim down a ladder
   • Conscious
   • Unconscious
14. Demonstrate victim removal methods (including various carries)
15. Rescue a fire fighter whose respiratory protection is not functioning
16. Rescue a person who has no respiratory protection
17. Assess areas to determine tenability
18. Demonstrate a primary and secondary search

Discussion Questions
1. When conducting a search in a residential structure, what area should be searched first, second, third, etc.?
2. What tools and equipment will make room/area searches more efficient?
3. What is the difference between a primary search and a secondary search?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-10

Topic 5-10: Structural Fire Fighting Operations

Terminal Learning Objective
At the end of this topic, a student, given an attack line (1½-inch or larger), ladders (when needed), personal protective equipment, tools, and an assignment, will be able to attack an interior structure fire, maintain team integrity, deploy the attack line for advancement, correctly place ladders when used, gain access into the fire area, effectively apply water, correctly approach the fire using attack techniques that facilitate suppression given the level of the fire, locate and control hidden fires, maintain the correct body posture, recognize and manage hazards, and bring the fire under control, operating as a member of a team.

Enabling Learning Objectives
1. Identify precautions to be followed when advancing hose lines to a fire
2. Identify principles of exposure protection
   • Exterior
   • Interior
3. Define the role of the backup team in fire attack situations
4. Describe attack and control techniques for below, at, and above grade level fires
5. Identify methods for locating and exposing hidden fires
6. Apply water using direct, indirect, and combination attacks
7. Advance charged and uncharged hand lines of 1½-inch diameter or larger up ladders and up and down interior and exterior stairways
8. Operate charged hand lines of 1½-inch diameter or larger while secured to a ground ladder
9. Attack fires below, at, and above grade level
10. Locate and suppress interior wall and subfloor fires

Discussion Questions
1. What are critical fireground factors to consider prior to and during fire suppression operations?
2. What is the difference between a second line and a backup line?
3. What are important factors to consider when engaging in overhaul efforts?
4. What are indicators of a below grade fire?
5. What hazards are associated with below grade fires?

Activities
1. To be determined by the instructor.

Instructor Notes
1. Fire Control 3A or 3B, California State Fire Training
Topic 5-11: Horizontal Ventilation Operations

Terminal Learning Objective
At the end of this topic, a student, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, will be able to perform horizontal ventilation on a structure, free ventilation openings of obstructions, use tools as designed, place ladders and ventilation devices correctly, and clear structure of smoke, as a part of a team.

Enabling Learning Objectives
1. Describe the principles, advantages, limitations, and effects of horizontal ventilation
   - Natural
   - Mechanical
   - Hydraulic
2. Describe safety considerations when venting a structure
3. Transport and operate ventilation tools and equipment and ladders
4. Break windows and door glass and remove obstructions
5. Horizontally ventilate a structure
   - Mechanical
     - Negative
     - Positive
   - Hydraulic

Discussion Questions
1. What situations call for horizontal ventilation?
2. What are appropriate actions to take when implementing horizontal ventilation?
3. What are different ways to complete horizontal ventilation?
4. What are some safety considerations when using horizontal ventilation?
5. What are the ramifications of opening windows and doors without coordinating with attack crews?

Activities
1. Ask students to develop several case studies that resulted in fire fighter injury or fatality due to improper ventilation.

Topic 5-12: Vertical Ventilation Operations

Terminal Learning Objective
At the end of this topic, a student, given an assignment, personal protective equipment, ground and roof ladders, and ventilation tools, will be able to perform vertical ventilation on a structure, position ladders for ventilation, create a specified opening, remove all ventilation barriers, avoid compromising structural integrity, release products of combustion
from the structure, and retreat from the area when ventilation is accomplished, as a part of a team.

**Enabling Learning Objectives**
1. Describe the principles, advantages, limitations, and effects of vertical ventilation
2. List the techniques and safety precautions for venting flat roofs, pitched roofs, and basements
3. Identify the effects of construction type and elapsed time under fire conditions on structural integrity
4. Describe basic indicators of potential collapse or roof failure
5. Describe the advantages and disadvantages of vertical and trench/strip ventilation
6. Select, carry, deploy, and secure ground ladders for ventilation activities
7. Deploy roof ladders on pitched roofs while secured to a ground ladder for vertical ventilation
8. Carry ventilation-related tools and equipment while ascending and descending ladders
9. Hoist ventilation tools to a roof
10. Sound a roof for integrity
11. Cut roofing and flooring materials to vent flat roofs, pitched roofs, and basements and retreat from the area as a team when ventilation is accomplished
12. Clear an opening with hand tools

**Discussion Questions**
1. When is vertical ventilation performed versus horizontal ventilation?
2. What safety factors should be considered when performing vertical/top-side ventilation?
3. What are the types of cuts that can be performed to achieve vertical ventilation?
4. What are some indicators that a roof is not safe for operations?
5. What are some safety considerations while performing vertical ventilation on different roof types?

**Activities**
1. To be determined by the instructor.

**CTS Guide Reference**
3-13

**Topic 5-13: Property Conservation**

**Terminal Learning Objective**
At the end of this topic, a student, given an assignment, salvage tools and equipment, and personal protective equipment, will be able to conserve property so that the building and its contents are protected from further damage, acting as a member of a team.

**Enabling Learning Objectives**
1. Discuss the purpose of property conservation and its value to the public
2. Describe methods used to protect property
3. List types of and uses for salvage covers
4. Describe operations at properties protected with automatic sprinklers
5. Discuss how to stop the flow of water from an automatic sprinkler head
6. Identify the main control valve on an automatic sprinkler system
7. Describe procedures for protecting possible areas of origin and potential evidence
8. Describe forcible entry issues related to salvage
9. Cluster furniture
10. Deploy covering materials
11. Roll and fold salvage covers for reuse
12. Construct water chutes and catch-alls
13. Remove water
14. Cover building openings, including doors, windows, floor openings, and roof openings
15. Stop the flow of water from a sprinkler with sprinkler wedges or stoppers
16. Operate a main control valve on an automatic sprinkler system

Discussion Questions
1. What is the importance of property conservation?
2. When does property conservation take place?
3. What are some effective ways to conserve property?
4. What is primary damage?
5. What is secondary damage?

Activities
1. To be determined by the instructor.

CTS Guide Reference
3-15

Topic 5-14: Overhaul

Terminal Learning Objective
At the end of this topic, a student, given personal protective equipment, an attack line, hand tools, a flashlight, and an assignment, will be able to overhaul a fire scene without compromising structural integrity, discover all hidden fires, preserve fire cause evidence, and extinguish the fire.

Enabling Learning Objectives
1. Describe the purposes and methods of overhaul
2. Describe the types of fire attack lines and water application devices most effective for overhaul
3. Discuss water application methods for extinguishment that limit water damage
4. Identify types of tools and methods used to expose hidden fire
   • Senses
   • Hand and power tools
   • Thermal imaging cameras
5. Discuss dangers associated with overhaul
   • Air monitoring
   • Need for respiratory protection
6. Identify reasons for protecting a fire scene
7. Describe obvious signs of area of origin, cause, or arson
8. List techniques for the preservation of fire cause evidence
9. Deploy and operate an attack line for overhaul
10. Apply water for maximum effectiveness
11. Expose and extinguish hidden fires in walls, ceilings, and subfloor spaces
12. Remove floor, ceiling, and wall components to expose void spaces without compromising structural integrity
13. Recognize and preserve obvious signs of area of origin and arson
14. Separate, remove, and relocate charred material to a safe location while protecting the area of origin for cause determination
15. Evaluate for complete extinguishment

Discussion Questions
1. What safety factors should be considered when performing overhaul operations?
2. What are appropriate tools and equipment used when performing overhaul operations?
3. What are ways to preserve an area for a proper fire investigation prior to and during overhaul operations?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
3-14; 3-9

Unit 6: Fire Fighter Survival

Topic 6-1: Structural Fire Fighter Survival

Terminal Learning Objective
At the end of this topic, a student, given vision-obscured conditions, personal protective equipment, and the department’s standard operating procedures, will be able to activate an emergency call for assistance and exit a hazardous area without endangering others while maintaining team integrity.

Enabling Learning Objectives
1. Identify different personnel accountability systems
2. Identify the development of fire fighter survival attitudes
3. Identify emergency communication procedures
4. Identify emergency procedures for loss of air supply
5. Initiate an emergency call in accordance with the AHJ’s procedures
6. Use other methods of emergency calls for assistance
7. Describe emergency evacuation methods for fire fighter survival
8. Define what constitutes a safe haven
9. Identify elements that create or indicate a hazard
10. Demonstrate emergency evacuation methods for fire fighter survival
11. Operate as a team member in vision-obscured conditions
12. Locate and follow a guideline
13. Evaluate areas for hazards
14. Identify a safe haven

Discussion Questions
1. What are best practices for enhancing fire fighter safety and survival during fire suppression activities?
2. What are common factors that place fire fighters in need of rescue assistance in hazardous conditions?
3. What should a fire fighter do when he/she is trapped, disoriented, or has lost direct contact with the crew?

Activities
1. Ask students to develop case studies based on line-of-duty injuries and deaths that resulted from trapped, missing, or lost fire fighters.

Instructor Note
1. State Fire Training Fire Fighter Survival or International Association of Fire Fighter’s Fire Ground Survival Program

CTS Guide Reference:
2-4; 3-6

Unit 7: Suppression of Fires Outside of a Structure

Topic 7-1: Exterior Fires

Terminal Learning Objective
At the end of this topic, a student, given attack lines, hand tools, master stream devices, an assignment, personal protective equipment, and fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, will be able to extinguish fires in exterior Class A materials, protect exposures, stop the spread of fire, avoid collapse hazards, effectively apply water, extinguish the fire, and preserve signs of the origin area(s) and arson.

Enabling Learning Objectives
1. Discuss types of exterior fires
2. Describe the types of attack lines and water streams appropriate for attacking stacked, piled materials, and outdoor fires
3. Identify water application methods for exposure protection and fire extinguishment
4. Identify dangers, such as collapse, associated with stacked and piled materials
5. Describe various extinguishing agents and their effect on different material configurations
6. Identify tools and methods used in breaking up various types of materials
7. Describe the difficulties related to complete extinguishment of stacked and piled materials
8. Describe dangers such as exposure to toxic or hazardous materials associated with storage building and container fires
9. Recognize inherent hazards related to the material's configuration
10. Operate handlines or master streams
   • One fire fighter method (operating a large hand line)
   • Two fire fighter method (operating a large hand line)
   • Master stream
     o Fixed
     o Portable
11. Break up material using hand tools and water streams
12. Evaluate and modify water application for maximum penetration
13. Search for and expose hidden fires
14. Assess patterns for origin determination
15. Evaluate for complete extinguishment

Discussion Questions
1. What life hazards are presented to fire fighters during exterior fires?
2. What are some concerns presented by outbuildings and dumpster fires and what steps can be taken to ensure fire fighter safety?

Activities
1. Divide students into groups and ask them to list possible materials found in exterior and outbuilding fires.

CTS Guide Reference:
3-9

Topic 7-2: Passenger Vehicle Fires

Terminal Learning Objective
At the end of this topic, a student, given personal protective equipment, an attack line (1½-inch or larger), hand tools, and a passenger vehicle, will be able to attack a passenger vehicle fire, avoid hazards, identify and control leaking flammable liquids, maintain protection from flash fires, overhaul all vehicle compartments, and extinguish the fire, while operating as part of a team.

Enabling Learning Objectives
1. Describe principles of fire streams as they relate to fighting passenger vehicle fires
2. Identify precautions to be followed when advancing hose lines toward a passenger vehicle
3. List observable results that a fire stream has been properly applied
4. Identify the hazards associated with alternative fuels in passenger vehicle fires
5. Describe dangerous conditions created during a passenger vehicle fire
6. Describe common types of accidents or injuries related to fighting passenger vehicle fires and how to avoid them
7. Describe how to access locked passenger, trunk, and engine compartments
8. Identify methods for overhauling a passenger vehicle
9. Identify passenger vehicle fuel types
10. Assess and control fuel leaks
11. Apply water for maximum effectiveness while maintaining flash fire protection
12. Advance 1½-inch or larger diameter attack lines on a passenger vehicle fire
13. Expose hidden fires by opening all passenger vehicle compartments

Discussion Questions
1. What are the major safety concerns of fire fighters during passenger vehicle fires?
2. What is the proper personal protective equipment associated with fighting passenger vehicle fires?
3. What are the recommended approaches, hoseline selections, and proper procedures for fighting passenger vehicle fires?
4. What are some hazards that hybrid and alternative fuel passenger vehicle fires present?

Activities
1. Given a fire in one of the three different vehicle compartments, ask students to describe and diagram how to fight each fire and list the different concerns each present to the fire fighter.

Instructor Note:
1. Alternative Fuel Vehicles, California State Fire Training

CTS Guide Reference:
3-8
MODULE B: WILDLAND FIRE FIGHTER I

Unit 8: Wildland Fire Suppression

Topic 8-1: Wildland Response

Terminal Learning Objective
At the end of this topic, a student, given an assembly location, an assignment, an incident location, a mode of transportation, and time requirements, will be able to assemble and prepare for response so that arrival at the incident with the required personnel and equipment meets agency guidelines.

Enabling Learning Objectives
1. Identify equipment requirements
2. Discuss agency time standards
3. Identify special transportation considerations (weight limitations)
4. Discuss agency safety response guidelines
5. Describe operational procedures for various transportation modes

Discussion Questions
1. What items are necessary for wildland incident response?
2. What steps should be completed at the fire station before a response to a wildland incident?

Activities
1. Ask students to create a list of items carried in an out-of-county bag.

CTS Guide Reference:
5-4

Topic 8-2: Wildland Personal Protective Equipment

Terminal Learning Objective
At the end of this topic, a student, given wildland personal protective clothing and a new generation fire shelter, will be able to don wildland personal protective clothing and shelter according to the manufacturers’ guidelines within 60 seconds; deploy a new generation fire shelter within 30 seconds; ensure serviceability and availability on the fireline; and recognize defects and report them to a supervisor.

Enabling Learning Objectives
1. Describe the use and limitations of required wildland personal protective clothing
2. Describe the use, limitations, inspection, and care of new generation fire shelter
3. Describe the inspection of wildland personal protective clothing
4. Recognize unserviceable items among wildland personal protective clothing
5. Describe maintenance of wildland personal protective clothing
6. Discuss agency policy on fire shelter use
7. Describe first aid as referenced in NFES 1077, Incident Response Pocket Guide (IRPG), and NFES 2943, Wildland Fire Incident Management Field Guide
8. Demonstrate the ability to don wildland personal protective ensemble
9. Demonstrate the ability to deploy new generation fire shelter
   • Standing to sitting method
   • Standing drop-down method
   • Lying down method
10. Demonstrate proper cleaning procedures for wildland personal protective clothing

Discussion Questions
1. What characteristics make wildland personal protective clothing different from structural personal protective equipment?
2. Why is it important to always wear your personal protective equipment, including your fire shelter?

Activities
1. Given a recent fire entrapment or shelter deployment, ask students to discuss how personal protective equipment worked to prevent more serious injuries or fatalities.

Instructor Note:
1. New Generation Fire Shelter DVD, National Wildland Coordinating Group, NFES 2712

CTS Guide Reference:
5-1; 5-2

Topic 8-3: Wildland Tools and Equipment

Terminal Learning Objective
At the end of this topic, a student, given tools, equipment, and agency maintenance specifications, will be able to recognize defects and report them to a supervisor and maintain assigned suppression hand tools and equipment so that assigned equipment is serviceable.

Enabling Learning Objectives
1. Identify wildland fire fighting tools and equipment
   • Fussees
   • Road flares
   • Drip torches
   • Backpumps
   • Round point shovel
   • Pulaski
   • Mcleod
   • Brush hook
   • Single and double bit axe
   • Wire broom
   • Rhino tool
   • Combi tool
   • Fireline flagging
2. Describe uses for wildland fire fighting tools and equipment
3. Describe the inspection of tools
4. Describe the maintenance and care of tools and equipment
5. Describe the inspection of assigned suppression equipment
6. Recognize unserviceable items
7. Perform required maintenance techniques
8. Sharpen assigned suppression equipment
9. Perform other maintenance techniques for assigned suppression equipment
10. Use required maintenance equipment
11. Assemble and use a back pump

**Discussion Questions**

1. Why is it important to properly maintain wildland tools and equipment?
2. What are some common tools for cutting lines?

**Activities**

1. Given wildland tools that have been taken out of service due to safety concerns, ask students to inspect the tools/equipment and identify the deficiencies.

**CTS Guide Reference:**

5-3

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**Topic 8-4: Wildland Fire Behavior**

**Terminal Learning Objective**

At the end of this topic, a student, given a wildland or wildland urban interface fire and the standard safety policies and procedures of the agency, will be able to describe basic wildland fire behavior.

**Enabling Learning Objectives**

1. Describe basic wildland fire behavior

**Discussion Questions**

1. Why is it important to have a good understanding of weather?
2. How does weather influence fire behavior?
3. Why is it important to monitor the seven wildland fire environment factors?

**Activities**

1. Ask students to discuss how local factors influence fire behavior.
2. Ask students to obtain and review various sources of weather data.
3. Ask students to correctly predict fire behavior using a simulated wildland fire.

**Instructor Notes:**

1. Introduction to Wildland Fire Behavior, S-190, National Wildland Coordinating Group
2. Fire Weather DVD, National Wildland Coordinating Group, NFES 2236

**CTS Guide Reference:**

5-5

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**Topic 8-5: Wildland Fire Safety**

**Terminal Learning Objective**

At the end of this topic, a student, given a wildland or wildland urban interface fire and the standard safety policies and procedures of the agency, will be able to recognize hazards and
unsafe situations, communicate hazard(s) and unsafe condition(s) to a supervisor, and take appropriate action.

**Enabling Learning Objectives**

1. Describe basic wildland fire safety
   - 10 standard fire orders
   - 18 watch-out situations
   - LCES
   - Common denominators
   - Downhill line construction
   - Avoiding fire entrapment
   - Using a vehicle or a structure as refuge
2. Describe hazards associated with working around aircraft
3. Describe hazards associated with working around heavy equipment
4. Assume safe position for an air tanker drop
5. Use fireline flagging
6. Use the Incident Response Pocket Guide (IRPG)

**Discussion Questions**

1. How is LCES different than the 10 standard orders or 18 watch-out situations?
2. How do the principles of wildland fire behavior factor into avoiding fire entrapment?

**Activities**

1. Using small work groups, ask students to identify how to effectively implement the 10 standard fire orders and 18 watch-out situations.
2. Given several fatal fire incidents, ask students to identify violations of the 10 standard fire orders and 18 watch-out situations.

**CTS Guide Reference:**

5-5

**Topic 8-6: Human Factors on the Fireline**

**Terminal Learning Objective**

At the end of this topic, a student, given a wildland or wildland urban interface fire and the standard safety policies and procedures of the agency, will be able to promptly communicate hazard(s) and unsafe condition(s) to a supervisor.

**Enabling Learning Objectives**

1. Describe basic verbal communications

**Discussion Questions**

1. How do human factors affect fireline safety?
2. How do human factors affect crew cohesion?

**Activities**

1. To be determined by the instructor.

**Instructor Notes:**

1. Human Factors on the Fireline, L-180, National Wildland Coordinating Group
CTS Guide Reference:
5-5

Topic 8-7: Wildland Suppression

Terminal Learning Objective
At the end of this topic, a student, given a wildland or wildland urban interface a fire agency line construction standards, suppression tools and water or other suppression agents equipment, will be able to construct a fireline that conforms to the construction standard of the AHJ.

Enabling Learning Objectives
1. Describe basic wildland strategy and tactics
2. Describe basic wildland suppression methods
   • Hose lays
   • Line construction
     o Hand line
     o Dozer line
     o Retardant line
   • Mobile attack
3. Use and carry wildland tools
   • Brush hook
   • Pulaski
   • Single and double bit axe
   • Round point shovel
   • Mcleod
   • Wire broom
   • Rhino tool
   • Combi tool
   • Procedures for passing hand tools
4. Construct handline
   • Build a control line using the bump up or one lick method
   • Build a cup or trench while constructing handline
5. Perform mobile attack
6. Perform a simple hose lay
   • Single person
7. Perform progressive hoselay
   • Two person minimum
8. Retrieve hose
   • Single-section drain and carry
   • Figure 8 drain and carry

Discussion Questions
   1. How is a simple hoselay different from a progressive hoselay?
   2. How wide should a fireline be?
3. What are the safety considerations when building a fireline?

Activities
1. To be determined by the instructor.

CTS Guide Reference
5-5; 5-6

Topic 8-8: Reinforcing a Fireline

Terminal Learning Objective
At the end of this topic, a student, given a wildland fire, suppression tools, water or other suppression agents, and equipment, will be able to locate and abate burning materials and unburned fuels that threaten the fireline’s integrity.

Enabling Learning Objectives
1. Describe line improvement techniques
2. Identify safety considerations
3. Describe the types of basic ignition devices
4. Use basic ignition devices only under direct supervision
   - How to ignite and extinguish road flares and fussees
   - How to assemble and use a drip torch

Discussion Questions
1. What tools might be used to burn out a fireline?
2. What safety factors must be mitigated before burning is done?

Activities
1. To be determined by the instructor.

CTS Guide Reference: 5-7

Topic 8-9: Wildland Urban Interface

Terminal Learning Objective
At the end of this topic, a student, given a wildland or wildland urban interface fire, suppression tools, and equipment, will be able to describe methods of reducing the threat of fire exposure to improved properties in order to protect them.

Enabling Learning Objectives
1. Describe wildland fire behavior within the wildland urban interface
2. Describe wildland fuel removal for structure preparation
3. Identify structure defense methods
4. Identify equipment and personnel capabilities within the wildland urban interface
5. Prepare a structure for structure defense
6. Conduct structure defense within the wildland urban interface

Discussion Questions
1. How can the S-FACTS be used to improve safety when operating in the wildland urban interface?
2. Why is it acceptable to leave a structure that is threatened by a wildland fire?
3. How is a TRA different from a safety zone?

Activities
1. Ask students to complete an assessment of structures and determine triage category and appropriate tactics to protect them.
2. Ask students to fill out a wildland placard ICS 231.

Instructor Notes:
2. Field Operations Guide, Chapter 15, Firescope

CTS Guide Reference:
5-8

Topic 8-10: Mop-up Operations

Terminal Learning Objective
At the end of this topic, a student, given a wildland fire, suppression tools, water or other suppression agents, and equipment, will be able to mop up a fire area, locating and extinguishing burning fuels that threaten escape.

Enabling Learning Objectives
1. Describe principles, techniques, and standards for mop-up
   - Dry mop-up
   - Wet mop-up
2. Use basic tools to perform mop-up operations
3. Use basic techniques to perform mop-up operations

Discussion Questions
1. What are some critical elements of mop-up operations?
2. How will different fuels influence mop-up operations?

Activities
1. To be determined by the instructor.

CTS Guide Reference:
5-9

Topic 8-11: Conducting Patrols

Terminal Learning Objective
At the end of this topic, a student, given a wildland fire, suppression tools, and equipment, will be able to patrol and maintain control of the fire area.

Enabling Learning Objectives
1. Describe the principles, techniques, and standards of patrol

Discussion Questions
1. What should a fire fighter look for during patrol operations?
2. What is the importance of conducting patrol operations?

Activities
1. To be determined by the instructor.
MODULE C: HAZMAT FIRST RESPONDER AWARENESS/OPERATIONS

Unit 9: Hazardous Materials/WMD

Topic 9-1: Recognizing Hazardous Materials/WMD

Terminal Learning Objective
At the end of this topic, a student, given a hazardous materials incident, the DOT Emergency Response Guidebook or equivalent guide, shipper/manufacturer papers and contacts, material safety data sheets, and an assignment, will be able to recognize the presence of hazardous materials and the indicators of a hazardous materials incident, correctly identify the materials involved, take personal protective actions, initiate the appropriate notification process, and secure the area.

Enabling Learning Objectives
1. Define hazardous materials
2. Describe the risks associated with hazardous materials
3. Recognize the presence of hazardous materials in an emergency
4. Identify the hazardous materials involved
   • Placards
   • Labels
   • Containers
5. Recognize the presence of weapons of mass destruction
6. Identify procedures in the event of a WMD incident
7. Identify the potential outcomes associated with an emergency when hazardous materials are present
8. Identify the types of additional resources for a hazardous materials response
9. Identify mandatory notifications in accordance with AHJ
10. Describe the role of the fire fighter in the AHJ’s emergency response plan, including site security and control zones
11. Describe the components of the DOT Emergency Response Guidebook or equivalent guide
12. Identify shipper/manufacturer papers and contacts
13. Identify hazardous materials, their potential hazards, and appropriate personal protective actions using material safety data sheets
14. Describe the process to preserve evidence
15. Use the DOT Emergency Response Guidebook or equivalent guide
16. Initiate protective actions to secure the area
17. Make appropriate notifications as directed by the AHJ
18. Use material safety data sheets to identify hazardous materials, their potential hazards, and appropriate personal protective actions
Discussion Questions

1. What factors might indicate a hazardous materials/WMD incident?
2. What role does the DOT Emergency Response Guidebook play in identifying a hazardous materials incident?

Activities

1. Divide students into groups and ask them to list different factors that may indicate a hazardous materials incident in different methods of commercial transport.
2. Ask students to outline factors related to recognizing WMD incidents during initial response.

CTS Guide Reference:

6-1

Topic 9-2: Identifying/Analyzing Hazardous Materials/WMD Incidents

Terminal Learning Objective

At the end of this topic, a student, given a hazardous materials incident, recognized hazardous materials, department standard operating procedures, equipment readily available to personnel, and an assignment, will be able to protect persons, property, and the environment from further harm, initiate the appropriate communications process, and secure the area.

Enabling Learning Objectives

1. Define basic hazardous materials terms
2. Define health hazards and physical and chemical properties of hazardous materials
3. Describe basic hazard and risk assessment techniques
4. Describe procedures for initial hazardous materials/WMD response
5. Describe the incident command system used in hazardous materials incidents
6. Discuss standard operating procedures according to AHJ
7. Identify the containers and materials involved using the DOT Emergency Response Guidebook or equivalent guide
8. Identify damaged containers and the effects of release
9. Describe the process of evacuation and/or shelter in place
10. Determine if materials have been released
11. Evaluate the status of each incident response objective at a hazardous materials/WMD incident
12. Communicate the status of a hazardous materials/WMD incident
13. Limit access to the area

Discussion Questions

1. Given a chemical release, what are the important safety concerns related to weather and time of day for both fire fighters and the general public?
2. What are the basic roles and responsibilities of the fire fighter in a hazardous materials incident response?
3. What types of WMD agents might a fire fighter respond to?
4. What factors do you consider when deciding between evacuation and shelter in place?
Activities

1. Using the DOT Emergency Response Guidebook, ask students to identify proper emergency response practices when independently given a cargo container description, a four-digit ID number, and a chemical name.

CTS Guide Reference:
6-2

Topic 9-3: Emergency Decontamination

Terminal Learning Objective
At the end of this topic, a student, given a hazardous material incident, an individual contaminated by a hazardous material that can be decontaminated by fire fighters in personal protective equipment, equipment readily available to fire fighters, standard operating procedures, and an assignment, will be able to perform emergency, mass and technical decontamination procedures, use appropriate personal protective equipment based on hazard, protect exposures, avoid hazards, decontaminate victims and responders, and identify contaminated items and products of contamination for subsequent control.

Enabling Learning Objectives

1. Identify capabilities and limitations of personal protective equipment provided by the AHJ
2. Identify ways that people, personal protective equipment, apparatuses, tools, and equipment become contaminated
3. Explain the emergency, mass and technical decontamination process, according to AHJ
4. Explain the importance and limitations of emergency, mass and technical decontamination procedures
5. Describe standard operating procedures for emergency, mass and technical decontamination
6. Prepare an emergency, mass and technical decontamination area
7. Perform emergency mass and technical decontamination

Discussion Questions

1. What is the importance and proper methods of emergency decontamination for mass casualty incidents?
2. What consequences can arise from improper decontamination procedures?

Activities

1. To be determined by the instructor.

CTS Guide Reference:
6-3

Topic 9-4: Mitigating a Hazardous Materials/WMD Incident

Terminal Learning Objective
At the end of this topic, a student, given a hazardous materials incident, recognized hazardous materials, department standard operating procedures, equipment readily available to personnel, an assignment, and personal protective equipment, will be able to
perform basic control, containment, and confinement techniques to control hazardous materials release, and protect emergency responders from contamination.

**Enabling Learning Objectives**

1. Describe product control operations including absorption, adsorption, damming, diking, dilution, retention, remote valve shutoff, and vapor dispersion
2. Identify tools and equipment for product control
3. Perform basic control, containment, and confinement operations within the capabilities of the AHJ’s resources and personal protective equipment

**Discussion Questions**

1. What are some different methods of control, containment, and confinement operations and how might these cause harm to fire fighters, the general public, and the environment?
2. What is the importance of containment and control during incidents near waterways, storm drains, and other routes of major water systems?
3. How is a WMD incident contained and the scene preserved for law enforcement?

**Activities**

1. Divide students into groups and assign each group a disaster. Given weather, topography, and their assigned disaster, ask students to outline a response and create a plan to control and contain the incident.

**CTS Guide Reference:**

6-4

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### Unit 5: Structural Fire Suppression

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**Unit 6: Fire Fighter Survival**

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**Unit 9: Hazardous Materials/WMD**

**Topic 9-1: Recognizing Hazardous Materials/WMD**

| Lecture                                      | 3:00         |                      |                 |
| Activity 9-1                                 |              | 1:00                 |                 |
| Skills                                       |              | 2:00                 |                 |

**Topic 9-2: Identifying/Analyzing Hazardous Materials/WMD Incidents**

| Lecture                                      | 4:00         |                      |                 |
| Activity 9-2                                 |              | 1:00                 |                 |
| Skills                                       |              | 1:00                 |                 |

**Topic 9-3: Emergency Decontamination**

| Lecture                                      | 2:00         |                      |                 |
| Activity 9-3                                 |              | 00:00                |                 |
| Skills                                       |              | 2:00                 |                 |

**Topic 9-4: Mitigating a Hazardous Materials/WMD Incident**

| Lecture                                      | 3:00         |                      |                 |
| Activity 9-4                                 |              | 1:00                 |                 |
| Skills                                       |              | 4:00                 |                 |

**Unit 9 Totals**

| Lecture, Activity, and Unit Totals:          | 118:30       | 240:00               | 358:30          |

Course Totals
Fire Fighter I

<table>
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<tr>
<th>Total Lecture Time (LT)</th>
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<td>Total Course Time</td>
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**Note:** Skills and activity time will vary depending on the number of students in the program. It is important to remember that the suggested skill hours are for up to 50 students. The following is a breakdown of what a program might look like if there were fewer students. These are just estimates, times may need to be adjusted based on student abilities.

- 40 – 50 Students: 240 hours
- 30 – 40 Students: 180 hours
- 20 – 30 Students: 120 hours
- 1 – 20 Students: 60 hours
Fire Fighter I

Certification Task Book
September 2017

Candidate:  Click here to enter text.
SFT ID Number:  Click here to enter text.
Fire Agency:  Click here to enter text.

Issued By:  Click here to enter text.
Issue Date:  Click here to enter text.


Published by:
State Fire Training, 1131 S Street, Sacramento, CA  95811
(916) 445-8200

Cover photo courtesy of Dave Boyce, Almanac News
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Purpose and Process

The State Fire Training Certification task book is a performance-based document. It lists the individual job performance requirements for certification.

Purpose
Each certification task book focuses on a single State Fire Training job function certification. A certification task book identifies the minimum job performance requirements necessary to perform the duties of that certification. Completion of a certification task book verifies that the candidate has demonstrated the requisite knowledge and skills to obtain that certification.

SFT has taken the position that the JPRs listed in the task book may, in fact be signed off during fire fighter I training. Additionally, SFT has stated that ARTP’s should consult with their fire technology advisory committee and local fire agencies to determine how the fire service community would like them to proceed in this regard. If sections of the task book are signed off during the academy, a fire chief may require the candidate to perform a skill again and have that performance documented by a second signature in the task book.

Responsibilities

Candidate Responsibilities
The candidate is the individual pursuing certification.

All candidates shall:
- Complete a block on the Signature Verification page.
- Complete the Experience, Rank, and Job Performance Requirements.
- Accurately record and maintain the certification task book.
- Sign and date the Candidate verification statement under the Review and Approval segment
- Submit the completed certification task book to State Fire Training.
- Retain a copy of the completed certification task book.

Evaluator Responsibilities
An evaluator is any individual who verifies that the candidate can satisfactorily execute a job performance requirement. A qualified evaluator is designated by the candidate’s fire chief (or authorized designee) and shall possess the equivalent or higher-level certification. If no such evaluator is present within the organization, the fire chief (or authorized designee) shall designate an individual with more experience than the candidate and a demonstrated ability to
execute the job performance requirements. A certification task book may have more than one evaluator.

All evaluators shall:
- Complete a block the Signature Verification page.
- Review and understand the candidate's certification task book requirements and responsibilities.
- Verify the candidate’s successful completion of one or more job performance requirements through observation or review.
- Sign and/or initial all appropriate lines in the certification task book to record demonstrated performance of tasks.

**Fire Chief Responsibilities**

The fire chief (or authorized designee) is the individual who reviews and confirms the completion of a candidate’s certification task book.

The fire chief (or authorized designee) shall:
- Designate qualified evaluators.
- Complete a block on the Signature Verification page.
- Review the candidate’s certification task book requirements and responsibilities.
- Verify the candidate has obtained the appropriate signatures to verify successful completion of each job performance requirement.
- Verify the experience segment is completed and sign the fire chief verification statement under Authority segment. If signing as an authorized designee, verify that your signature is on file with State Fire Training.

**Completion Process**

When you receive your certification task book:

1. Thoroughly review the Experience, Rank, and Job Performance Requirements segments to make sure that you understand them.
2. Confirm who within your California fire agency will evaluate your job performance requirements.
3. Complete the Experience segment. All experience must be completed within a California fire agency.
4. Complete the Rank segment.
5. Complete each task in the Job Performance Requirements segment and ensure that an evaluator signs and dates each one to verify completion. Also ensure that every evaluator is listed on the Signature Verification page. All Job Performance Requirements must be completed within a California fire agency or training center.
6. Ask your fire chief (or authorized designee) to verify certification task book completion by signing the appropriate paragraph under Authority.

7. Make a copy of the completed certification task book to retain with your personal records.

8. Mail the original certification task book, supporting documents, application, fee and fee schedule to State Fire Training (see address below).

After receipt and successful review of your application package, State Fire Training will approve the application package and mail your certificate to you. State Fire Training retains the completed, approved original certification task book in your career file.

If State Fire Training determines that your application package is incomplete State Fire Training will return the insufficient components, replacement pages and a checklist indicating what needs to be completed.

**Do not submit this certification task book until you have completed the Experience and Rank segments and all tasks in the Job Performance Requirements segment and obtained all required signatures.**

**State Fire Training Mailing Address**

Office of the State Fire Marshal  
State Fire Training  
1131 S Street  
Sacramento, CA 95811

**Completion Timeframe**

State Fire Training aims to update certification task books on a five-year cycle. A certification task book in process is valid until State Fire Training issues a new certification task book for the same job function certification.

If a candidate does not complete a certification task book before the release of a new version, State Fire Training will provide candidates with a task book revision supplement identifying any revisions or new requirements. The candidate must fulfill all requirements included in the revision supplement and submit the revision supplement with the original task book.
# Signature Verification

The following individuals have the authority to verify portions of this certification task book using the signature recorded below.

<table>
<thead>
<tr>
<th>Name:</th>
<th>Job Title:</th>
<th>Organization:</th>
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Revised: September 2017
Certification Task Book Requirements

Job Performance Requirements

All job performance requirements must be performed in accordance with the standards of the authority having jurisdiction (AHJ) or the National Fire Protection Association (NFPA), whichever is more restrictive. Additionally all Job Performance Requirements must be completed within a California fire agency or training center.

General

1. **OSFM** Operate at a confined space or permit-required confine space and identify when a confined space is present, hazards are recognized and mitigated, equipment is secured, procedures are followed, and Cal/OSHA position are utilized.

   ________________  ________________
   Date Completed    Evaluator Verification

2. **OSFM** Operate within the Incident Command System on an incident, given an incident and an incident action plan so that organizational elements are recognized, positions and responsibilities are identified, facility needs are met, and the incident is managed.

   ________________  ________________
   Date Completed    Evaluator Verification

Fire Department Communications

1. **5.2.1** Initiate the response to a reported emergency, given the report of an emergency, fire department SOPs, and communications equipment, so that all necessary information is obtained, communications equipment is operated correctly, and the information is relayed promptly and accurately to the dispatch center.

   ________________  ________________
   Date Completed    Evaluator Verification

2. **5.2.2** Receive a telephone call, given a fire department phone, so that procedures for answering the phone are used and the caller’s information is relayed.

   ________________  ________________
   Date Completed    Evaluator Verification
3. **5.2.3** Transmit and receive messages via the fire department radio, given a fire department radio and operating procedures, so that the information is accurate, complete, clear, and relayed within the time established by the AHJ.

____________________________  _______________________
Date Completed Evaluator Verification

4. **5.2.4** Activate an emergency call for assistance, given vision-obscured conditions, PPE, and department SOPs, so that the fire fighter can be located and rescued.

____________________________  _______________________
Date Completed Evaluator Verification

**Fireground Operations**

1. **5.1.2** The ability to don personal protective clothing, doff personal protective clothing and prepare for reuse, hoist tools and equipment using ropes and the correct knot, and locate information in departmental documents and standard or code materials.

____________________________  _______________________
Date Completed Evaluator Verification

2. **5.3.1** Use self-contained breathing apparatus (SCBA) during emergency operations, given SCBA and other personal protective equipment, so that the SCBA is correctly donned, the SCBA is correctly worn, controlled breathing techniques are used, emergency procedures are enacted if the SCBA fails, all low-air warnings are recognized, respiratory protection is not intentionally compromised, and hazardous areas are exited prior to air depletion.

____________________________  _______________________
Date Completed Evaluator Verification

3. **5.3.2** Respond on apparatus to an emergency scene, given personal protective clothing and other necessary personal protective equipment, so that the apparatus is correctly mounted and dismounted, seat belts are used while the vehicle is in motion, and other personal protective equipment is correctly used.

____________________________  _______________________
Date Completed Evaluator Verification

4. **5.3.3** Establish and operate in work areas at emergency scenes, given protective equipment, traffic and scene control devices, structure fire and roadway emergency scenes, traffic hazards and downed electrical wires, an assignment, and SOPs, so that procedures are followed, protective equipment is worn, protected work areas are established as directed using traffic and scene control devices, and the fire fighter performs assigned tasks only in established, protected work areas.
Fire Fighter I – Task Book

Job Performance Requirements

5. **5.3.4** Force entry into a structure, given personal protective equipment, tools, and an assignment, so that the tools are used as designed, the barrier is removed, and the opening is in a safe condition and ready for entry.

6. **5.3.5** Exit a hazardous area as a team, given vision-obscured conditions, so that a safe haven is found before exhausting the air supply, others are not endangered, and the team integrity is maintained.

7. **5.3.6** Set up ground ladders, given single and extension ladders, an assignment, and team members if needed, so that hazards are assessed, the ladder is stable, the angle is correct for climbing, extension ladders are extended to the necessary height with the fly locked, the top is placed against a reliable structural component, and the assignment is accomplished.

8. **5.3.7** Attack a passenger vehicle fire operating as a member of a team, given personal protective equipment, attack line, and hand tools, so that hazards are avoided, leaking flammable liquids are identified and controlled, protection from flash fires is maintained, all vehicle compartments are over-hauled, and the fire is extinguished.

9. **5.3.8** Extinguish fires in exterior Class A materials, given fires in stacked or piled and small unattached structures or storage containers that can be fought from the exterior, attack lines, hand tools and master stream devices, and an assignment, so that exposures are protected, the spread of fire is stopped, collapse hazards are avoided, water application is effective, the fire is extinguished, and signs of the origin area(s) and arson are preserved.

10. **5.3.9** Conduct a search and rescue in a structure operating as a member of a team, given an assignment, obscured vision conditions, personal protective equipment, a flashlight, forcible entry tools, hose lines, and ladders when necessary, so that ladders are correctly placed when used, all assigned areas are searched, all victims are located and removed, team
integrity is maintained, and team members’ safety — including respiratory protection — is not compromised.

Date Completed ___________________________ Evaluator Verification

11. **5.3.10** Attack an interior structure fire operating as a member of a team, given an attack line, ladders when needed, personal protective equipment, tools, and an assignment, so that team integrity is maintained, the attack line is deployed for advancement, ladders are correctly placed when used, access is gained into the fire area, effective water application practices are used, the fire is approached correctly, attack techniques facilitate suppression given the level of the fire, hidden fires are located and controlled, the correct body posture is maintained, hazards are recognized and managed, and the fire is brought under control.

Date Completed ___________________________ Evaluator Verification

12. **5.3.11** Perform horizontal ventilation on a structure operating as part of a team, given an assignment, personal protective equipment, ventilation tools, equipment, and ladders, so that the ventilation openings are free of obstructions, tools are used as designed, ladders are correctly placed, ventilation devices are correctly placed, and the structure is cleared of smoke.

Date Completed ___________________________ Evaluator Verification

13. **5.3.12** Perform vertical ventilation on a structure as part of a team, given an assignment, personal protective equipment, ground and roof ladders, and tools, so that ladders are positioned for ventilation, a specified opening is created, all ventilation barriers are removed, structural integrity is not compromised, products of combustion are released from the structure, and the team retreats from the area when ventilation is accomplished.

Date Completed ___________________________ Evaluator Verification

14. **5.3.13** Overhaul a fire scene, given personal protective equipment, attack line, hand tools, a flashlight, and an assignment, so that structural integrity is not compromised, all hidden fires are discovered, fire cause evidence is preserved, and the fire is extinguished.

Date Completed ___________________________ Evaluator Verification

15. **5.3.14** Conserve property as a member of a team, given salvage tools, equipment and an assignment, so that the building and its contents are protected from further damage.

Date Completed ___________________________ Evaluator Verification
16. **5.3.15** Connect a fire department pumper to a water supply as a member of a team, given supply or intake hose, hose tools, and a fire hydrant or static water source, so that connections are tight and water flow is unobstructed.

17. **5.3.16** Extinguish incipient Class A, Class B, and Class C fires, given a selection of portable fire extinguishers, so that the correct extinguisher is chosen, the fire is completely extinguished, and correct extinguisher-handling techniques are followed.

18. **5.3.17** Illuminate the emergency scene, given fire service electrical equipment and an assignment, so that designated areas are illuminated and all equipment is operated within the manufacturer’s listed safety precautions.

19. **5.3.18** Turn off building utilities, given tools and an assignment, so that the assignment is safely completed.

20. **5.3.20** Tie a knot appropriate for hoisting tool, given personnel protective equipment, tools, ropes, and an assignment, so that the knots used are appropriate for hoisting tools securely and as directed.

### Preparedness and Maintenance

1. **5.5.1** Clean and check ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools, given cleaning tools, cleaning supplies, and an assignment, so that equipment is clean and maintained according to manufacturer’s or departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.
2. **5.5.2** Clean, inspect, and return fire hose to service, given washing equipment, water, detergent, tools, and replacement gaskets, so that damage is noted and corrected, the hose is clean, and the equipment is placed in a ready state for service.

   _______________ _______________  
   Date Completed Evaluator Verification

**Wildland Suppression**

1. **4.3.2** Maintain assigned personal protective equipment, given the standard equipment issue, so that the equipment is serviceable and available for use on the fireline and defects are recognized and reported to the supervisor.

   _______________ _______________  
   Date Completed Evaluator Verification

2. **4.3.3** Maintain assigned suppression hand tools and equipment, given tools and equipment and agency maintenance specifications, so that assigned equipment is maintained and serviceable and defects are recognized and reported to the supervisor.

   _______________ _______________  
   Date Completed Evaluator Verification

3. **4.5.2** Assemble and prepare for response, given an assembly location, an assignment, incident location, mode of transportation, and the time requirements, so that arrival at the incident with the required personnel and equipment meets agency guidelines.

   _______________ _______________  
   Date Completed Evaluator Verification

4. **4.5.3** Recognize hazards and unsafe situations given a wildland or wildland/urban interface fire and the standard safety policies and procedures of the agency, so that the hazard(s) and unsafe condition(s) are communicated to the supervisor and appropriate action is taken.

   _______________ _______________  
   Date Completed Evaluator Verification

5. **4.5.4, 5.3.19** Construct a fireline, given a wildland fire, agency line construction standards, suppression tools, water or other suppression agents, and equipment, so that the fireline conforms to the construction standard.

   Combat a ground cover fire operating as a member of a team, given protective clothing, SCBA (if needed), hose lines, extinguishers or hand tools, and an assignment, so that threats
to property are reported, threats to personal safety are recognized, retreat is quickly accomplished when warranted, and the assignment is completed.

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6. **4.5.5** Secure the fireline, given a wildland fire and suppression tools, water or other suppression agents, and equipment, so that burning materials and unburned fuels that threaten the integrity of the fireline are located and abated.

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7. **4.5.6** Describe the methods to reduce the threat of fire exposure to improved properties given a wildland/urban interface fire, suppression tools, and equipment so that improvements are protected.

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8. **4.5.7** Mop up fire area, given a wildland fire, suppression tools, and water or other suppression agents and equipment, so that burning fuels that threaten escape are located and extinguished.

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9. **4.5.8** Patrol the fire area, given a wildland fire, suppression tools, and equipment, so that control of the fire area is maintained.

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**Hazardous Materials for Fire Fighters**

1. **OSFM** Recognize the presence of hazardous materials and the indicators of a hazardous materials incident, given a hazardous materials/WMD incident, the DOT Emergency Response Guidebook or equivalent guide, shipper/manufacturer papers and contacts, material safety data sheets, and an assignment, to correctly identify the materials involved, take personal protective actions, initiate the appropriate notification process, and secure the area.

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2. **OSFM** Protect persons, property, and the environment from further harm, given a hazardous materials incident, recognized hazardous materials, fire department standard operating procedures, equipment readily available to personnel, and an assignment, to initiate the appropriate communications process, and secure the area.

   ________________  ____________________________
   Date Completed    Evaluator Verification

3. **OSFM** Perform emergency decontamination procedures, given a hazardous material incident, an individual contaminated by a hazardous material that can be decontaminated by fire fighters in personal protective equipment, equipment readily available to fire fighters, standard operating procedures, and an assignment, to use appropriate personal protective equipment based on the hazard, protect exposures, avoid hazards, decontaminate victims and responders, and identify contaminated items and products of contamination for subsequent control.

   ________________  ____________________________
   Date Completed    Evaluator Verification

4. **OSFM** Perform basic control, containment, and confinement techniques, given a hazardous materials incident, recognized hazardous materials, department standard operating procedures, equipment readily available to personnel, an assignment, and personal protective equipment, to control hazardous materials release, and protect fire fighters from contamination.

   ________________  ____________________________
   Date Completed    Evaluator Verification
Experience

The candidate meets the following requirements for experience.

☐ Six (6) months full-time experience as a Fire Fighter in a California fire agency

OR

☐ Twelve (12) months Volunteer or Reserve Fire Fighter in a California fire agency

Rank or Position

The candidate meets the following qualifications for rank or position.

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<thead>
<tr>
<th>Rank or Position</th>
<th>Agency</th>
<th>Employment Dates</th>
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<tbody>
<tr>
<td>Fire Fighter</td>
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</tbody>
</table>

Authority

Candidate’s Fire Chief

Candidate’s Fire Chief: ____________________________

Fire Chief’s (or Authorized Designee’s) Printed Name

I, the undersigned, am the person authorized to verify the candidate’s experience, rank, and job performance requirements. I hereby certify under penalty of perjury under the laws of the State of California, that completion of all experience, rank, and job performance requirements made herein are true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documents may be cause for rejection.

_________________________  ________________________
Fire Chief’s (or Authorized Representative’s) Signature  Date
**Review and Approval**

**Candidate Review**

_Candidate:_ __________________________

Candidate’s Printed Name

I, the undersigned, am the person applying for certification. I hereby certify under penalty of perjury under the laws of the State of California, that completion of all experience, rank, and job performance requirements made herein are true in every respect. I understand that misstatements, omissions of material facts, or falsification of information or documents may be cause for rejection or revocation.

_________________________________________  ____________________________

Candidate’s Signature  Date

******This section is for State Fire Training use only******

**State Fire Training Review**

I have reviewed this certification task book and verify that the candidate has met all requirements for this job function certification.

_________________________________________  ____________________________

State Fire Training Representative’s Signature  Date

_Certification #:_ __________________________

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Fire Fighter I

CIRM

Course Details

Certification: Fire Fighter I

CTS Guide: Fire Fighter I Certification Training Standards Guide

Description: This course provides the skills and knowledge needed for the entry level fire fighter, career or volunteer, to perform his/her duties safely, effectively, and competently. The curriculum is based on the 2013 edition of NFPA 1001 Standard for Fire Fighter Professional Qualifications, the 2016 edition of NFPA 1051 Standard for Wildland Fire Fighter Professional Qualifications, and the 2013 edition of NFPA 472 Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. The seven overarching themes of the California State Fire Fighter I curriculum are: general knowledge germane to the profession, fire department communications, fireground operations, rescue operations, preparedness and maintenance, wildland suppression activities, and hazardous materials/WMD.

Designed For: Entry level fire fighter

Prerequisites: Minimum of Public Safety First Aid and CPR (CA Health and Safety Code 1797.182)

Corequisites: *Only the classroom version will be accepted for the courses below:
Confined Space Awareness (CA Code of Regulations, Title 8, Section 5157)
Introduction to the Incident Command System (ICS-100), FEMA
National Incident Management System, An Introduction (IS-700.A), FEMA

Standard: Complete all activities and formative tests.
Complete all summative tests with a minimum score of 80%.
Complete all mandatory skills testing.
Fire Fighter I

Hours: Lecture: 118:30  
Activities/Skills: 240:00*  
Testing: 36:00  
- Fire Fighter I: 24:00  
- Wildland Fire Fighter I: 8:00  
- Hazardous Materials/WMD: 4:00

Hours (Total): 394:30
Maximum Class Size: 50
Instructor Level: Training Instructor 1A and 1B
Instructor/Student Ratio: 1:50 (Lecture); 1:10 (Skills)
Restrictions: None
SFT Designation: CFSTES

*Note: Skills and activity time will vary depending on the number of students in the program. It is important to remember that the suggested skill hours are for up to 50 students. The following is a breakdown of what a program might look like if there were fewer students. These are just estimates, times may need to be adjusted based on student abilities.

40 – 50 Students 240 hours  
30 – 40 Students 180 hours  
20 – 30 Students 120 hours  
1 – 20 Students 60 hours
### Required Resources

#### Instructor Resources

To teach this course, instructors need:

- **Fundamentals of Fire Fighter Skills** (Includes Instructor’s Toolkit DVDs)  
  *Optional Companion Reference: Hazardous Materials: Awareness and Operations*  

  OR

- **Essentials of Fire Fighting and Fire Department Operations**  
  (Stowell, Frederick M., Murnane, Lynne, Brady Publishing, a division of Pearson  
  **AND**  
  **Hazardous Materials for First Responders**  

  OR

- **Fire Engineering’s Handbook for Fire Fighter I and Fire Fighter II** (Includes Instructor  
  Guide and Sample Skills Drills DVDs)  

- **Firefighters Handbook on Wildland Firefighting**  


- **Incident Response Pocket Guide, NFES 001077, Current Edition**  

- **IS-100 Introduction to Incident Command System, I-100, Instructor Guide**  
  ([https://training.fema.gov/is/coursematerials.aspx?code=IS-100.b](https://training.fema.gov/is/coursematerials.aspx?code=IS-100.b))

- **IS-700 National Incident Management System, An Introduction, Instructor Guide**  
  ([https://training.fema.gov/is/coursematerials.aspx?code=is-700.a](https://training.fema.gov/is/coursematerials.aspx?code=is-700.a))

#### Online Instructor Resources

The following instructor resources are available online at  
[http://osfm.fire.ca.gov/training/SFTCurriculum.php](http://osfm.fire.ca.gov/training/SFTCurriculum.php)

- Skill Sheets
- Course plan
- Website

#### Student Resources

To participate in this course, students need:

- **Fundamentals of Fire Fighter Skills**  
  (Jones and Bartlett Learning, Third Edition, ISBN: 978-1-4496-7085-6),  

  OR
Fire Fighter I

Essentials of Fire Fighting and Fire Department Operations
Fire Engineering’s Handbook for Fire Fighter I and Fire Fighter II

• Firefighters Handbook on Wildland Firefighting
• The New Generation Fire Shelter, NFES 2710, March 2003 Edition
  (https://www.nwcg.gov/sites/default/files/products/newshelt72.pdf)
• Incident Response Pocket Guide, NFES 001077, Current Edition
• IS-100 Introduction to Incident Command System, I-100, Student Manual
  (https://training.fema.gov/is/coursematerials.aspx?code=IS-100.b)
• IS-700 National Incident Management System, An Introduction, Student Manual
  (https://training.fema.gov/is/coursematerials.aspx?code=is-700.a)
• Full structural and wildland personal protective equipment

Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

• **Appliances and tools:** 1 ½-inch fog nozzle, 2 ½ - 1 ¾-inch straight tip nozzle, wildland nozzles and appliances, cap, double female fittings, double male fittings, hose clamps, hose jacket, hose roller, hose strap, rope, or chain, nozzle selection as determined by AHJ, plug, master stream device, traffic and scene control devices, reducer or increaser (fittings), Siamese, spanner wrenches, and gated wye

• **Extinguishers and supplies:** Dry chemical extinguisher, (ordinary base or multi-purpose) 20 pounds, CO₂ extinguisher, pump tank water extinguisher, Class A fuel for live burns, Class B fuel for live burns, and metal pan – minimum 16 square feet

• **Hose:** 1-, 1 ½- or 1 ¾-inch fire hose (300-foot minimum), 2 ½- or 3-inch fire hose (500-foot minimum), large diameter hose (LDH) (300-foot minimum), handline with fog nozzle, hard suction (intake) hose and strainer, hose and nozzles capable of flowing a minimum of 95 GPM, and soft suction hose

• **Hand tools:** Bolt cutters, crowbar/pry bar, flat head axe, halligan tool, hand saw, hydrant wrench, K-tool, pick-head axe, pike pole (8 feet), sledgehammer, flashlight, and wildland hand tools and equipment

• **Ladders:** 10-foot folding ladder, 14-foot roof ladder, 24-foot extension ladder, 35-foot extension ladder, and two straight ladders

• **Power tools:** Electric and gasoline powered fan, chain saw, gasoline powered circular saw, and a generator

• **Protective equipment/clothing:** Full set of protective clothing for structural fire fighting for each trainee, including bunker pants, bunker coat, bunker boots, gloves, helmet, hood, and face piece, self-contained breathing apparatus with charged air cylinder, (one
extra fully charged air cylinder), personal alert safety system (P.A.S.S.), safety harness, manufacturer approved cleaning agent (for SCBA), manufacturer approved cleaning equipment (for SCBA), and manufacturer approved sanitizing agent (for SCBA)

- **Rope**: ½-inch rope, safety line, webbing, various lengths and diameters of utility rope, various lengths and diameters of synthetic rope, and various lengths of 1-person or 2-person life safety rope

- **Salvage equipment/materials**: Brooms, buckets, tubs, mops, objects to cover, salvage covers, squeegees, sprinkler stop, and water vacuums

- **Simulation equipment/materials**: Burn building as recommended in NFPA 1403: *Standard on Live Fire Training*, wood roof prop, smoke-generating equipment, training tower, minimum of two stories in height, gas, water, and electric service cut-off, vehicle fire prop, and a simulated breaching/restricted passageway prop

- **Other supplies/equipment needed**: Fire hydrant, pitot tube and gauge, portable radio, thermal imaging camera, standard above ground fall protection, minimum of two apparatuses equipped with pump and two separate water supplies, fuel and supplies for power equipment, cleaning supplies and equipment, portable lighting equipment, two portable tanks with water transfer equipment and appliances
Unit 1: Introduction

Topic 1-1: Orientation and Administration
Topic 1-2: Fire Fighter I Certification Process
Topic 1-3: General Knowledge Requirements

MODULE A: FIRE FIGHTER I

Unit 2: Fire Fighter Safety

Topic 2-1: Health and Safety
Topic 2-2: Structural Personal Protective Ensemble
Topic 2-3: Self-Contained Breathing Apparatus
Topic 2-4: Responding on an Apparatus
Topic 2-5: Operating at an Emergency Scene

Unit 3: Communications

Topic 3-1: Operating a Phone in a Non-emergency Situation
Topic 3-2: Initiating a Response to an Emergency
Topic 3-3: Operating Fire Department Radios

Unit 4: Fire Tools and Equipment

Topic 4-1: Ropes and Knots
Topic 4-2: Hand and Power Tools
Topic 4-3: Portable Electric and Lighting Equipment
Topic 4-4: Maintenance

Unit 5: Structural Fire Suppression
Fire Fighter I

Topic 5-1: Building Construction and Related Hazards

Topic 5-2: Fire Behavior

Topic 5-3: Fire Extinguishers

Topic 5-4: Water Supply Systems

Topic 5-5: Fire Hose

Topic 5-6: Utility Control at Emergencies

Topic 5-7: Ground Ladder Operations

Topic 5-8: Forcible Entry

Topic 5-9: Structure Fire Search and Rescue Operations

Topic 5-10: Structural Fire Fighting Operations

Topic 5-11: Horizontal Ventilation Operations

Topic 5-12: Vertical Ventilation Operations

Topic 5-13: Property Conservation

Topic 5-14: Overhaul

Unit 6: Fire Fighter Survival

Topic 6-1: Structural Fire Fighter Survival

Unit 7: Suppression of Fires Outside of a Structure

Topic 7-1: Exterior Fires

Topic 7-2: Passenger Vehicle Fires

MODULE B: WILDLAND FIRE FIGHTER I

Unit 8: Wildland Fire Suppression
Topic 8-1: Wildland Response
Topic 8-2: Wildland Personal Protective Equipment
Topic 8-3: Wildland Tools and Equipment
Topic 8-4: Wildland Fire Behavior
Topic 8-5: Wildland Fire Safety
Topic 8-6: Human Factors on the Fireline
Topic 8-7: Wildland Suppression
Topic 8-8: Reinforcing a Fireline
Topic 8-9: Wildland Urban Interface
Topic 8-10: Mop-up Operations
Topic 8-11: Conducting Patrols

MODULE C: HAZMAT FIRST RESPONDER AWARENESS/OPERATIONS

Unit 9: Hazardous Materials/WMD
Topic 9-1: Recognizing Hazardous Materials/WMD
Topic 9-2: Identifying/Analyzing Hazardous Materials/WMD Incidents
Topic 9-3: Emergency Decontamination
Topic 9-4: Mitigating a Hazardous Materials/WMD Incident