Student Resources

To participate in this course, students need:

- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response* (Jones and Bartlett Learning, 4th edition, ISBN: 978-1-284-15133-6)
  or
  Essentials of Fire Fighting (IFSTA, 7th edition, ISBN: 978-087939657-2)
- Full structural PPE and SCBA that meets AHJ requirements
  - PPE and SCBA used during live burns must be compliant with NFPA 1971 (current edition)

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 1/8-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, CO_2 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 (current edition), 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 device, atmospheric monitor, 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

* See NFPA 1403 (2018 or current edition) for additional facilities, equipment, and personnel requirements needed for NFPA 1403-compliant live fire training evolutions.

Time Table

Segment	Lecture	Application	Unit Total
Unit 1: Introduction			
Topic 1-1: Orientation and Administration	0.5	0.0	
Topic 1-2: Fire Fighter 2 Certification Process	0.5	0.0	
Topic 1-3: Fire Fighter 2 Roles and Responsibilities	1	0.0	
Unit 1 Totals	**2.0**	**0.0**	**2.0**
Unit 2: Fire Department Communications			
Topic 2-1: Completing a Basic Incident Report	1.0	0.5	
Topic 2-2: Communicating the Need for Team Assistance	0.5	0.5	
Unit 2 Totals	**1.5**	**1.0**	**2.5**
Unit 3: Fireground Operations			
Topic 3-1: Extinguishing an Ignitable Liquid Fire	2.0	4.0	
Topic 3-2: Controlling a Flammable Gas Cylinder Fire	2.0	4.0	
Topic 3-3: Coordinating an Interior Attack Line	2.0	6.5	
Topic 3-4: Protecting Evidence of Fire Cause and Origin	1.5	0.5	
Unit 3 Totals	**7.5**	**15.0**	**22.5**
Unit 4: Rescue Operations			
Topic 4-1: Extricating a Victim Entrapped in a Motor Vehicle	2.0	6.0	
Topic 4-2: Assisting Rescue Operation Teams	2.0	0.0	
Unit 4 Totals	**4.0**	**6.0**	**10.0**
Unit 5: Fire and Life Safety			
Topic 5-1: Performing a Fire Safety Survey in an Occupied Structure	1.0	1.0	
Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups	1.0	1.0	
Topic 5-3: Preparing a Preincident Survey	1.0	2.0	
Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment	1.0	1.0	
Topic 5-5: Performing an Annual Service Test on Fire Hose	1.0	1.0	
Unit 5 Totals	**5.0**	**6.0**	**11.0**
Summative Assessment			
Determined by AHJ or educational institution	**TBD**	**TBD**	**TBD**
Skills Practice (Lab / Sets and Reps)			
Determined by AHJ or educational institution	**TBD**	**TBD**	**TBD**
Course Totals	**20.0**	**28.0**	**48.0**

Time Table Key

1. The Time Table documents the amount of time required to deliver the content included in the course plan.

2. Time is documented using the quarter system: 15 min. = .25 / 30 min. = .50 / 45 min. = .75 / 60 min. = 1.0.

3. The Course Totals do not reflect time for lunch (1 hour) or breaks (10 minutes per each 50 minutes of instruction or assessment). It is the instructor's responsibility to add this time based on the course delivery schedule.

4. Application (activities, skills exercises, and formative testing) time will vary depending on the number of students enrolled. The Application time documented is based on the maximum class size identified in the Course Details section.

5. Summative Assessments are determined and scheduled by the authority having jurisdiction. These are not the written or psychomotor State Fire Training certification exams. These are in-class assessments to evaluate student progress and calculate course grades.

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, skills exercises, 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 and skills exercises
   - Required student resources
   - Class participation requirements

Discussion Questions

1. Determined by instructor

Application

1. Determined by instructor

Instructor Notes

1. None

CTS Guide Reference: None

Skill Sheet: None

Topic 1-2: Fire Fighter 2 Certification Process

Terminal Learning Objective

At the end of this topic a student will be able to identify the requirements for Fire Fighter 2 certification and be able to describe the certification task book and examination process.

Enabling Learning Objectives

1. Identify the different levels of certification in the Fire Fighter certification track
   - Fire Fighter 1
   - Fire Fighter 2
2. Identify the prerequisites for Fire Fighter 2 certification
3. Identify the course work required for Fire Fighter 2 certification
4. Identify the certification exams required for Fire Fighter 2 certification
5. Identify the task book requirements for Fire Fighter 2 certification
6. Identify the experience requirements for Fire Fighter 2 certification
7. Identify the position requirements for Fire Fighter 2 certification
8. Describe the certification task book process
9. Describe the certification examination process

Discussion Questions

1. Determined by instructor

Application

1. Determined by instructor

Instructor Notes

1. Use the *SFT Procedures Manual (2019)* (7.12.2 Fire Fighter 2) content for ELOs 2 through 7.
2. Use a copy of the Fire Fighter 2 Certification Task Book to walk students through the task book process and expectations for ELO 8.
3. Use the *SFT Procedures Manual (2019)* (Chapter 11: Fire Fighter Certification Exams) content for ELO 9.

CTS Guide Reference: None
Skill Sheet: None

Topic 1-3: Fire Fighter 2 Roles and Responsibilities

Terminal Learning Objective

At the end of this topic a student will be able to describe the role of the Fire Fighter 2 as identified by NFPA 1001: Standard for Fire Fighter Professional Qualifications (current edition) and the Office of the State Fire Marshal.

Enabling Learning Objectives

1. Describe the responsibilities of the Fire Fighter 2 in assuming and transferring command within an incident command system (ICS)
2. Describe how to perform assigned duties in conformance with applicable NFPA standards, other safety regulations, and AHJ procedures
3. Identify the role of a Fire Fighter 2 within the organization
4. Determine the need for command
5. Organize and coordinate an incident command system until command is transferred
6. Function within an assigned role in an incident management system

Discussion Questions

1. How do the roles and responsibilities of a Fire Fighter 2 differ from those of a Fire Fighter 1?

Application

1. Determined by instructor

Instructor Notes:

1. None

CTS Guide Reference: 1-1

Skill Sheet: 1-1: Organize an Incident Management System

Unit 2: Fire Department Communications

Topic 2-1: Completing a Basic Incident Report

Terminal Learning Objective

At the end of this topic a student, given report forms, guidelines, and information, will be able to complete a basic incident report so that all pertinent information is recorded, the information is accurate, and the report is complete.

Enabling Learning Objectives

1. Identify content requirements for basic incident reports
   - Program reporting systems
     - Software must be compliant with National Fire Incident Reporting System (NFIRS) or NFPA 901: Standard Classifications for Incident Reporting and Fire Protection Data (current edition)
     - California Fire Incident Reporting System (CalFIRS), Firehouse, Image Trend, etc.
     - Other electronic collection programs
   - Information collected
     - Incident type
     - Incident origin and growth
     - Fire department intervention
     - Personnel and parties involved
   - Writing style
     - Clear and concise language
     - Proper grammar and spelling
     - Appropriate use of abbreviations/acronyms
     - Legible handwriting (if not electronic)
     - Proof reading
2. Identify the purpose and usefulness of accurate reports
   - Data, statistics, and trends
   - Fire activity analysis
   - Community risk reduction
   - Insurance claims
   - Liability reduction
3. Identify consequences of inaccurate reports
   - False data analysis
   - Possible legal consequences
4. Describe how to obtain necessary information
   - Personal observation
   - Interviews
5. Identify required coding procedures
6. Determine necessary codes
7. Proof reports

8. Demonstrate fire department computers or other equipment necessary to complete reports

Discussion Questions

1. What is National Fire Incident Reporting System (NFIRS)?
2. Why are fire reports important the AHJ? Why are they important to the public?
3. What are the potential consequences or incomplete or inaccurate reports?

Application

1. Given an event scenario and an AHJ report form or template, have students prepare and code a basic incident report.

Instructor Notes:

1. ELO 1: See U.S. Fire Administration course National Fire Incident Reporting System 5.0 Self-Study (Q0494) as a recommended resource.
2. Provide students with sample AHJ reports as examples.

CTS Guide Reference: 2-1

Skill Sheet: 2-1: Complete a Basic Incident Report

Topic 2-2: Communicating the Need for Team Assistance

Terminal Learning Objective

At the end of this topic a student, given fire department communications equipment, SOPs, and a team, will be able to communicate the need for team assistance so that the supervisor is consistently informed of team needs, departmental SOPs are followed, and the assignment is accomplished safely.

Enabling Learning Objectives

1. Describe standard operating procedures (SOPs) for alarm assignments
   - Alarm assignments are a predetermined allocation of resources specific to AHJs
   - SOPs are predetermined operations to mitigate incident objectives depending on nature and complexity
   - Emergency scene operations rely on consistent SOPs and methods
   - Risk assessment may influence incident goals and priorities
2. Describe fire department radio communication procedures
3. Demonstrate proper operation of fire department communications equipment

Discussion Questions

1. What methods of communication do personnel use on an emergency scene?
2. What is the importance of radio discipline?

Application

1. Given simulated situations, have students identify the proper channel for communication on a fire department radio.

Instructor Notes:

1. Describe interoperability of radios and equipment between different fire agencies.

CTS Guide Reference: 2-2

Skill Sheet: 2-2: Communicate the Need for Team Assistance

Unit 3: Fireground Operations

Topic 3-1: Extinguishing an Ignitable Liquid Fire

Terminal Learning Objective

At the end of this topic a student, given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (or suitable substitute), and a water supply, will be able to extinguish an ignitable liquid fire, operating as a member of a team, so that the correct type of foam concentrate is selected for the given fuel and conditions, a properly proportioned foam stream is applied to the surface of the fuel to create and maintain a foam blanket, fire is extinguished, reignition is prevented, team protection is maintained with a foam stream, and the hazard is faced until retreat to safe haven is reached.

Enabling Learning Objectives

1. Describe how foam prevents or controls a hazard
   - Separating
   - Cooling
   - Smothering
2. List principles by which foam is generated
   - Foam proportioner
   - Aeration
3. Identify causes of and corrective measures for poor foam generation
   - Incorrect ratios of water, concentrate, and air
4. Describe the difference between hydrocarbon and polar solvent fuels and the concentrates that work on each
   - Hydrocarbon fuels
     - Petroleum based
     - Combustible or flammable
     - Float on water
   - Polar solvent fuels
     - Flammable liquids
     - Mix readily with water
   - Class B foam is utilized for both
5. Identify the characteristics, uses, and limitations of fire-fighting foams
   - Class A
   - Class B
6. Describe the advantages and disadvantages of using fog nozzles versus foam nozzles for foam application
   - Fog nozzle
     - Advantage: Produces low expansion short lasting foam, widely available on most apparatus
     - Disadvantage: May not create the same quality of foam as foam nozzles

- Foam nozzle
    - Advantage: Most effective for generation of low, medium, or high expansion foam
    - Disadvantage: Not as versatile as a fog nozzle and generally does not have the same reach

7. Describe foam stream application techniques
    - Rain down
    - Roll in/on
    - Bounce off/Bank down
8. List hazards associated with foam usage
    - Can degrade PPE
    - Most are mildly corrosive
    - Environmental impacts
    - Health impacts
9. Describe methods to reduce or avoid hazards
    - Maintain foam blanket to reduce risk of reignition
    - Avoid standing in pools of fuel or run-off water
10. Prepare a foam concentrate (or suitable substitute) for use
11. Assemble foam stream components
12. Master various foam application techniques
13. Approach and retreat from spills as part of a coordinated team.

Discussion Questions

1. What types of foam are used during fire fighting operations?
2. What are some limitations of foam use?
3. What are some hazards of foam use?

Application

1. Given an assignment, an attack line, PPE, a foam proportioning device, a nozzle, foam concentrates (or suitable substitute), and a water supply, have students extinguish a simulated or ignitable liquid fire as a member of a team.

Instructor Notes:

1. The content in this topic can be fulfilled through completion of State Fire Training's Fire Control 4: Controlling Ignitable Liquids and Gases (FSTEP) course.
2. If unable to demonstrate foam application due to cost or environmental restrictions:
    - Use digital sources to review foam application.
    - Demonstrate using dish soap, bucket, and eductor.

CTS Guide Reference: 3-1
Skill Sheet: 3-1: Extinguish an Ignitable Liquid Fire

Topic 3-2: Controlling a Flammable Gas Cylinder Fire

Terminal Learning Objective

At the end of this topic a student, given an assignment, a cylinder outside of a structure, an attack line, PPE, and tools, will be able to control a flammable gas cylinder fire, operating as

a member of a team, so that crew integrity is maintained, contents are identified, safe havens are identified prior to advancing, open valves are closed, flames are not extinguished unless the leaking gas is eliminated, the cylinder is cooled, cylinder integrity is evaluated, hazardous conditions are recognized and acted upon, and the cylinder is faced during approach and retreat.

Enabling Learning Objectives

1. Identify characteristics of pressurized flammable gases
2. List elements of a gas cylinder
3. Describe effects of heat and pressure on closed cylinders
4. Describe boiling liquid expanding vapor explosion (BLEVE) signs and effects
5. Describe methods for identifying contents
6. Describe how to identify safe havens before approaching flammable gas cylinder fires
7. Describe water stream usage and demands for pressurized cylinder fires
8. Describe what to do if the fire is prematurely extinguished
9. Identify valve types and their operation
10. Describe alternative actions related to various hazards and when to retreat
11. Execute effective advances and retreats
12. Apply various techniques for water application
13. Assess cylinder integrity and changing cylinder conditions
14. Operate control valves
15. Choose effective procedures when conditions change

Discussion Questions

1. What happens to a gas cylinder when exposed to fire conditions?
2. What safety precautions should be taken in anticipation of a BLEVE?
3. Why is it a problem if a venting tank fire is extinguished prematurely?

Application

1. Given a cylinder outside of a structure, an attack line, PPE, and tools, have students control a simulated flammable gas cylinder fire as a member of a team.

Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training's Fire Control 4: Controlling Ignitable Liquids and Gases (FSTEP) course.

CTS Guide Reference: 3-2

Skill Sheet: 3-2: Control a Flammable Gas Cylinder Fire

Topic 3-3: Coordinating an Interior Attack Line

Terminal Learning Objective

At the end of this topic a student, given attack lines, personnel, PPE, and tools, will be able to coordinate an interior attack line for a team's accomplishment of an assignment in a structure fire so that crew integrity is established; attack techniques are selected for the given level of the fire (e.g., attic, grade level, upper levels, or basement); attack techniques are communicated to the attack teams; constant team coordination is maintained; fire growth and development is continuously evaluated; search, rescue, and ventilation

requirements are communicated or managed; hazards are reported to the attack teams; and incident command is apprised of changing conditions.

Enabling Learning Objectives

1. Describe how to select the nozzle and hose for fire attack
2. Describe how to select adapters and appliances to be used for specific fireground situations
3. Identify dangerous building conditions created by fire and fire suppression activities
   - Collapse
   - Increased water weight
   - Building construction
   - Improper ventilation
   - Flow path
   - Flashover
   - Rapid fire development
   - Smoke (volume, velocity, density, and color)
4. Describe indicators of building collapse
5. List indicators of structural instability
6. Describe the effects of fire and fire suppression activities on wood, masonry (brick, block, stone), cast iron, steel, reinforced concrete, gypsum wallboard, glass, and plaster on lath
7. Describe coordinated search and rescue and ventilation procedures
8. Describe suppression approaches and practices for various types of structural fires
   - Offensive vs. defensive
   - Traditional vs. transitional
   - Direct vs. indirect
9. Describe the association between specific tools and special forcible entry needs
10. Assemble a team
11. Choose attack techniques for various levels of a fire (e.g., attic, grade level, upper levels, or basement)
12. Evaluate and forecast a fire's growth and development
13. Select tools for forcible entry
14. Incorporate search and rescue procedures and ventilation procedures in the completion of the attack team efforts
15. Determine developing hazardous building or fire conditions

Discussion Questions

1. What are some considerations for line selection and placement?
2. Why is reading smoke essential for fire fighter safety?
3. What are some indicators of a below grade or basement fire?

Application

1. Given a simulated scenario, attack lines, personnel, PPE, and tools, have students work in teams to coordinate an interior attack line.

Instructor Notes

1. None

CTS Guide Reference: 3-3
Skill Sheet: 3-3: Coordinate an Interior Fire Attack Line

Topic 3-4: Protecting Evidence of Fire Cause and Origin

Terminal Learning Objective

At the end of this topic a student, given a flashlight, *PPE*, and overhaul tools, will be able to protect evidence of fire cause and origin so that the evidence is noted and protected from further disturbance until investigators can arrive on the scene.

Enabling Learning Objectives

1. Identify methods to assess fire origin and cause
2. List types of evidence
3. Describe means to protect various types of evidence
4. Identify the role and relationship a Fire Fighter 2 during fire investigations with:
   - Criminal investigators
   - Insurance investigators
5. Describe the effects and problems associated with removing property or evidence from the scene
6. Locate the fire's origin area
7. Recognize possible causes
8. Protect the evidence

Discussion Questions

1. What is the difference between fire cause and fire origin?
2. Why is it important to determine the area of origin prior to initiating overhaul operations?
3. What are some ways to protect potential evidence?

Application

1. Given a simulated scenario, video, or photographs, have students determine the fire's area of origin and possible causes and describe how they would protect potential evidence.

Instructor Notes

1. None

CTS Guide Reference: 3-4
Skill Sheet: 3-4: Protect Evidence of Fire Cause and Origin

Unit 4: Rescue Operations

Topic 4-1: Extricating a Victim Entrapped in a Motor Vehicle

Terminal Learning Objective

At the end of this topic a student, given stabilization and extrication tools, *a vehicle, and PPE*, will be able to extricate a victim entrapped in a motor vehicle as part of a team so that the vehicle is stabilized, the victim is disentangled without further injury, and hazards are managed.

Enabling Learning Objectives

1. Describe the fire department's role at a vehicle accident
2. Describe points of strength and weakness in auto body construction
3. Describe dangers associated with vehicle components and systems
4. Describe the uses and limitations of hand and power extrication equipment
5. Describe safety procedures when using various types of extrication equipment
   - Hazards and dangers associated with emergency scene requiring extrication
   - Basic fire protection with charged hose line and/or fire extinguisher
6. Operate hand and power tools used for forcible entry and rescue as designed
7. Use cribbing and shoring material
8. Use stabilization tools and equipment
9. Choose and apply appropriate techniques for moving or removing vehicle roofs, doors, seats, windshields, windows, steering wheels or columns, and the dashboard

Discussion Questions

1. What safety concerns are associated with alternative fuel vehicle extrication?
2. What safety precautions should a fire fighter take when working on modern vehicles?
3. What level of personal protective equipment should a fire fighter use during vehicle extrication?

Application

1. Given a stimulated scenario, stabilization and extrication tools, a vehicle or prop, and PPE, have students work in teams to extricate a victim entrapped in a motor vehicle.

Instructor Notes

1. The content in this topic can be fulfilled through completion of State Fire Training's Auto Extrication (FSTEP) course.

CTS Guide Reference: 4-1

Skill Sheet: 4-1: Extricate a Victim Entrapped in a Motor Vehicle

Topic 4-2: Assisting Rescue Operation Teams

Terminal Learning Objective

At the end of this topic a student, given standard operating procedures, necessary rescue equipment, and an assignment, will be able to assist rescue operation teams so that procedures are followed, rescue items are recognized and retrieved in the time as prescribed by the AHJ, and the assignment is completed.

Enabling Learning Objectives

1. Identify types of rescue operations
    - Structural collapse
    - Trench collapse
    - Cave and/or tunnel emergencies
    - Confined space emergencies
    - Water and/or ice emergencies
    - Elevator emergencies
    - Escalator emergencies
    - Energized electrical line emergencies
    - Industrial accidents
    - Wilderness search and rescue
2. Describe the fire fighter's role at technical rescue operations
3. Identify hazards associated with technical rescue operations
4. Describe types and uses of rescue tools
5. Identify rescue practices and goals
6. Identify and retrieve various types of rescue tools
7. Establish public barriers
8. Assist rescue teams as a member of the team when assigned

Discussion Questions

1. What level of personal protective equipment is appropriate for a [choose one type] rescue?
2. What hazards are associated with a [choose one type] rescue?
3. Why is operational discipline important during technical rescue incidents?

Application

1. Determined by instructor

Instructor Notes

1. None

CTS Guide Reference: 4-2

Skill Sheet: 4-2: Assist a Rescue Operations Team

Unit 5: Fire and Life Safety

Topic 5-1: Performing a Fire Safety Survey in an Occupied Structure

Terminal Learning Objective

At the end of this topic a student, given survey forms and procedures, will be able to perform a fire safety survey in an occupied structure so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority.

Enabling Learning Objectives

1. Describe AHJ policy and procedures
2. List common causes of fire and their prevention
3. Describe the importance of a fire safety survey and public fire education programs to fire department public relations and the community
4. Identify referral procedures utilized by the AHJ
5. Complete forms
6. Recognize hazards
7. Match findings to preapproved recommendations
8. Effectively communicate findings to occupants or referrals

Discussion Questions

1. What is it important to conduct fire safety surveys at occupied structures?
2. What are some essential items to inspect during fire safety surveys?
3. What are common causes of fire in occupied structures?

Application

1. Given a survey form or checklist and a location, have students demonstrate the proper method to perform a fire safety survey and communicate results to the occupant or referral entity.

Instructor Notes

1. None

CTS Guide Reference: 5-1

Skill Sheet: 5-1: Perform a Fire Safety Survey in an Occupied Structure

Topic 5-2: Presenting Fire Safety Information to Station Visitors or Small Groups

Terminal Learning Objective

At the end of this topic a student, given prepared materials, will be able to present fire safety information to station visitors or small groups so that all information is presented, the information is accurate, and questions are answered or referred.

Enabling Learning Objectives

1. Describe parts of informational materials and how to use them
    - Example programs include:
        - Stop, drop, and roll when clothes are on fire
        - Crawl low under smoke

    - Plan and practice a home escape plan with two ways out of each room (especially sleeping rooms), a meeting place, and how to call the fire department (from the neighbor's house)
    - Alert others to an emergency
    - Call the fire department
    - Test and maintain residential smoke alarms according to manufacturer's instructions
2. Identify basic presentation skills
    - Select materials and activities appropriate to age and audience
        - Learning level
        - Physical capabilities
    - Three step delivery
        - Introduce what you are going to tell them
        - Tell them the information
        - Summarize what you told them
    - Consistent messaging
3. Describe departmental standard operating procedures for giving fire station tours
4. Describe how to complete a "public contact report"
    - Information for public outreach program analytics
    - Replacement/restock of educational materials
5. Document presentations
6. Use prepared materials

Discussion Questions

1. What types of presentations might a fire fighter deliver?
2. Why is it important to give age appropriate presentations?
3. Why is it important to deliver a consistent message?

Application

1. Given AHJ talking points and an identified audience, have students work in groups to create and deliver a five-minutes presentation with peer review and feedback.

Instructor Notes:

1. Recommended resources for additional student learning:
    - NFPA: "Learn Not to Burn" Preschool Program (https://www.nfpa.org/Public-Education/Resources/Education-Programs/Learn-not-to-burn/Learn-Not-to-Burn-Preschool-Program)
    - FEMA: Fire Prevention and Public Education (https://www.usfa.fema.gov/prevention/)

CTS Guide Reference: 5-2

Skill Sheet: 5-2: Present Fire Safety Information

Topic 5-3: Preparing a Preincident Survey

Terminal Learning Objective

At the end of this topic a student, given forms, necessary tools, and an assignment, will be able to prepare a preincident survey so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared.

Enabling Learning Objectives

1. Describe AHJ requirements for a preincident survey and documentation
2. Describe how fire involvement impacts strategy and tactics
   - 25% vs. 50% vs. 75% vs. 100% involvement
3. Identify water supply sources for fire protection
4. Identify basic components of fire suppression and detection systems
   - Identify general system locations
5. Identify common symbols used to diagram:
   - Construction features
   - Utilities
   - Hazards
   - Fire protection systems
   - NFPA 704 placarding program
6. Identify the importance of accurate diagrams
7. Sketch the site, buildings, and special features
8. Detect hazards and special considerations to include in the preincident sketch
9. Complete all related AHJ documentation

Discussion Questions

1. What are the essential components of a preincident plan?
2. When should you update a preincident plan?

Application

1. Given a location and level of fire involvement, have students work in small groups to prepare a preincident survey that records tactical and strategic options.

Instructor Notes:

1. Recommended resources for additional student learning:
   - Frequently Asked Questions on NFPA 704 (pdf) (www.nfpa.org/Assets/files/AboutTheCodes/704/704_FAQs.pdf)

CTS Guide Reference: 5-3

Skill Sheet: 5-3: Prepare a Preincident Survey

Topic 5-4: Maintaining Power Plants, Power Tools, and Lighting Equipment

Terminal Learning Objective

At the end of this topic a student, given tools and manufacturers' instructions, will be able to maintain power plants, power tools, and lighting equipment so that equipment is clean and maintained according to manufacturer and departmental guidelines, maintenance is recorded, and equipment is placed in a ready state or reported otherwise.

Enabling Learning Objectives

1. Identify types of cleaning methods
2. Describe correct use of cleaning solvents
3. Describe manufacturer and AHJ guidelines for maintaining equipment and its documentation
4. Identify problem-reporting practices
5. Select correct tools
6. Follow guidelines
7. Complete recording and reporting procedures
8. Operate power plants, power tools, and lighting equipment

Discussion Questions

1. What types of cleaning methods are used for power plants, power tools, and lighting equipment?
2. What is the process for removing tools or equipment from service within your AHJ?

Application

1. Given tools, cleaning materials, and manufacturers specifications, have students clean and maintain designated tools.

Instructor Notes:

1. Bring referenced tools and equipment for display and demonstration.

CTS Guide Reference: 5-4

Skill Sheet: 5-4: Maintain Power Plants, Tools, and Equipment

Topic 5-5: Performing an Annual Service Test on Fire Hose

Terminal Learning Objective

At the end of this topic a student, given an apparatus or a hose testing device, a marking device, pressure gauges, a timer, record sheets, and related equipment, will be able to perform an annual service test on fire hose, so that procedures are followed, the condition of the hose is evaluated, any damaged hose is removed from service, and the results are recorded.

Enabling Learning Objectives

1. Describe procedures for safely conducting hose service testing
   - Use host testing equipment or tools that regulate water flow in case of equipment or hose failure
   - Keep area clear of personnel during test
   - Use proper helmets and PPE
   - Operate testing equipment using manufacturer guidelines
   - Maintain focus and avoid complacency
   - Comply with NFPA 1962
2. Identify indicators that dictate when hose should be removed from service
3. Describe AHJ procedures for documenting hose test results
4. Operate hose testing equipment and nozzles
5. Record results

Discussion Questions

1. What is the proper PPE for hose testing?
2. How often is hose testing conducted?
3. What equipment is used in conjunction with hose testing?
4. What type of injuries might occur during hose testing? How can they be prevented?

Application

1. Given an apparatus or hose testing device, hose, related equipment, and PPE, have students set up a hose service test, describe how they would execute the test and mark the hose, and identify the indictors they would look for to determine whether or the not the hose should be removed from service.

Instructor Notes

1. None

CTS Guide Reference: 5-5

Skill Sheet: 5-5: Perform an Annual Service Test on a Fire Hose

How to Read a Course Plan

A course plan identifies the details, logistics, resources, and training and education content for an individual course. Whenever possible, course content is directly tied to a national or state standard. SFT uses the course plan as the training and education standard for an individual course. Individuals at fire agencies, academies, and community colleges use course plans to obtain their institution's consent to offer course and provide credit for their completion. Instructors use course plans to develop syllabi and lesson plans for course delivery.

Course Details
The Course Details segment identifies the logistical information required for planning, scheduling, and delivering a course.

Required Resources
The Required Resources segment identifies the resources, equipment, facilities, and personnel required to delivery the course.

Unit
Each Unit represents a collection of aligned topics. Unit 1 is the same for all SFT courses. An instructor is not required to repeat Unit 1 when teaching multiple courses within a single instructional period or academy.

Topics
Each Topic documents a single Terminal Learning Objective and the instructional activities that support it.

Terminal Learning Objective
A Terminal Learning Objective (TLO) states the instructor's expectations of student performance at the end of a specific lesson or unit. Each TLO includes a task (what the student must be able to do), a condition (the setting and supplies needed), and a standard (how well or to whose specifications the task must be performed). TLOs target the performance required when students are evaluated, not what they will do as part of the course.

Enabling Learning Objectives
The Enabling Learning Objectives (ELO) specify a detailed sequence of student activities that make up the instructional content of a lesson plan. ELOs cover the cognitive, affective, and psychomotor skills students must master in order to complete the TLO.

Discussion Questions
The Discussion Questions are designed to guide students into a topic or to enhance their understanding of a topic. Instructors may add to or adjust the questions to suit their students.

Application
The Application segment documents experiences that enable students to apply lecture content through cognitive and psychomotor activities, skills exercises, and formative testing. Application experiences included in the course plan are required. Instructors may add additional application experiences to suit their student population if time permits.

Instructor Notes
The Instructor Notes segment documents suggestions and resources to enhance an instructor's ability to teach a specific topic.

CTS Guide Reference
The CTS Guide Reference segment documents the standard(s) from the corresponding Certification Training Standard Guide upon which each topic within the course is based. This segment is eliminated if the course is not based on a standard.

Skill Sheet
The Skill Sheet segment documents the skill sheet that tests the content contained within the topic. This segment is eliminated if the course does not have skill sheets.