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Course Outline for FST 11C

FIREFIGHTER I ACADEMY - CAPSTONE TESTING

Effective: Spring 2019

I. CATALOG DESCRIPTION:

FST 11C — FIREFIGHTER I ACADEMY - CAPSTONE TESTING — 2.00 units

This course prepares students to meet the State Fire Training (SFT) requirements for Fire Fighter I (FFI) including the capstone knowledge and skills necessary to pass. Upon successful completion, students will receive a pass letter from the SFT. The course is 45 hours skills practice, 3 hours written exam, and 33 hours certification skills evaluation.

0.50 Units Lecture 1.50 Units Lab

Prerequisite

FST 11 - ARTP Firefighter I Academy
with a minimum grade of C

Grading Methods:

Pass/No Pass

Discipline:

- Fire Technology

	MIN
Lecture Hours:	9.00
Expected Outside of Class Hours:	18.00
Lab Hours:	81.00
Total Hours:	108.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering the course a student should be able to:

A. FST11

1. Don a structural personal protective ensemble so that all elements of the ensemble are worn according to manufacturer's guidelines, within 60 seconds.
2. Don and activate a self-contained breathing apparatus (SCBA) within 60 seconds, and demonstrate the ability to use the SCBA during emergency operations.
3. Respond on apparatus to an emergency scene, correctly mount and dismount the apparatus, use seatbelt while the vehicle is in motion, and correctly use other personal protective equipment.
4. Establish and operate in work areas at emergency scenes, following procedures while wearing protective equipment, and establish attempted work areas as directed using traffic and scene control devices.
5. Demonstrate the ability to receive a telephone call using correct procedures for answering the phone and relaying information.
6. Initiate the response to a reported emergency, obtain all necessary information, correctly operate all communications equipment, and properly and accurately relay information to the dispatch center.
7. Transmit and receive messages via the fire department radio and relay accurate, clear information within a required time established.
8. Describe the history, features, principles, and organizational structure of the Incident Command System. Explain the relationship between ICS and the National Incident Management System (NIMS). Use ICS to manage an incident or event. Describe the purpose of the NIMS components and describe the purpose and response doctrine established by the National Response Framework.
9. Tie designated knots appropriate for hoisting tools securely and as directed.
10. Safely transport, operate, and maintain forcible entry equipment.
11. Illuminate designated areas of the emergency scene and operate fire service electrical equipment within the manufacturer's listed safety precautions.
12. Clean and maintain ladders, ventilation equipment, SCBA, ropes, salvage equipment, and hand tools according to manufacturer's or departmental guidelines, record equipment maintenance, and place equipment in a ready state or report otherwise.
13. Describe common building materials and construction types, and identify dangerous building conditions created by fire.
14. Identify and mitigate dangerous fire behavior conditions, while ensuring firefighter safety.
15. Choose the correct extinguisher and follow the correct handling techniques to completely extinguish incipient Class A, Class

- B, and Class C fires.
16. Connect a fire department engine to a water supply, ensuring tight connections and an unobstructed water flow, as a member of a team.
 17. Shut off building utilities in order to safely complete an assignment.
 18. Setup ground ladders, assess hazards, ensure ground ladders are stable and their angles are correct for climbing, extend extension ladders to the necessary height and locked their fly(s), place the tops of the ladders against reliable structural components, and accomplish the assignment.
 19. Remove barriers and produce an opening that is safe and ready for use by forcing entry into a structure using tools as designed.
 20. 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.
 21. Operating as a member of a team, attack an interior structure fire, maintain team integrity, deploy the attack line for its advancement, correctly placed ladders when used, gain access into the fire area, effectively apply water, correctly approach the fire using attack techniques to 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.
 22. 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.
 23. 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.
 24. Conserve property so that building and its contents are protected from further damage.
 25. Overhaul of fire scene without compromising structural integrity, discover all hidden fires, preserve fire cause evidence, and extinguish the fire.
 26. Activate an emergency call for assistance and exit the hazardous area without endangering others while maintaining team integrity.
 27. Extinguish fires in exterior Class A materials, protect exposures, stop the spread of fire, avoid collapse hazards, effectively applied water, extinguish the fire, and preserve signs of the origin area(s) and arson.
 28. Attack a passenger vehicle fire, avoid hazards, identifying control leaking flammable liquids, maintain protection from flash fires, overhaul all vehicle compartments, and extinguish the fire, while operating as part of a team.
 29. Assemble and prepare for a wildland response so that arrival at the incident with the required personnel and equipment meets agency guidelines.
 30. Don wildland personal protective clothing and shelter according to the manufacturer's guidelines within 60 seconds. Deploy a new generation fire shelter within 30 seconds. Ensure serviceability and availability on the fire line, and recognize defects and report them to a supervisor.
 31. Recognize defects on wildland tools and equipment and report them to a supervisor, and maintain assigned suppression hand tools and equipment so that assigned equipment may be serviced.
 32. Describe basic wildland fire behavior.
 33. Recognize hazards and unsafe situations, promptly communicate hazard(s) and unsafe conditions to a supervisor, and take appropriate action.
 34. Construct a fire line that conforms to Cal Fire construction standards.
 35. Locate and abate burning materials and unburned fuels that threaten the fire line's integrity.
 36. Describe methods of reducing the threat of fire exposure to improved properties in order to protect them.
 37. Mop up fire area, locating and extinguishing burning fuels that threatened escape.
 38. Patrol and maintain control of the fire area.
 39. 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.
 40. Protect persons, property, and the environment from further harm, initiate the appropriate communications process, and secure the area.
 41. Perform emergency 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.
 42. Perform basic control, containment, and confinement techniques to control hazardous materials release, and protect emergency responders from contamination.
 43. Complete California capstone certification for IFSAC/ProBoard Fire Fighter I, Wildland Fire Fighter I, and Hazardous Materials First Responder Operations Level.

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

- A. Identify the Firefighter I certification track, test evaluation methods participation and capstone task book requirements.
- B. Describe the mission of the fire service and the role of the firefighter and the Standard Operating Procedures (SOP's) rules and regulations used by fire departments.
- C. Don and doff Personal Protective Equipment (PPE) and Self-Contained Breathing Apparatus (SCBA) in simulated emergency situations.
- D. Inspect a SCBA and replace an SCBA cylinder.
- E. Respond and operate safely at an emergency scene following established procedures and wearing proper PPE.
- F. Receive a phone call using established procedures, relay the appropriate information and initiate a response to a reported emergency.
- G. Transmit and receive messages relaying accurate information using fire department radios.
- H. Tie a knot appropriate for hoisting tools securely as directed.
- I. Illuminate an area of an emergency scene using electrical and lighting equipment according to the manufactures and agency guidelines.
- J. Clean and maintain a wide variety of fire department tools and equipment.
- K. Correct selection of a fire extinguisher for a given fire and the proper techniques for extinguishing a Class A, B, OR C fire.
- L. Conduct a forward hose lay as a member of a team.
- M. Deploy a portable tank and prepare for drafting operations.
- N. Load, deploy and advance attack and supply hose.
- O. Clean and maintain hose, mark defective hose, build hose rolls, replace burst hose sections, and extend lines.
- P. Secure (turn-off) all building utilities safely.
- Q. Lift, carry, and raise an extension ladder single person.
- R. Use forcible entry tools and equipment to force the opening of a door, window, or wall.
- S. Conduct a search and rescue of a civilian or firefighter with or without respirator protection.
- T. Activate an emergency call for assistance and exit a hazardous area.
- U. Rescue a victim from an elevated location using a 24 foot ladder.
- V. Conduct an interior fire attack as a member of a team, locating and controlling the fire.
- W. Extinguish exterior fires in vehicles and in stacked and piled materials.
- X. Operate a charged hose line from a ground ladder.
- Y. Operate a portable master stream.

- A@. Use horizontal and vertical ventilation techniques to ventilate a structure.
- AA. Perform salvage operations in a room.
- AB. Remove water from the interior of a structure using correct salvage techniques.
- AC. Control the flow of water from a fire sprinkler system.
- AD. Overhaul a fire scene, extinguish hidden fires, and remove charred material while protecting the area of origin.
- AE. Secure a fire scene by covering building openings.
- AF. Don a wildfire personal protective ensemble and deploy a fire shelter using the lying down method.
- AG. Assume a safe position to perform a retardant drop.
- AH. Inspect, maintain, and sharpen hand tools.
- AI. Assemble, use, and maintain a backpack pump.
- AJ. Ignite and extinguish road flares and fusees.
- AK. Assemble ignite, extinguish, and disassemble a drip torch.
- AL. Use the Incident Response Pocket Guide (IRPG).
- AM. Conduct a two person, 500 foot progressive hose lay.
- AN. Construct a fire line using hand tools.
- AO. Perform a mobile pumping operation.
- AP. Prepare and defend a structure in the Wildland Urban Interface (WUI).
- AQ. Perform wet or dry mop-up operations.
- AR. Perform wildland patrol operations.
- AS. Identify hazardous materials and the correct PPE to be used by the responder.
- AT. Implement a planned response to a hazardous materials incident.
- AU. Perform control, containment, and confinement operations to control a hazardous materials incident.
- AV. Perform emergency decontamination on an individual and large number of persons.

V. CONTENT:

- A. Lecture
 - 1. Orientation and Administration
 - a. Review of training facilities
 - b. Review of course syllabus
 - 1. Objectives
 - 2. Requirements
 - 3. Methods of evaluation
 - 4. Participation requirements
 - 2. Firefighter I Certification Test Process
 - a. Written test
 - b. Skills test
 - 3. Capstone Taskbook Process
- B. Laboratory
 - 1. Mission of the Fire Service
 - a. Role of the firefighter
 - b. Use of SOP's and rules and regulations used by fire departments
 - 2. Use of PPE & SCBA's
 - a. Donning and doffing PPE
 - b. Donning and doffing SCBA's
 - c. Inspecting a SCBA
 - d. Replacing a SCBA cylinder
 - 3. Responding to and Operating at an Emergency Scene
 - a. Use of PPE
 - b. Department SOP's
 - 4. Receiving Emergency Phone Calls
 - a. Department procedures
 - b. Relaying pertinent information
 - c. Initiating a response
 - 5. Radio Use
 - a. Transmitting messages
 - b. Receiving messages
 - 6. Knots
 - a. Bowline
 - b. Clove hitch
 - c. Figure eight in a bight
 - d. Half-hitch
 - e. Becket/sheep bend
 - f. Safety knot
 - 7. Hoisting Equipment
 - a. Axes
 - b. Pike poles
 - c. Smoke ejectors
 - d. Chain saws
 - e. Hoselines
 - f. Ground ladders
 - 8. Scene Lighting
 - a. Use of generators
 - b. Light assemblies
 - c. Power cords
 - d. Ground fault interrupters
 - 9. Cleaning and Maintain Fire Department Tools and Equipment
 - a. Ladders
 - b. Ventilation equipment
 - 1. Smoke ejectors
 - 2. Chain saws
 - c. SCBA's
 - d. Rope
 - e. Salvage equipment
 - f. Hand tools
 - 1. Axe
 - 2. Pike poles
 - 3. Halligan
 - 10. Fire Extinguisher Use
 - a. Correct selection for the type of fire

- b. Effective operating distance
 - c. Proper application
- 11. Forward Hose Lay
- 12. Portable Tank Operations
 - a. Deploying portable tanks
 - b. Use of hard suction for drafting operations
- 13. Fire Hose
 - a. Use of attack lines
 - 1. Loading
 - 2. Deploying
 - 3. Advancing
 - b. Loading supply hose
 - c. Maintenance
 - 1. Cleaning hose
 - 2. Inspecting hose
 - 3. Identifying defective hose
 - d. Building hose rolls
 - 1. Straight rolls
 - 2. Donut rolls
 - 3. Twin rolls
 - 4. Self-locking donuts
 - e. Replacing burst hose
 - f. Extending hoselines
- 14. Controlling Building Utilities
 - a. Securing electrical power
 - b. Securing gas connections
 - c. Securing water supplies
- 15. Deploying an Extension Ladder
 - a. Lifting and carrying
 - b. Footing and raising
 - c. Checking for hazards and extending
 - d. Adjusting climbing angle
 - e. Lowering and stowing
- 16. Conducting Forcible Entry
 - a. Selection of a point of entry
 - b. Selection of the correct tool(s)
 - c. Entering a window
 - d. Entering a door
 - e. Breaching a wall
- 17. Search and Rescue
 - a. Primary search and rescue of a victim with no respiratory protection
 - b. Primary search and rescue of a firefighter with respiratory protection
 - c. Lowering a rescued victim down a ladder
 - d. Making an emergency call and exiting a hazardous area
- 18. Fire Attack Operations
 - a. Interior fire attack as a member of a team
 - b. Exterior fire attack as a member of a team
 - c. Operating an attack line from a ladder
 - d. Fire attack on a vehicle fire
 - e. Deploying and operating a portable master stream
- 19. Ventilation
 - a. Horizontal ventilation
 - b. Vertical ventilation
- 20. Salvage and Overhaul
 - a. Salvage of a room and contents
 - b. Water removal techniques from a structure
 - c. Controlling the flow of water from a fire sprinkler
 - d. Separation and removal of charred materials while protecting the area of origin
 - e. Covering building openings
 - f. Overhauling a fire scene
- 21. Wildland PPE, Safety, and Tools
 - a. Donning wildfire PPE
 - b. Deploying a fire shelter using the lying down method
 - c. Assuming a safe position for a retardant drop
 - d. Inspecting, maintaining, and sharpening hand tools
 - e. Assembling, use, and maintenance of backpack pumps
 - f. Igniting and extinguishing road flares and fusees
 - g. Assembling, igniting, extinguishing, and disassembling a drip torch
 - h. Using the IRPG
- 22. Wildland Suppression
 - a. Conducting a two person 500 foot progressive hose lay
 - b. Constructing a fire line using hand tools
 - c. Performing mobile pumping operations
 - d. Prepare and defend a structure in the WUI
 - e. Performing wet or dry mop-up operations
 - f. Performing wildland patrol operations
- 23. Identifying and Planning a Hazardous Materials Response
 - a. Identifying hazardous materials, their potential hazards and appropriate PPE
 - b. Implementing a planned response to a hazardous materials incident
- 24. Performing Hazardous Materials Control, Containment, and Confinement Activities
- 25. Hazardous Materials Decontamination Activities
 - a. Performing emergency decontamination
 - b. Performing mass decontamination

VI. METHODS OF INSTRUCTION:

- A. **Classroom Activity** - tool manipulation and exercises
- B. **Observation and Demonstration** - Provide testing skill examples
- C. **Simulations** - Practice Required Skills
- D. **Lecture** - 1. Fire Fighter I Capstone Skills Testing process

- E. **Individualized Instruction** - Individual use of proper protective equipment and proper tool use and procedures will be constantly stressed for individual safety
- F. **Audio-visual Activity** - video, overlays and powerpoints

VII. TYPICAL ASSIGNMENTS:

- A. The instructor will facilitate classroom discussion on the Firefighter capstone certification testing process and how the process works.
- B. The instructor will lecture on how to access and use a firefighter skill testing sheets on donning personal protective equipment from the State Fire Training web site.
 - 1. Students will each download the assigned skill sheet and demonstrate how to don personal protective equipment based on the steps indicated on the skill sheet.
- C. The instructor will then supervise as students demonstrate how to properly spot, raise, and lower a 24 foot extension ladder for a given scenario, i.e., raise ladder to a 2nd story window for a rescue.

VIII. EVALUATION:

Methods/Frequency

- A. Class Participation
 - mandatory participation
- B. Home Work
 - State Fire Training Skill Sheet Review
- C. Other
 - 1. 3 Summative exams required by California State Fire Training 1. Firefighter Exam 2. Hazardous Materials Exam 3. Wildland Firefighter Exam Skills Testing: Firefighter Complete 5 required skills and 3 random skills Wildland 4 required skills and 2 random skills Hazardous Materials 1 required skill and 2 random skills
 - 2. Final Performance
 - a. Tool function and recognition lab examination
 - b. Skills performance assessment
 - c. Timed event state standards
 - 3. Final Written exam

IX. TYPICAL TEXTS:

- 1. Jones and Bartlett. *Fundamentals of Fire Fighter Skills*. 3rd ed., Jones and Bartlett, 2017.
- 2. Corbett, Glenn. *Fire Engineering's Handbook for Fire Fighter 1 and Fire Fighter 2*. 2013 ed., Pennwell, 2013.
- 3. Tele, William. *Firefighters Handbook on Wildland Firefighting*. 3rd ed., Deer Valley Press, 2005.
- 4. Stowell, Frederick. *Essentials of Fire Fighting and Fire Department Operations*. 6th ed., IFSTA Brady, 2013.
- 5. IAFC and NFPA. *Hazardous Materials: Awareness and Operations*. 3rd ed., Jones and Bartlett, 2017.

X. OTHER MATERIALS REQUIRED OF STUDENTS:

- A. Dark Navy Blue T-Shirt Dark Navy Blue Uniform Pant Black Braided Belt Black Polished Steel Toe Work Boot Pair of Leather Work Gloves
- B. 1 - Drinking Water Bottle (8oz Clear Plastic)