

## Course Outline for FST 22

### CO 2C FIRE INSPECTIONS AND INVESTIGATION FOR COMPANY OFFICERS

Effective: Fall 2019

#### I. CATALOG DESCRIPTION:

FST 22 — CO 2C FIRE INSPECTIONS AND INVESTIGATION FOR COMPANY OFFICERS — 2.50 units

This course provides information on conducting inspections, identifying hazards and addressing violations, performing a fire investigation to determine preliminary cause and securing the incident scene and preserving evidence. This course is a requirement for aspiring Firefighters seeking promotion as a company officer.

2.50 Units Lecture

#### Prerequisite

FST 11 - LPC-East Bay Regional Firefighter I Academy  
with a minimum grade of B  
and

Completion of any Fire Academy using the Firefighter 2013 curriculum and/or certification as both a Firefighter 1 and Firefighter 2 with a letter from the Fire Chief attesting to this fact.

#### Grading Methods:

Letter or P/NP

#### Discipline:

- Fire Technology

	MIN
<b>Lecture Hours:</b>	45.00
<b>Expected Outside of Class Hours:</b>	90.00
<b>Total Hours:</b>	135.00

#### 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. 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.
2. 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.
3. Demonstrate the ability to receive a telephone call using correct procedures for answering the phone and relaying information.
4. 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.
5. Transmit and receive messages via the fire department radio and relay accurate, clear information within a required time established.
6. 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.
7. Tie designated knots appropriate for hoisting tools securely and as directed.
8. Safely transport, operate, and maintain forcible entry equipment.
9. Illuminate designated areas of the emergency scene and operate fire service electrical equipment within the manufacturer's listed safety precautions.
10. 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.
11. Describe common building materials and construction types, and identify dangerous building conditions created by fire.
12. Identify and mitigate dangerous fire behavior conditions, while ensuring firefighter safety.
13. Choose the correct extinguisher and follow the correct handling techniques to completely extinguish incipient Class A, Class B, and Class C fires.
14. Connect a fire department engine to a water supply, ensuring tight connections and an unobstructed water flow, as a member of a team.
15. Shut off building utilities in order to safely complete an assignment.

16. 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.
17. Remove barriers and produce an opening that is safe and ready for use by forcing entry into a structure using tools as designed.
18. 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.
19. 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.
20. 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.
21. 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.
22. Conserve property so that building and its contents are protected from further damage.
23. Overhaul of fire scene without compromising structural integrity, discover all hidden fires, preserve fire cause evidence, and extinguish the fire.
24. Activate an emergency call for assistance and exit the hazardous area without endangering others while maintaining team integrity.
25. 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.
26. 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.
27. Assemble and prepare for a wildland response so that arrival at the incident with the required personnel and equipment meets agency guidelines.
28. 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.
29. 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.
30. Describe basic wildland fire behavior.
31. Recognize hazards and unsafe situations, promptly communicate hazard(s) and unsafe conditions to a supervisor, and take appropriate action.
32. Construct a fire line that conforms to Cal Fire construction standards.
33. Locate and abate burning materials and unburned fuels that threaten the fire line's integrity.
34. Describe methods of reducing the threat of fire exposure to improved properties in order to protect them.
35. Mop up fire area, locating and extinguishing burning fuels that threatened escape.
36. Patrol and maintain control of the fire area.
37. 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.
38. Protect persons, property, and the environment from further harm, initiate the appropriate communications process, and secure the area.
39. 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.
40. Perform basic control, containment, and confinement techniques to control hazardous materials release, and protect emergency responders from contamination.
41. 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. Describe the procedures for conducting fire inspections
- B. Identifying hazards including hazardous materials and properly documenting and conducting follow-up in accordance with adopted policies
- C. Identify the construction, alarm, detection and suppression features that prevent or contribute to the spread of fire, heat and smoke through a building and develop an occupancy pre-fire plan
- D. Describe the procedures for securing and incident scene which keeps unauthorized persons from restricted areas and protects evidence from damage or destruction.
- E. Determine the point of origin and preliminary cause of fire to ascertain if arson is suspected

#### V. CONTENT:

- A. Introduction
  1. Orientation and Administration
  2. Fire Officer Certification Process
- B. Fire and Life Safety Inspections
  1. Fire Inspection Procedures
  2. Identify hazards, document and conduct follow-up inspections
  3. Features that Prevent or Contribute to Fire Spread
- C. Fire Investigation
  1. Securing Incident Scene
  2. Determining the Origin and Cause of Fires

#### VI. METHODS OF INSTRUCTION:

- A. **Lecture** - as described in the course plan from the California State Marshall curriculum for Company Officer 2C course plan
- B. **Research** - Case study regarding fire cause and origin as it applies to a fire scene
- C. **Classroom Activity** - table top exercises and facilitated small group discussions
- D. **Audio-visual Activity** - Power point, Pow Toon, Key note or any other type of audio visual presentation for the students

#### VII. TYPICAL ASSIGNMENTS:

- A. Quizzes-Daily
- B. Final Summative Exam - Capstone Exam

#### VIII. EVALUATION:

## Methods/Frequency

- A. Exams/Tests  
Initial Assessment Exam Final Summative Written Exam
- B. Group Projects  
small group discussions
- C. Class Participation  
daily
- D. Home Work  
as assigned per instructor
- E. Final Performance  
Summative capstone exam Simulations or table top exercises

## IX. TYPICAL TEXTS:

1. Ward, Michael . *Fire Officer: Principles and Practice* . 3rd Edition ed., Jones and Barlett Publishing , 2014.
2. IFSTA . *Fire and Emergency Medical Services Company Officer* . 4th ed., IFSTA , 2014.
3. IAFC and NFPA . *Fundamentals of Firefighter Skills 4th*. 4th edition ed., Jones and Barlett Publishing, 2018.
4. IFSTA and Pearson Publishing . *Fire Inspection and Code Enforcement*. 8th ed., FPP/IFSTA (Pearson), 2018.
5. California Fire Chief's Association. California Fire Inspector's Guide. California Fire Chief's Association , 2013.
6. Fire Inspections and Investigations for Company Officers Course Plan California  
Fire Service Training and Education System, 2014 edition.  
FREE materials found here:  
<http://osfm.fire.ca.gov/training/pdf/Curriculum/CompanyOfficer2C-CoursePlan.pdf>

## X. OTHER MATERIALS REQUIRED OF STUDENTS:

- A. Access to both internet and email and ability to complete online assignments using a laptop or a computer.