



# Fire Inspections and Investigation for Company Officers

## Course Plan

### Course Details

<b>Certification:</b>	Company Officer (NFPA Fire Officer Levels I and II)
<b>CTS Guide:</b>	Company Officer
<b>Description:</b>	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.
<b>Designed For:</b>	Aspiring company officers
<b>Prerequisites:</b>	Meet the educational requirements for Fire Fighter II
<b>Standard:</b>	Complete all activities and formative tests. Complete all summative tests with a minimum score of 80%.
<b>Hours:</b>	Lecture: 29:30 Activities: 7:00 Testing: 3:30
<b>Hours (Total):</b>	40:00
<b>Maximum Class Size:</b>	32
<b>Instructor Level:</b>	Current State Fire Training registered instructor
<b>Instructor/Student Ratio:</b>	1:32
<b>Restrictions:</b>	none
<b>SFT Designation:</b>	CFSTES

### Required Resources

#### Instructor Resources

To teach this course, instructors need:

1. One or more of the following texts:
  - *Fire and Emergency Services Company Officer*, fifth edition, International Fire Service Training Association, 2014, 9780879395643
  - *Fire Officer: Principles and Practice*, enhanced third edition, Jones and Bartlett, 2015, 9781284068368
2. *California Fire Inspector's Guide*, current edition, California Fire Chiefs Association
3. Optionally, for reference purposes:
  - *Fire Investigator: Principles and Practice to NFPA 921 and 1033*, fourth edition, Jones & Bartlett, 2016, 9781284098228
  - *Fire Inspector: Principles and Practice*, Jones & Bartlett, 2012, 9780763749392
  - *Introduction to Fire Origin and Cause*, fourth edition, International Fire Service Training Association, 2013, 9780879395278
  - *Fire Inspection and Code Enforcement*, seventh edition, Fire Protection Publications, 2009, 9780879393489

#### Online Instructor Resources

The following instructor resources are available online at:

- Company Officer 2C: Fire Inspections and Investigation for Company Officers course plan <http://osfm.fire.ca.gov/training/SFTCurriculum>

#### Student Resources

To participate in this course, students need:

- The required textbook chosen by the instructor
- *California Fire Inspector's Guide*, current edition, California Fire Chiefs Association

### 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

Identify facility requirements

- Restroom locations
- Food locations
- Smoking locations
- Emergency procedures

Identify classroom requirements

- Start and end times
- Breaks
- Electronic device policies
- Special needs and accommodations
- Other requirements as applicable

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: Company Officer Certification Process

##### Terminal Learning Objective

At the end of this topic, a student will be able to identify different levels in the Officer certification track, the courses and requirements for Level I and II certification, and be able to describe the capstone task book and testing process.

##### Enabling Learning Objectives

1. Identify the different levels of certification in the Officer certification track

## Company Officer 2C

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- Company Officer
  - Chief Fire Officer
  - Executive Chief Officer
2. Identify the courses required for Level I and II
    - Company Officer 2A: Human Resource Management for Company Officers
    - Company Officer 2B: General Administration Functions for Company Officers
    - Company Officer 2C: Fire Investigation and Inspection for Company Officers
    - Company Officer 2D: All Risk Command Operations for Company Officers
    - Company Officer 2E: Wildland Incident Operations for Company Officers
    - ICS-200.B: Incident Command System For Single Resources and Initial Action Incidents
    - Intermediate Wildland Fire Behavior S-290 (classroom delivery only)
    - Instructor I: Instructional Methodology
    - Hazardous Material Incident Commander (as offered by the California Specialized Training Institute)
  3. Identify any other requirements for Level I and II
    - Complete experience requirements
  4. Describe the capstone task book process
    - Complete all prerequisites and course work
    - Submit application and fees and request capstone 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 examination
    - Schedule skills evaluation test

### Discussion Questions

1. How many levels are there in the Company Officer certification track? What are they?

### Activities

1. To be determined by the instructor.

## Topic 1-3: Definition of Duty

### Terminal Learning Objective

At the end of this topic, a student will be able to articulate the duties of a company officer level I and II and wildland fire officer level I.

### Enabling Learning Objectives

1. Identify the duties of a company officer level I:
  - This duty involves utilizing human resources to accomplish assignments in accordance with safety plans and in an efficient manner. This duty also involves evaluating member performance and supervising personnel during emergency and nonemergency work periods, according to the following job performance requirements.
  - This duty involves dealing with inquiries of the community and communicating the role, image, and mission of the department to the public and delivering safety, injury, and fire prevention education programs, according to the following job performance requirements.
  - This duty involves general administrative functions and the implementation of departmental policies and procedures at the unit level, according to the following job performance requirements.
  - This duty involves conducting inspections to identify hazards and address violations, performing a fire investigation to determine preliminary cause, securing the incident scene, and preserving evidence, according to the following job performance requirements.
  - This duty involves supervising emergency operations, conducting preincident planning, and deploying assigned resources in accordance with the local emergency plan and according to the following job performance requirements.
  - This duty involves integrating health and safety plans, policies, and procedures into daily activities as well as the emergency scene, including the donning of appropriate levels of personal protective equipment to ensure a work environment that is in accordance with health and safety plans for all assigned members, according to the following job performance requirements.
2. Identify the duties of a company officer level II:
  - This duty involves evaluating member performance, according to the following job performance requirements.
  - This duty involves dealing with inquiries of allied organizations in the community and projecting the role, mission, and image of the department to other organizations with similar goals and missions for the purpose of establishing strategic partnerships and delivering safety, injury, and fire prevention education programs, according to the following job performance requirements.
  - This duty involves preparing a project or divisional budget, news releases, and policy changes, according to the following job performance requirements.
  - This duty involves conducting fire investigations to determine origin and preliminary cause, according to the following job performance requirements.

- This duty involves supervising multiunit emergency operations, conducting preincident planning, and deploying assigned resources, according to the following job requirements.
  - This duty involves reviewing injury, accident, and health exposure reports, identifying unsafe work environments or behaviors, and taking approved action to prevent reoccurrence, according to the following job requirements.
3. Identify the duties of a wildland fire officer level I:
- This duty involves basic wildland leadership, human resource management, and principles of supervision, according to the following job performance requirements.

### Discussion Questions

1. None

### Activities

1. To be determined by the instructor.

**CTS Guide Reference:** CTS 1-1

## Unit 2: Fire and Life Safety Inspections

### Topic 2-1: Describing Fire Inspection Procedures

#### Terminal Learning Objective

At the end of this topic, a student, given the policies of the AHJ and the forms of the AHJ, will be able to describe the AHJ's procedures for conducting fire inspections, identifying all hazards, including hazardous materials; completing approved forms; and initiating approved follow-up action.

#### Enabling Learning Objectives

1. Describe the the various occupancies according to the current California Fire Code
2. Describe inspection procedures
3. Describe fire detection systems
4. Describe alarm systems
5. Describe protection systems
6. Identify fire hazards
7. Identify life safety hazards
8. Describe markings and identification systems for hazardous materials
9. Apply the appropriate codes and standards
10. Describe the wildland-urban interface inspection procedures

#### Discussion Questions

1. What are the benefits of doing a fire company inspection?
2. How do you respond to a business owner who complains that a previous fire inspector did not enforce a violation?
3. What are the benefits and drawbacks to making an inspection appointment?
4. How do you deal with a technical question that you do not have the answer to?

### Activities

1. Instructor must develop an activity on conducting a fire life safety inspection of an occupancy, asking the students to record their findings and present them in class.
2. Instructor must develop other activities to reinforce the other learning objectives.

### Instructor Notes

1. Consider using a “big box” store for inspection (such as Home Depot or Lowe’s). Alternatively, the classroom building or other buildings maybe be used.
2. Students can bring their departments’ inspection forms or the instructor can provide them.

**CTS Guide Reference:** CTS 5-1

## Topic 2-2: Identifying Features that Prevent or Contribute to Fire Spread

### Terminal Learning Objective

At the end of this topic, a student, given an occupancy, will be able to identify construction, alarm, detection, and suppression features that contribute to or prevent the spread of fire, heat, and smoke throughout the building or from one building to another and develop an occupancy preincident plan.

### Enabling Learning Objectives

1. Describe fire behavior as it relates to fire spread in the various occupancies according to the current California Fire Code
2. Identify the five types of building construction
3. Identify building construction features, including:
  - Fire walls
  - Fire barriers
  - Fire partitions
  - Fire doors
  - Vertical openings
  - Interior finishes
  - Roofing
  - Draft stops and smoke vents
4. Describe the impact of:
  - Detection systems
  - Alarm systems
  - Suppression systems
5. Describe the impact of:
  - Applicable codes
  - Applicable ordinances
  - Applicable standards
6. Describe the purpose of a preincident plan
7. Describe the preincident survey process

### Discussion Questions

1. What are some typical violations related to construction features designed to limit fire spread?
2. How does a building's size impact fire behavior?
3. How does a building's occupancy impact building construction type?
4. Why is preincident knowledge so important?
5. When should a preincident plan be developed for an occupancy?

### Activities

1. Instructor must create an activity on developing a preincident plan that includes: building construction, fire protection systems and features, fuel loading, special hazards and safety concerns, utility control locations, ventilation systems, and water supplies.

### Instructor Notes

1. Consider using a "big box" store for inspection (such as Home Depot or Lowe's). Alternatively, the classroom building or other buildings maybe be used. The instructor may wish to use different buildings for Activities 2-1 and 2-2.
2. Students can bring their departments' preincident forms or the instructor can provide them.

**CTS Guide Reference:** CTS 5-2

## Unit 3: Fire Investigation

### Topic 3-1: Securing Incident Scenes

#### Terminal Learning Objective

At the end of this topic, a student, given an incident scene, procedures for securing an incident scene, and equipment and resources, will be able to secure an incident scene with recognizable perimeters, which keep unauthorized persons from restricted areas, and which protect all evidence or potential evidence from damage or destruction.

#### Enabling Learning Objectives

1. Identify types of evidence
2. Describe the importance of fire scene security, including legal aspects of fire scene security
3. Describe the importance of evidence preservation
4. Identify procedures for establishing perimeters at an incident scene

#### Discussion Questions

1. Why is it important to maintain scene security?
2. When does it become necessary to obtain a search warrant for investigation?

#### Activities

1. To be determined by the instructor.

**CTS Guide Reference:** CTS 5-3

### **Topic 3-2: Determining the Origin and Cause**

#### **Terminal Learning Objective**

At the end of this topic, a student, given one or more of the following: a fire scene or photographs of a fire scene, diagrams, pertinent data, or sketches, will be able to determine the point of origin and preliminary cause of a fire to ascertain if arson is suspected.

#### **Enabling Learning Objectives**

1. Identify methods used by arsonists
2. Identify common causes of fire
3. Describe basic fire cause and origin determination
4. Describe fire growth and development
5. Describe the documentation of preliminary fire investigative procedures
6. Apply knowledge using deductive skills

#### **Discussion Questions**

1. What are common motives for arson?
2. What are the agency's legal obligations regarding determination of origin and cause?
3. What is the benefit of determining origin and cause?

#### **Activities**

1. The instructor must develop an activity so that the students can determine cause and origin.

**CTS Guide Reference:** CTS 5-4

**Time Table**

Segment	Lecture Time	Activity Time	Total Unit Time
<b>Unit 1: Introduction</b>			
Topic 1-1: Orientation and Administration			
Lecture	0:30		
Activity 1-1: To be determined by instructor		0:00	
Topic 1-2: Company Officer Certification Process			
Lecture	0:30		
Activity 1-2: To be determined by instructor		0:00	
Topic 1-3: Definition of Duty			
Lecture	0:30		
Activity 1-3: To be determined by instructor		0:00	
<b>Unit 1 Totals</b>	<b>1:30</b>	<b>0:00</b>	<b>1:30</b>
<b>Unit 2: Fire and Life Safety Inspections</b>			
Topic 2-1: Describing Fire Inspection Procedures			
Lecture	10:00		
Activity 2-1: Instructor must develop an activity on conducting a fire life safety inspection of an occupancy, asking the students to record their findings and present them in class. Instructor must develop other activities to reinforce the other learning objectives.		3:00	
Topic 2-2: Identifying Features that Prevent or Contribute to Fire Spread			
Lecture	8:00		
Activity 2-2: Instructor must create an activity on developing a preincident plan that includes: building construction, fire protection systems and features, fuel loading, special hazards and safety concerns, utility control locations, ventilation systems, and water supplies.		2:00	

## Company Officer 2C

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Segment	Lecture Time	Activity Time	Total Unit Time
<b>Unit 2 Totals</b>	<b>18:00</b>	<b>5:00</b>	<b>22:00</b>
<b>Unit 3: Fire Investigation</b>			
Topic 3-1: Securing Incident Scenes			
Lecture	3:00		
Activity 3-1: To be determined by instructor		0:00	
Topic 3-2: Determining the Origin and Cause			
Lecture	7:00		
Activity 3-2: The instructor must develop an activity so that the students can determine cause and origin.		2:00	
<b>Unit 3 Totals</b>	<b>10:00</b>	<b>2:00</b>	<b>12:00</b>
<b>Lecture, Activity, and Unit Totals:</b>	<b>29:30</b>	<b>7:00</b>	<b>36:30</b>

### Course Totals

Total Lecture Time (LT)	29:30
Total Activity Time (AT)	7:00
Total Testing Time (TT)	3:30
<b>Total Course Time</b>	<b>40:00</b>