

**FIRE 82 Course Outline as of Fall 2024****CATALOG INFORMATION**

Dept and Nbr: FIRE 82 Title: FIRE INSPECT/INVESTIGATE

Full Title: Fire Inspections and Investigations for Company Officers

Last Reviewed: 9/23/2019

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	2.00	Lecture Scheduled	7.00	5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	2	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	7.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 105.00

Title 5 Category: AA Degree Applicable

Grading: P/NP Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: FIRE 272

**Catalog Description:**

An overview of the information necessary to conduct inspections, identify hazards and address violations, performing a fire investigation to determine preliminary cause and to secure the incident scene and preserve evidence. Upon successful completion, the student will be awarded a completion certificate from the State Board of Fire Services.

**Prerequisites/Corequisites:**

Course Completion of FIRE 208.1 or FIRE 290 (Completion of basic fire academy or equivalent as determined by the Dean of Public Safety Instruction)

**Recommended Preparation:**

Eligibility for ENGL 100 OR EMLS 100 (formerly ESL 100) or equivalent

**Limits on Enrollment:**

Certified Fire Fighter II through CA State Fire Training

**Schedule of Classes Information:**

Description: An overview of the information necessary to conduct inspections, identify hazards and address violations, performing a fire investigation to determine preliminary cause and to secure the incident scene and preserve evidence. Upon successful completion, the student will be awarded a completion certificate from the State Board of Fire Services. (P/NP Only)

Prerequisites/Corequisites: Course Completion of FIRE 208.1 or FIRE 290 (Completion of basic fire academy or equivalent as determined by the Dean of Public Safety Instruction)

Recommended: Eligibility for ENGL 100 OR EMLS 100 (formerly ESL 100) or equivalent

Limits on Enrollment: Certified Fire Fighter II through CA State Fire Training

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

### **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Transferable	Effective:	Spring 2020	Inactive:
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<b>UC Transfer:</b>		Effective:		Inactive:
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**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

### **COURSE CONTENT**

**Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Describe the different levels and duties of the positions in the Fire Officer Certification track
2. Demonstrate the ability to complete a thorough fire inspection and pre-fire plan addressing occupancy, construction type and fire protection features
3. Demonstrate the ability to conduct a preliminary fire cause and origin investigation

**Objectives:**

At the conclusion of this course, the student should be able to:

1. Identify course objectives, requirements, assignments, activities, evaluation methods and participation requirements
2. Identify the different levels in the Fire Officer Certification track, the courses and requirements for Level I and II certification and the task book and testing process
3. Describe the duties of a Level I Company Officer, a Level II Company Officer and a Level I Wildland Officer
4. Demonstrate the procedures for conducting fire inspections, identifying hazards including hazardous materials and properly documenting and conducting follow-up inspections in accordance with adopted policies
5. 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
6. Describe the procedures for securing an incident scene which keeps unauthorized persons from restricted areas and protects evidence from damage or destruction
7. Determine the point of origin and preliminary cause of fire to ascertain if arson is suspected

## Topics and Scope:

- I. Orientation and Administration
  - A. Review of facilities
  - B. Review of classroom requirements
  - C. Review of syllabus, participation, assignments and evaluation methods
- II. Fire Officer Certification Track Course Requirements
  - A. Level I requirements
  - B. Level II requirements
  - C. The capstone task book process
  - D. The capstone testing process
- III. Definitions of Duty
  - A. Duties of a Level I Company Officer
  - B. Duties of a Level II Company Officer
  - C. Duties of a Level I Wildland Fire Officer
- IV. Fire Inspection Procedures
  - A. California Fire Code classifications
  - B. Inspection procedures
  - C. Fire detection systems
  - D. Fire alarm systems
  - E. Fire protection systems
  - F. Common fire hazards
  - G. Life safety hazards
  - H. Hazardous materials marking and identification systems
  - I. Application of codes and standards
  - J. Wildland Urban Interface inspection procedures
- V. Factors that Prevent or Contribute to Fire Spread
  - A. Fire behavior and fire spread in various occupancies
  - B. Building construction types
    - 1. Type I non-combustible
    - 2. Type II non-combustible
    - 3. Type III non-combustible exterior
    - 4. Type IV heavy timber
    - 5. Type V combustible
  - C. Building construction features
    - 1. Fire walls
    - 2. Fire barriers
    - 3. Fire partitions
    - 4. Fire doors
    - 5. Vertical openings
    - 6. Interior finishes
    - 7. Roofing
    - 8. Draft stops and smoke vents
  - D. Impacts
    - 1. Detection systems
    - 2. Alarm systems
    - 3. Suppression systems
    - 4. Codes
    - 5. Ordinances
    - 6. Standards
  - E. Purpose of pre-incident plans
  - F. Pre-incident plan survey process

## VI. Securing Incident Scenes

- A. Types of evidence
- B. Fire scene security
- C. Evidence preservation
- D. Establishing perimeters at incident scenes

## VII. Determining Cause and Origin

- A. Methods used by arsonists
- B. Common causes of fire
- C. Basic fire cause and origin determination
- D. Fire growth and development
- E. Procedures to document preliminary investigations
- F. Applying knowledge using deductive skills

### Assignment:

1. Pre-course reading and writing assignments
2. Reading 20-80 pages between sessions
3. Lecture videos (16 - 25)
4. Written homework assignments (4 - 7)
5. Individual and group inspection and investigation exercises (5 - 10)
6. Quizzes (10 - 15)
7. Summative exam

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Pre-course writing assignment, written homework assignments

Writing  
5 - 20%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Individual and group inspection and investigation exercises

Problem solving  
5 - 15%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Individual and group inspection and investigation exercises

Skill Demonstrations  
5 - 15%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, summative exam

Exams  
60 - 75%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Pre-course reading assignment, reading 20-80 pages  
between sessions, lecture videos

Other Category  
5 - 10%

**Representative Textbooks and Materials:**

Fire Inspections and Investigations for Company Officers Course Plan. California Fire Service Training and Education System. 2017

California Fire Inspector's Guide. California Fire Chief's Association. 2016

Fire Officer: Principles and Practices. 3rd ed. Ward, Michael. Jones and Bartlett Learning. 2014 (classic)