



Fire Investigation Program Management

Course Plan

Course Details

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|----------------------------------|---|
| Certification: | Fire Marshal |
| CTS Guide: | Fire Marshal CTS Guide (March 2018) |
| Description: | This course provides an overview of the knowledge and skills needed to administer fire investigation requirements, review documentation intended for litigation or resolution, conduct investigative analysis, manage technical resources, develop and manage a comprehensive investigation program, and construct a resource plan for investigations with allied groups. |
| Designed For: | A current or future Fire Marshal pursuing SFT certification or anyone seeking an overview of fire investigation program management. |
| Prerequisites: | None |
| Standard: | Complete all activities and formative tests. Complete all summative tests with a minimum score of 80%. |
| Hours: | Lecture: 13:30 Activities: 3:00 Testing: 1:30 |
| Hours (Total): | 18:00 |
| Maximum Class Size: | 30 |
| Instructor Level: | Primary Instructor |
| Instructor/Student Ratio: | 1:30 |
| Restrictions: | None |
| SFT Designation: | CFSTES |

Required Resources

Instructor Resources

To teach this course, instructors need:

- NFPA 921 Guide for Fire and Explosion Investigations (2017)
- NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2014)
- NFPA 1037 Standard for Fire Marshal Professional Qualifications (2016)
- Activity materials
 - Sample fire investigation reports (Activity 2-2)
 - A list of investigation equipment (Activity 2-4)

Online Instructor Resources

The following instructor resources are available online at

<http://osfm.fire.ca.gov/training/resources>

- None at this time

Student Resources

To participate in this course, students need:

- NFPA 921 Guide for Fire and Explosion Investigations (2017)
 - Physical copy or digital access
- NFPA 1033 Standard for Professional Qualifications for Fire Investigator (2014)
 - Physical copy or digital access
- NFPA 1037 Standard for Fire Marshal Professional Qualifications (2016)
 - Physical copy or digital access
- Activity materials
 - Fire investigation policies from the student's jurisdiction (Activity 2-1)

Facilities, Equipment, and Personnel

The following facilities, equipment, or personnel are required to deliver this course:

- Standard classroom equipped for 30 students
- Whiteboard or easel pads with appropriate writing implements
- Projector with appropriate laptop connections
- Wifi/Internet access

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

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
 - 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: Fire Marshal Certification Process

Terminal Learning Objective

At the end of this topic, a student will be able to identify different levels in the Fire Marshal certification track, the courses and requirements for Fire Marshal 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 Fire Marshal certification track
 - Fire Marshal (standalone certification)

Fire Marshal 1C

2. Identify the courses required for Fire Marshal certification
 - Fire Marshal 1A: Administration and Professional Development
 - Fire Marshal 1B: Community Relations & Fire and Life Safety Education
 - Fire Marshal 1C: Fire Investigation Program Management
 - Fire Marshal 1D: Community Risk Reduction Program Management
 - Fire Marshal 1E: Regulatory Programs Management
 - Chief Fire Officer 3A: Human Resource Management
 - Instructor I: Instructional Methodology
 - Statutes and Regulations
 - G290 Basic Public Information Officer Course
3. Identify any other requirements for Fire Marshal certification
 - International Code Council (ICC) Fire Inspector II certification
4. Describe the capstone task book process
 - Complete all prerequisites and course work
 - Submit application and fees to 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 capstone testing process
 - Complete course work
 - Schedule online capstone test
 - Schedule skills evaluation test

Discussion Questions

1. Do you have any questions about the requirements for SFT Fire Marshal certification?

Activities

1. To be determined by the instructor

Unit 2: Fire Investigation

Topic 2-1: Administering Fire Investigation Requirements

Terminal Learning Objective

At the end of this topic, a student, given applicable codes, standards, and jurisdictional requirements for investigations, will be able to administer applicable codes, standards, and jurisdictional requirements for investigations so that investigators are knowledgeable and operate within organizational policies.

Enabling Learning Objectives

1. Define key fire investigation terms
 - “Origin and cause”

- The circumstances, conditions, or agencies that bring together a fuel, ignition source, and oxidizer resulting in a fire or combustion explosion. (NFPA 921, section 3.3.57)
 - “Fire investigation”
 - The process of determining the origin, cause, and development of a fire or explosion. (NFPA 921, section 3.3.59)
 - “Arson”
 - Willfully and maliciously setting fire to, burning, causing to be burned, or aiding, counseling, or procuring the burning of, any structure, forest land, or property. (California Penal Code 451 a-e)
 - “Reckless burning”
 - Unlawfully causing a fire by recklessly setting fire to, burning, or causing to be burned any structure, forestland, or property. (California Penal Code 452 a-e)
2. Describe how to identify different types of fire investigations
 - For reporting purposes only
 - No identified crime
 - Trend identification
 - Risk analysis
 - For a civil case
 - Fire caused by product failure or malfunction
 - For a criminal case
 - Arson
 - Reckless burning
 - Insurance fraud
 3. Identify local, state, federal, tribal, and provincial laws
 - California Fire Code charging language
 4. Identify fire investigation models
 - Dedicated unit
 - Suppression personnel
 - Regional group
 - Contract
 - Office of the State Fire Marshal
 5. Describe investigation methodology
 - NFPA 921 Guide for Fire and Explosion Investigations (2017)
 6. Describe how to conduct investigations
 - Scientific method
 - Methodical approach
 - Always treat as a criminal scene
 7. Describe how to monitor investigative actions and administrative follow up
 - Review and evaluate investigation reports and data
 - Analyze in context patterns and trends
 - Recommend action that enhances fire prevention and education programs

8. Describe different requirements for different types of fire investigations
 - Securing a scene
 - Collecting and storing evidence
 - External agency or organization involvement
9. Apply codes, standards, and jurisdictional requirements to conduct investigations
10. Describe how to develop an administrative policy for fire origin and cause investigations
 - Consider codes, standards, and jurisdictional requirements for investigations including:
 - NFPA 921 Guide for Fire and Explosion Investigations
 - NFPA 1033 Standard for Professional Qualifications for Fire Investigators
 - Apply local, state, and federal laws, including:
 - California Penal Code
 - Search and seizure case law
 - Apply organizational policies
 - Select program components
11. Describe how to identify and develop policies and procedures related to fire investigations:
 - Authority
 - Legal authority to conduct investigations
 - Criminal Case Management
 - Conducting arrests
 - Conducting interviews
 - Conducting search and seizure
 - Search warrant policy
 - Use of force policy
 - Using applicable criminal civil statutes
 - Criminal database use policies (CJIC/NCIC/TLO)
 - Criminal filing policy
 - Civil Case Management
 - Interpreting and using contract and insurance law
 - Maintaining chain of custody
 - Evidence collection and storage
 - Using applicable civil statutes
 - Forensic analysis and laboratory testing
 - Report writing
 - Report review
 - Status of notes
 - Evidence
 - Maintaining chain of custody
 - Evidence collection and storage
 - Forensic analysis and laboratory testing
 - Training

- Investigator training and certification
- Weapon qualifications
- Defensive tactics
- Drivers training
- Special Topics in Fire Investigations
 - Juvenile fire-setter programs
 - Fire fatalities
 - Large loss fires
 - Serial arson
 - Code 3 driving policy
- Agency Coordination
 - Fire agencies
 - Law enforcement agencies
 - School districts
 - Local government (cities, counties, etc.)
 - California Department of Insurance
 - Other state and federal agencies
 - DMV
 - ATF

12. Manage the investigative process and evaluate the results

Discussion Questions

1. What is the difference between fire investigation and arson investigation?
2. How would an investigation for a criminal case differ from an investigation for reporting purposes?
3. What is the role of the private investigator?
How can he or she assist with the fire agency origin and cause investigation?
4. What are the potential consequences of having no policy or incomplete policies for conducting fire investigations?

Activities

1. Using a sample of jurisdictional policies (provided by students), have students compare their policies with NFPA 1033 and 921 (current edition) to determine consistency.

CTS Guide Reference: CTS 8-1

Topic 2-2: Reviewing Documentation Intended for Litigation or Resolution

Terminal Learning Objective

At the end of this topic, a student, given details of an investigation including evidence collected, reports, scene sketches, photographs, other related information, and data relevant to the investigation, will be able to review and assess investigation reports and data to be submitted in anticipation of litigation or resolution in order to submit complete, accurate documents for possible legal action.

Enabling Learning Objectives

1. Describe how to review and assess investigation data and reports

Fire Marshal 1C

- Review for compliance with agency report-writing policies and procedures
 - Review for accuracy, completeness, and verifiability
 - Review for clear and concise writing techniques
 - Remove irrelevant material
 - Use correct grammar, spelling, and punctuation
 - Write from a first-person point of view
 - Avoid jargon and overly complicated or ambiguous terminology
 - Use paragraphs that are short and to the point
 - Use simple language
 - Place opinions and conclusions in the correct locations
 - Maximize statements of fact and observations that an investigator can prove
 - Ensure correlation with the National Fire Incident Reporting System (NFIRS) or incident reports
 - Anticipate submittal for litigation or resolution
 - Ensure that report or data content supports report conclusion or findings
2. Identify local, state, federal, tribal, and provincial laws related to investigation, codes, standards, and jurisdictional requirements
 - Civil rights laws
 - Fair credit reporting act
 - Laws applicable to the authority having jurisdiction
 - Libel and slander laws
 - Privacy laws
 - Punitive damages and attorney-client privilege laws
 - Rules of evidence, including spoliation
 - Trespass and invasion of privacy laws
 3. Identify other pertinent references
 4. Write technical reports
 5. Review fire investigation reports
 6. Compile and analyze investigative data

Discussion Questions

1. How important is effective report writing while conducting fire investigations?
2. Who may read the report?

Activities

1. Given a fire investigation report (provided by instructor), have students conduct an analysis and evaluate the conclusions.
 - Does the documented information support the conclusion?

CTS Guide Reference: CTS 8-2

Topic 2-3: Conducting Investigative Analysis

Terminal Learning Objective

At the end of this topic, a student, given reports compiled from investigation data, will be able to conduct investigative analysis to recommend action that enhances fire prevention and other programs.

Enabling Learning Objectives

1. Describe how to conduct statistical analysis
2. Use verbal and written communication
3. Write technical reports
4. Evaluate data
5. Communicate findings verbally and in writing

Discussion Questions

1. How does fire investigation analysis impact a community risk program?

Activities

1. To be determined by instructor

Instructor Notes

1. Refer to NFPA 921 Guide for Fire and Explosion Investigations (2017) when teaching this section.

CTS Guide Reference: CTS 8-3

Topic 2-4: Managing Technical Resources Required to Perform Fire Investigations

Terminal Learning Objective

At the end of this topic, a student, given personnel, protective equipment, jurisdictional requirements, and other necessary equipment, including investigation tools and resources for investigations, will be able to manage technical resources needed to perform investigations in order to protect and equip investigators and conduct investigations in accordance with safety requirements.

Enabling Learning Objectives

1. Identify resources needed to perform a fire investigation
 - Personnel
 - Peace officer status (California Penal Code 830.37)
 - Education and certification requirements
 - Jurisdictional requirements
 - Protective equipment
 - Personal protective equipment
 - Air monitoring equipment
 - Investigation tools
 - Evidence cans
 - Evidence tags
 - Photography equipment
 - Special equipment for digging into debris
 - Lighting equipment

- Tool kits
- Hydrocarbon detector
- Resources
 - Law enforcement support
 - Crime lab support
 - In-service personnel
 - District attorney support
- 2. Describe procedures for managing resources needed to perform fire investigations
 - Training on report writing policies and procedures
 - Coordinating tasks and people
 - Protecting and equipping investigators
 - Conducting investigations according to jurisdictional policies and procedures
 - Ensuring safety
 - Long-term case management
- 3. Identify local, state, federal, tribal, and provincial laws, regulations, and standards for the safety of employees
- 4. Demonstrate technical knowledge of equipment
- 5. Use personal protective ensemble and tools needed to conduct investigations
- 6. Coordinate tasks and people
- 7. Write procedures
- 8. Communicate
- 9. Utilize resources

Discussion Questions

1. Should fire investigators be required to wear breathing apparatus during investigations?
2. Why is it important to use clean evidence collection tools and equipment?

Activities

1. Given a list of investigation equipment (provided by instructor) prioritize the list from the most to the least critical.

Instructor Notes

1. Bring in as many of the items listed in ELO 1 under “protective equipment” and “investigation tools” as possible for students to experience first hand.

CTS Guide Reference: CTS 8-3

Topic 2-5: Developing and Managing a Comprehensive Fire Investigation Program

Terminal Learning Objective

At the end of this topic, a student, given reference materials and laws related to investigations, including due process, will be able to develop and manage a comprehensive investigation program that meets legal mandates and formulates jurisdictional requirements for consistent, complete, and safe investigations.

Enabling Learning Objectives

1. Identify technical writing and procedure/policy formatting

Fire Marshal 1C

1. Identify policy issues
2. Describe laws and legal aspects of investigations
3. Identify codes, standards, and jurisdictional requirements
4. Use verbal and written communication skills

Discussion Questions

1. What groups within your city or county could you go to for help in developing a fire investigation program?

Activities

1. To be determined by the instructor

Instructor Notes

1. Many of the ELOs for this topic were covered by earlier topics in this unit. Only teach what you have not already covered and include or expand on any additional materials appropriate to the TLO not already covered.

CTS Guide Reference: CTS 8-5

Topic 2-6: Constructing a Resource Plan for Fire Investigations with Allied Groups

Terminal Learning Objective

At the end of this topic, a student, given knowledge of the capabilities of available groups and resources, will be able to construct a resource plan for investigations with allied groups to adapt to incident needs in order to investigate responses to various types of incidents.

Enabling Learning Objectives

1. Identify local, state, federal, tribal, and provincial resources and their capabilities
 - Federal Bureau of Investigation
 - Federal Bureau of Alcohol, Tobacco, Firearms, and Explosives
 - Cal FIRE / Office of the State Fire Marshal
 - Local fire agencies
 - Local law enforcement agencies
 - Forensic laboratories
 - District attorney
2. Use verbal and written communication skills
3. Utilize resources

Discussion Questions

1. What agency would assist you with fire investigations involving:
 - A church
 - A hate crime
 - A terrorist attack

Activities

1. To be determined by instructor

Instructor Notes

1. Consider bringing in representative from allied agencies as guest speakers to discuss their role in fire investigations.

Fire Marshal 1C

CTS Guide Reference: CTS 8-6

Time Table

| Segment | Lecture Time | Activity Time | Total Unit Time |
|--|--------------|---------------|-----------------|
| Unit 1: Introduction | | | |
| Topic 1-1: Orientation and Administration | | | |
| Lecture | 0:30 | | |
| Activity 1-1: Determined by instructor | | 0:00 | |
| Topic 1-2: Fire Marshal Certification Process | | | |
| Lecture | 0:30 | | |
| Activity 1-2: Determined by instructor | | 0:00 | |
| Unit 1 Totals | 1:00 | 0:00 | 1:00 |
| Unit 2: Investigation | | | |
| Topic 2-1: Administering Fire Investigation Requirements | | | |
| Lecture | 6:00 | | |
| Activity 2-1: See recommended activity | | 1:00 | |
| Topic 2-2: Reviewing Documentation Intended for Litigation or Resolution | | | |
| Lecture | 1:30 | | |
| Activity 2-2: See recommended activity | | 0:30 | |
| Topic 2-3: Conducting Investigative Analysis | | | |
| Lecture | 0:30 | | |
| Activity 2-3: Determined by instructor | | 0:00 | |
| Topic 2-4: Managing Technical Resources Required to Perform Fire Investigations | | | |
| Lecture | 2:00 | | |
| Activity 2-4: See recommended activity | | 0:30 | |
| Topic 2-5: Developing and Managing a Comprehensive Fire Investigation Program | | | |
| Lecture | 1:00 | | |
| Activity 2-5: Determined by instructor | | 1:00 | |
| Topic 2-6: Constructing a Resource Plan for Fire Investigations with Allied Groups | | | |
| Lecture | 1:30 | | |
| Activity 2-6: Determined by instructor | | 0:00 | |
| Unit 2 Totals | 12:30 | 3:00 | 15:30 |
| Lecture, Activity, and Unit Totals: | 13:30 | 3:00 | 16:30 |

Fire Marshal 1C

Course Totals

| Segment Type | Time |
|--------------------------|--------------|
| Total Lecture Time (LT) | 13:30 |
| Total Activity Time (AT) | 3:00 |
| Total Testing Time (TT) | 1:30 |
| Total Course Time | 18:00 |