



# National Fire Academy

**W0770 – Fire Investigation: First Responders  
Version: 1st Edition, 2nd Printing, March 2020**

**Quarter:**

**ACE Credit: There is not an American Council on Education credit recommendation for this course.**

**IACET Continuing Education Units: 0.0**

**Length of Course: 2 Days (14 hr. contact hours)**

**Prerequisite: None**

**Curriculum: Fire Investigation**

**Training Specialist: Lester Rich**

**Instructor:**

**Instructor email/phone:**

**Classroom: J-**

**Meeting Time: 8 AM – 5 PM**

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## Course Description (Catalog)

W0770 – “Fire Investigation: First Responders.” This two-day course presents a basic overview of a fire investigation. Students will review the basics of fire chemistry and develop an enhanced understanding with respect to fire suppression and fire investigation. The course will stress the importance of fire scene awareness, evidence identification, preservation and the basics of a fire investigation. Students will develop an appreciation of the convergence of suppression, investigation, science and law.

## **Student Qualifications (Primary and Secondary Audience)**

The target audience for “Fire Investigation: First Responders” (FI: FR) is first responders and their advancement in the professional development of fire, rescue and emergency service personnel, as well as the mitigation of loss of life and property from fire and other hazards. An integral part of the program is training and professional development in fire and life safety education programs/courses.

## **Course Scope (Goal)**

The goal of this course is to enable students to identify and define key concepts of fire investigation specifically as they relate to the scientific method, scene preservation and the role of the first responder.

The scope of this course is to provide first responders with the fundamental understanding of the principles, processes and procedures involved in fire scene examination.

## **Course Objectives (Course Learning Outcomes – TLOs)**

After successfully completing this course, you will be able to accomplish the following:

- Evaluate how the role of first responder relates to the fundamentals of fire investigation.
- Evaluate the impact of fire dynamics on the fire investigation.
- Consider the process of a fire scene investigation.
- Develop an understanding of potential issues and hazards affecting the first responder that relate to fatal fires, trauma, behavioral health, arson and social media.
- Evaluate a fire scene and identify evidence applicable to determining the origin of the fire.

## **Course Delivery Method**

The NFA offers specialized training courses and advanced management programs of national impact in an academic classroom environment [on campus at the National Emergency Training Center \(NETC\) in Emmitsburg, Maryland](#) and through their state, local, tribal and U.S. territories training partners. All course materials are designed for interactive classroom environments, in either paper notebook or electronic formats.

## Course Schedule

The purpose of the course schedule is to give you, at a glance, the required preparation, activities and evaluation components of your course.

DAY 1	DAY 2
Introduction, Welcome and Administrative	Unit 3: The Fire Scene
<i>Break</i>	<i>Break</i>
Unit 1: Overview of Fire Investigation and National Fire Protection Association 921/1033	Unit 3: The Fire Scene (cont'd)
<i>Break</i>	<i>Break</i>
Unit 1: Overview of Fire Investigation and National Fire Protection Association 921/1033 (cont'd)	Unit 3: The Fire Scene (cont'd)
<i>Lunch</i>	<i>Lunch</i>
Unit 2: Fire Science	Unit 3: The Fire Scene (cont'd) Unit 4: Uncomfortable Fire Investigation Topics
<i>Break</i>	<i>Break</i>
Unit 2: Fire Science (cont'd) Activity 2.1: Candle Experiment	Unit 4: Uncomfortable Fire Investigation Topics (cont'd) Unit 5: Making the Call

Note: This schedule is subject to modification by the instructors and approved by the training specialist.

## **Course Resources (Instructional Materials)**

In order to be fully prepared, obtain a copy of the required textbooks and other instructional materials prior to the first day of class.

### **Required Readings**

The student must complete required readings during the course to be able to thoughtfully participate in discussions and activities.

None.

### **Suggested Reading/Resources**

Suggested readings and resources are not evaluated, but may enhance the student's understanding, serve as additional sources for citation and promote discussion of course material.

None.

### **Required Resources (Course Textbook)**

Student Manual.

### **Supplemental Resources (Supplemental Course Textbook)**

None.

## **Grading Methodology (Evaluation Procedures)**

The required performance to successfully complete the course is attained by completing the class with a letter grade of a "C" or higher.

<b>Letter Grade</b>	<b>Point Range</b>
A	90-100
B	80-89
C	70-79
F	69 or lower

## **Required Reading Assignments**

N/A

## **Suggested Readings**

N/A

## **Course Outline**

### **Introduction (Day 1)**

#### **Objectives**

None.

### **Unit 1: Overview of Fire Investigation and National Fire Protection Association 921/1033 (Day 1)**

#### **Objectives**

#### **Terminal Objective**

The students will be able to:

- 1.1 Evaluate how the role of first responder relates to the fundamentals of fire investigation.

#### **Enabling Objectives**

The students will be able to:

- 1.1 Establish the scope of roles and associated actions for fire investigation response.
- 1.2 Use an understanding of the fire investigation profession to interpret the limitations on the first responder.
- 1.3 Compare national guides and standards related to fire investigation.
- 1.4 Summarize the responsibilities associated with fire investigation and testifying as a fact or expert witness.

## **Unit 2: Fire Science (Day 1)**

### **Objectives**

#### **Terminal Objective**

The students will be able to:

- 2.1 Evaluate the impact of fire dynamics on the fire investigation.

#### **Enabling Objectives**

The students will be able to:

- 2.1 Define fire.
- 2.2 Correlate the components of the fire tetrahedron with fire development.
- 2.3 Classify each phase of fire development related to the fuel and ventilation available.
- 2.4 Explain the three methods of heat transfer.
- 2.5 Summarize the relationship between fire dynamics, firefighter actions and the fire investigation.

## **Unit 3: The Fire Scene (Day 2)**

### **Objectives**

#### **Terminal Objective**

The students will be able to:

- 3.1 Consider the process of a fire scene investigation.

#### **Enabling Objectives**

The students will be able to:

- 3.1 Assess the fire scene activities of the first responder in relation to the fire investigation.
- 3.2 Summarize the process by which data is identified, documented and preserved during the process of a fire scene investigation.

3.3 Explain the four types of information that can assist with determining the origin of a fire as outlined in National Fire Protection Association (NFPA) 921, *Guide for Fire and Explosion Investigations*.

3.4 Evaluate potential factors impacting causation determinations.

#### **Unit 4: Uncomfortable Fire Investigation Topics (Day 2)**

##### **Objectives**

###### **Terminal Objective**

The students will be able to:

4.1 Develop an understanding of potential issues and hazards affecting the first responder that relate to fatal fires, trauma, behavioral health, arson and social media.

###### **Enabling Objectives**

The students will be able to:

4.1 Recognize the importance of managing a fire scene that involves a fatal fire or line-of-duty death (LODD).

4.2 Recognize the roles and responsibilities in managing a fatal fire scene and review the data regarding LODDs.

4.3 Consider the repercussions of secondary trauma on first responders and the people around them.

4.4 Recognize the issues and responsibilities associated with firefighter arson.

4.5 Ascertain the potential perils associated with social media misuse.

#### **Unit 5: Making the Call (Day 2)**

##### **Objectives**

###### **Terminal Objective**

The students will be able to:

5.1 Evaluate a fire scene, and identify evidence applicable to determining the origin of the fire.

## **Enabling Objectives**

The students will be able to:

- 5.1 Compare fire patterns.
- 5.2 Choose an area of origin based on the information provided.

## **Policies**

### **Class Attendance and Cancellation Policy**

#### **Attendance**

- You are required to attend all sessions of the course. If you do not, you may not receive a certificate.
- If you need to depart the training facility early and miss any portion of the course, you must make the request in writing to the sponsoring agency (e.g., state training director, etc.). The state training director may waive the attendance requirement in order to accommodate you with extraordinary circumstances as long as you complete all course requirements.

#### **Course Failure**

You can reapply for the failed course or any other NFA course and go through the random selection process. You do not have to successfully complete the failed course before attending another NFA course.

#### **Student Code of Conduct Policy**

Students, instructors and staff are expected to treat each other with respect at all times. Inappropriate behavior will not be tolerated.

#### **Writing Expectations**

Student writing will conform to the generally accepted academic standards for college papers. Papers will reflect the original work of the student and give appropriate credit through citations for ideas belonging to other authors, publications or organizations. Student written work should be free of grammatical and syntax errors, free of profanity or obscene language or ideas, and reflect critical thinking related to the course subject matter.



## **Citation and Reference Style**

Attention Please: Students will follow the “Publication Manual of the American Psychological Association,” Sixth Edition as the sole citation and reference style used in written work submitted as part of coursework to NFA. Assignments completed in a narrative essay, composition format, abstract and discussion posts must follow the citation style cited in the “Publication Manual of the American Psychological Association,” Sixth Edition.

## **Late Assignments**

All assignments must be turned in by the established deadline. Late submissions could result in a 10% decrease in grade.

## **Netiquette**

Online learning promotes the advancement of knowledge through positive and constructive debate – both inside and outside the classroom. Forums on the Internet, however, can occasionally degenerate into needless insults and “flaming.” Such activity and the loss of good manners are not acceptable in a professional learning setting – basic academic rules of good behavior and proper “Netiquette” must persist. Remember that you are in a place for the rewards and excitement of learning which does not include descent to personal attacks or student attempts to stifle the forum of others.

- Technology Limitations. While you should feel free to explore the full-range of creative composition in your formal papers, keep e-mail layouts simple. The NFA Online classroom may not fully support MIME or HTML encoded messages, which means that bold face, italics, underlining, and a variety of color-coding or other visual effects will not translate in your e-mail messages.
- Humor Note. Despite the best of intentions, jokes and especially satire can easily get lost or taken seriously. If you feel the need for humor, you may wish to add “emoticons” to help alert your readers: ;-), : ), ☺ .

## **Disclaimer Statement**

Course content may vary from the outline to meet the needs of this particular group.

## **Grading**

Please review the following rubrics that explain how grades will be awarded.

Students who do not complete the entire course will be awarded an Incomplete (I) grade. In accordance with NFA academic policies, an Incomplete (I) grade must be removed by the end of the next semester following the course, or it automatically becomes a Failing (F) grade.

[https://www.usfa.fema.gov/training/nfa/admissions/student\\_policies.html](https://www.usfa.fema.gov/training/nfa/admissions/student_policies.html)

## **Academic Honesty**

Students are expected to exhibit exemplary ethical behavior and conduct as part of the NFA community and society as a whole. Acts of academic dishonesty including cheating, plagiarism, deliberate falsification and other unethical behaviors will not be tolerated.

Students are expected to report academic misconduct when they witness a violation. All cases of academic misconduct shall be reported by the instructor to the state training director or host agency and to the NFA Training Specialist.

If a student is found to have engaged in misconduct and the allegations are upheld, the penalties may include, but are not limited to one or a combination of the following:

- Expulsion.
- Exclusion from future classes for a specified period; depending on the severity it could range from one to 10 years.
- Forfeiture of certificate for course(s) enrolled in at NETC.

Refer to NFA-specific Standard Operating Procedure 700.1 – *Academic Code of Conduct and Ethics* for more information.