



National Fire Academy

R0390 – Fire Inspection Principles 1
Version: 1st edition, 4th printing, October 2020

Quarter:

ACE Credit: In the lower-division baccalaureate/associate degree category, two semester hours in fire science or fire engineering.

IACET Continuing Education Units: 3.8

Length of Course: 6 Days (33 hr., 35 min. contact hours, Sunday – Friday)

Prerequisite: Yes

**Curriculum: Fire Protection: Technical
Training Specialist: Keith Heckler**

Instructor:

Instructor email/phone:

Classroom: J-

Meeting Time: 8 AM – 5 PM

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Course Description (Catalog)

R0390 – “Fire Inspection Principles 1.” This six-day course introduces the student to the fundamental methodology for application of fire and life safety codes and standards. Although it contains many of the basic principles of code enforcement, more experienced code inspectors and officials might find it useful as a review of essential methodologies and as a useful update to current code enforcement applications. It is not the intent of this course to present specific code requirements, however this course focuses more on the methodology of the use of these requirements. The "Fire Inspection Principles II" course is intended to provide additional

material on the code applications to fire protection systems as an extension of material presented in this course.

Student Qualifications (Primary and Secondary Audience)

The fire prevention or code enforcement officer with limited fire inspection experience. Suppression Company Officers (COs) who have responsibility for fire prevention inspections. Related professionals whose responsibility requires a basic knowledge of the fire prevention and code enforcement process.

Course Scope (Goal)

The course goal is to provide the students with the fundamental knowledge, skills and attitudes to conduct basic fire safety inspections effectively and confidently.

Course Objectives (Course Learning Outcomes – TLOs)

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

- Evaluate the general fire safety of a structure by researching the concepts within their code.
- Verify that an acceptable level of life safety is provided for the occupants of a structure by using their codes.
- Explain the significance of methods of fire travel, building construction types and systems, and occupancy classes.
- Evaluate the management of special hazards, including electrical and heating equipment hazards and hazardous materials for code compliance.

Course Delivery Method

The National Fire Academy (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](#). This classroom course is designed for the national level fire service officer from State and local fire service organizations. During this 6-day delivery, students will reside in dormitories provided on campus with classes conducted in classrooms designed for critical student/instructor interaction. 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	Unit 1: General Fire Safety (cont'd) Unit 2: Life Safety
<i>Break</i>	<i>Break</i>
Introduction (cont'd)	Unit 2: Life Safety (cont'd) Activity 2.1: Applications of Occupancy Separations
<i>Break</i>	<i>Break</i>
Assign Job's Project Letter (due Friday morning) Unit 1: General Fire Safety	Unit 2: Life Safety (cont'd) Activity 2.2: Determining Occupancy Classifications
<i>Lunch</i>	<i>Lunch</i>
Unit 1: General Fire Safety (cont'd) Activity 1.1: Site Problem Identification	Unit 2: Life Safety (cont'd) Activity 2.2: Determining Occupancy Classifications (cont'd)
<i>Break</i>	<i>Break</i>
Unit 1: General Fire Safety (cont'd)	Unit 2: Life Safety (cont'd) NETC Library

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

DAY 3	DAY 4
Unit 2: Life Safety (cont'd)	Unit 3: Fire and Codes: Their Relationship (cont'd)
<i>Break</i>	<i>Break</i>
Unit 2: Life Safety (cont'd) Activity 2.3: Calculation of Occupant Loads	Unit 3: Fire and Codes: Their Relationship (cont'd)
<i>Break</i>	<i>Break</i>
Unit 2: Life Safety (cont'd) Activity 2.4: Calculation of Means of Egress	Unit 3: Fire and Codes: Their Relationship (cont'd)
<i>Lunch</i>	<i>Lunch</i>
Unit 2: Life Safety (cont'd)	Unit 3: Fire and Codes: Their Relationship (cont'd) Unit 4: Special Hazards
<i>Break</i>	<i>Break</i>
Unit 2: Life Safety (cont'd) Unit 3: Fire and Codes: Their Relationship Review	Unit 4: Special Hazards (cont'd) NETC Library

DAY 5	DAY 6
Unit 4: Special Hazards (cont'd)	Jeb's Letter Due
<i>Break</i>	<i>Break</i>
Unit 4: Special Hazards (cont'd) Activity 4.1: Hazardous Material Code Search	Final Exam
<i>Break</i>	<i>Break</i>
Unit 4: Special Hazards (cont'd) Activity 4.1: Hazardous Material Code Search (cont'd)	Life Safety Code Project — Benson Building
<i>Lunch</i>	<i>Lunch</i>
Unit 4: Special Hazards (cont'd) Activity 4.2: Electrical Code Search	Life Safety Code Project — Benson Building (cont'd) Review of Final Exam and Life Safety Code Project
<i>Break</i>	<i>Break</i>
Unit 4: Special Hazards (cont'd)	Graduation

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)

A minimum final grade of at least 70 percent is required to pass this course.

Numerical Score	Letter Grade
100-90	A
89-80	B
79-70	C
69 or below	F

Course Outline

Introduction

Objectives

None.

Unit 1: General Fire Safety

Objectives

Terminal Objective

The students will be able to:

- 1.1 Evaluate the general fire safety of a structure by researching the concepts within their code.

Enabling Objectives

The students will be able to:

- 1.1 Analyze the general fire safety of a site.
- 1.2 Analyze the general fire safety of a structure.
- 1.3 Analyze the general fire safety pertaining to a structure's use.

Unit 2: Life Safety

Objectives

Terminal Objective

The students will be able to:

- 2.1 Verify that an acceptable level of life safety is provided for the occupants of a structure by using their codes.

Enabling Objectives

The students will be able to:

- 2.1 Identify the fundamental principles of life safety.
- 2.2 Determine the occupancy classification for a given structure.
- 2.3 Calculate the occupant load for a given structure by using their codes.
- 2.4 List the basic components of an exit system.
- 2.5 Determine the number of required exits for a given structure.
- 2.6 Evaluate the adequacy of the egress system for a given structure.
- 2.7 Determine the code requirements for interior finishes.
- 2.8 Explain the impact of the fire suppression and detection systems on life safety.

Unit 3: Fire and Codes: Their Relationship

Objectives

Terminal Objective

The students will be able to:

- 3.1 Explain the significance of methods of fire travel, building construction types and systems, and occupancy classes.

Enabling Objectives

The students will be able to:

- 3.1 Explain methods of fire travel.
- 3.2 Explain the methods of heat energy transfer.
- 3.3 Explain the characteristics of the different building systems.
- 3.4 Recognize the effects of fire on building construction materials.
- 3.5 Differentiate among the types of construction and identify the protection associated with each.

- 3.6 Explain the factors used to establish the occupancy classes.
- 3.7 Differentiate among “code,” “standard,” “recommended practices,” and “guides.”
- 3.8 Explain the characteristics that impact occupant behavior during a fire (age, mobility, knowledge of the building, etc.).

Unit 4: Special Hazards

Objectives

Terminal Objective

The students will be able to:

- 4.1 Evaluate the management of special hazards, including electrical and heating equipment hazards and hazardous materials for code compliance.

Enabling Objectives

The students will be able to:

- 4.1 Categorize hazardous materials and processes.
- 4.2 Verify code compliance for storage, handling and use of hazardous materials.
- 4.3 Differentiate among electrical equipment, components and the associated terminology.
- 4.4 Identify common electrical hazards.
- 4.5 Recognize hazards associated with electric and heating systems.
- 4.6 Explain electric and heating system hazard mitigation strategies.

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, and your stipend may be denied.

- If you need to depart campus early and miss any portion of the course and/or graduation, you must make the request in writing to the NFA training specialist. The training specialist, in collaboration with the superintendent, may waive the attendance requirement in order to accommodate you with extraordinary circumstances as long as you complete all course requirements. If you receive approval for departing early, you must forward the approval to the Admissions Office so your stipend reimbursement is not limited.

Student Substitutions

Substitutions for NFA courses are made from waiting lists; your fire department can't send someone in your place.

Cancellations or No-Shows

NFA's mission for delivery of courses is impaired significantly by cancellations and no-shows. It is very difficult and costly to recruit students at the last minute. Currently there is a two-year ban on student attendance for students who are no-shows or cancel within 30 days of the course start date without a valid reason. If you receive such a restriction, your supervisor needs to send a letter to our Admissions Office explaining the cancellation/no-show.

Course Failure

If you fail an on-campus course, you will not be issued a stipend for that course. You can reapply for the failed course or any other NFA course and go through the random selection process. You don't 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 and may result in removal from campus and denial of stipends.

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 APA, 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 APA, Sixth Edition.

Late Assignments

Students are expected to submit classroom assignments by the posted due date (11:59 p.m. EDT/EST) and to complete the course according to the published class schedule. As adults, students, and working professionals, you must manage competing demands on your time. Discussion board postings submitted within 3 days after the submission deadline will receive up to a 20% deduction. Those that do not submit their discussion board postings within this timeline will receive a “0” grade for the week. Final assignment papers will not be accepted after the deadline. Any paper submitted after the deadline will receive a “0” grade for that assignment.

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 National Fire Academy 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.

If you fail an on-campus course, you will not be issued a stipend for that course. You can reapply for the failed course or any other NFA course and go through the random selection process. You don't have to successfully complete the failed course before attending another NFA course.

http://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 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,
- withholding of stipend or forfeiture of stipend paid,
- exclusion from future classes for a specified period; depending on the severity it could range from 1-10 years, and/or
- 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.

Grading Rubrics

RECORD OF EVALUATIONS AND FINAL COURSE SCORES

FIRE INSPECTION PRINCIPLES 1

Dates of course offering: _____

Scoring: 250 to 225 — A; 224 to 200 — B; 199 to 175 — C

NAME	LETTER	FINAL	PROJECT	SCORE	GRADE
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Instructor Name and Signature: _____

Training Specialist Signature: _____