National Fire Academy

N0390 – 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)

N0390 – "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 and through their State, local, tribal, and US 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	Unit 1: General Fire Safety (cont'd) Unit 2: Life Safety
Break	*Break*
Introduction (cont'd)	Unit 2: Life Safety (cont'd) Activity 2.1: Applications of Occupancy Separations
Break	*Break*
Assign Jeb's Project Letter (due Friday morning) Unit 1: General Fire Safety	Unit 2: Life Safety (cont'd) Activity 2.2: Determining Occupancy Classifications
Lunch	*Lunch*
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)
Break	*Break*
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)
Break	*Break*
Unit 2: Life Safety (cont'd) Activity 2.3: Calculation of Occupant Loads	Unit 3: Fire and Codes: Their Relationship (cont'd)
Break	*Break*
Unit 2: Life Safety (cont'd) Activity 2.4: Calculation of Means of Egress	Unit 3: Fire and Codes: Their Relationship (cont'd)
Lunch	*Lunch*
Unit 2: Life Safety (cont'd)	Unit 3: Fire and Codes: Their Relationship (cont'd) Unit 4: Special Hazards
Break	*Break*
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
Break	*Break*
Unit 4: Special Hazards (cont'd) Activity 4.1: Hazardous Material Code Search	Final Exam
Break	*Break*
Unit 4: Special Hazards (cont'd) Activity 4.1: Hazardous Material Code Search (cont'd)	Life Safety Code Project — Benson Building
Lunch	*Lunch*
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
Break	*Break*
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

EXAMINATION ADMINISTRATION PROCEDURES

Students will be given exams at the end of the class, and only the instructor will grade the exams. While the exams are being graded by the instructor, students will be asked to complete end-of-course evaluations.

Exams are to be completed individually and not as a group or a group activity, unless specifically directed within the instructor guide for the specific course. Students should use pencils to complete answer sheets if bubble sheets and a scoring key overlay are being used.

There should only be one answer for any given question marked by the student. A question with multiple answers is considered incorrect. Please mark number of incorrect answers on completed exam sheets, record score (percentage), and mark the appropriate letter grade.

Transfer the letter grades to the corresponding student name on the course roster.

If a student does not obtain a passing grade on the first attempt, the instructor will provide remediation[1] prior to a retest. Students who do no pass the first exam will be allowed to take one retest of a new exam before departing from the class. A second failure will result in a grade of "F" being recorded on the grade roster.

Once all exams have been graded, instructors should review the exam as a group.

In the event of unusual events (storm, fire response, family emergency) or early departure, the host agency or state representative may be asked to proctor the exam at a later date. The instructor is responsible to notify the Training Specialist as soon as practical of the situation and name of person responsible for the exams and testing process.

Required Reading Assignments

Student completion of reading assignments will be done via evaluation of their class participation and will not be a separately graded activity.

Suggested Readings

Suggested readings are not evaluated, but may enhance the student's understanding and promote discussion of course material.

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.

- 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 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.

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

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

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.

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 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: _____