

COURSE OUTLINE

**Fire Technology 157
Fire Prevention 1B**

I. Catalog Statement

Fire Technology 157 is the second in a three-course series presenting the methods and techniques for fire prevention, use of codes, identification and correction of fire hazards in buildings and facilities containing hazardous materials. This course applies to the California Fire Service Training and Education System Certifications.

Total Lecture Units: 2.0

Total Course Units: 2.0

Total Lecture Hours: 32.0

Total Faculty Contact Hours: 32.0

Prerequisite: Fire Technology 156 or employment in a fire related occupation.

Recommended preparation: Eligibility for English 120 or ESL 151.

II. Course Entry Expectations

Skills Level Ranges: Reading 5; Writing 5; Listening/Speaking 5; Math 3.

Prior to enrolling in this course, the student should be able to:

1. describe the origin and history of fire prevention efforts in the United States;
2. explain the basic fire prevention functions of a fire department;
3. identify the responsibility and authority for fire prevention inspections and related activities;
4. explain and identify principles and procedures used to correct fire hazards;
5. identify occupancies and building preparation and records management in fire prevention efforts;
6. explain basic exiting requirement;
7. identify basic electrical fire hazards;
8. locate operational deficiencies in sprinkler systems and special fixed fire protection systems;
9. explain the plan review function of a fire prevention bureau;
10. identify the relationship between fire safety education and fire prevention.

III. Course Exit Standards

Upon successful completion of the required coursework, the student should be able to:

1. describe sources where technical information regarding hazardous material may be located;
2. identify the methods and criteria used by National Fire Prevention Authority (NFPA) to classify flammable and combustible liquids;
3. describe the physical and chemical properties of flammable and combustible liquids;
4. describe materials which are ready suppliers of oxygen;
5. identify terms, definitions and safe storage of hazardous materials;
6. describe Department of Transportation labels and placarding;
7. describe the properties of compressed, cryogenic, and liquified gases.

IV. Course Content**Total Faculty Contact Hours = 32**

A. Sources of Technical Information on Hazardous Materials	2 hours
B. Basic Classes of Flammable and Combustible Liquids	2 hours
C. Properties of Flammable and Combustible Liquids	2 hours
D. Characteristics of Common Oxidizing Materials and Organic Peroxides	1 hour
E. Characteristics of Common Radioactive Materials	1 hour
F. Characteristics of Common Toxic Materials	1 hour
G. Characteristics of Unstable (Reactive) Materials	1 hour
H. Characteristics of Combustible Metals	1 hour
I. Characteristics of Combustible Dusts	1 hour
J. Characteristics of Corrosives	1 hour
K. Characteristics of Explosives	2 hours
L. Technical Information of Explosives	2 hours
M. Fire Hazards of Plastics	1 hour
N. Department of Transportation Regulatory Labeling and Placarding	1 hour
O. Recommended Practices and Procedures for Outside storage of Flammable and Combustible Liquids	2 hours

P. Recommended Practices and Procedures for Outside Storage of Flammable and Combustible Liquids	1 hour
Q. Acceptable Containers for Flammable and Combustible Liquids	1 hour
R. Transferring Flammable and Combustible Liquids Use, Dispensing and Mixing	2 hours
S. Control of Ignition Sources and Explosive Atmospheres	1 hour
T. Properties of Compressed, Cryogenic, and Liquified Gases	1 hour
U. Fire Hazards of Compressed and Liquified Gases	1 hour
V. Storage and Transfer Practices of Compressed and Liquified Gases	1 hour
W. Regulations for Storage, Handling and Use of Natural and Synthetic Fibers	1 hour
X. Hazards of Explosive and Fireworks and the Need for Security	1 hour
Y. Describe Sources for Technical Information on Explosives and Fireworks	1 hour

V. Methods of Instruction

The following methods of instruction may be used in the course:

1. classroom lecture and demonstration;
2. multimedia lab demonstrations.

VI. Out of Class Assignments

The following out of class assignments may be used in the course:

1. individual projects (i.e. written assignment, reading reports);
2. group projects (i.e. Homework problems, problem solving demonstrations, discussion on textbook topics).

VII. Methods of Evaluation

The following methods of evaluation may be used in the course:

1. daily verbal evaluation of instructor;
2. quizzes;
3. midterm examination;
4. final examination.

VIII. Textbooks

International Fire Service Training Association (IFSTA), Fire Inspection and Code Enforcement, [6th Edition]. Oklahoma State University, 1998.
10th Grade Textbook Reading Level. ISBN: 0879391502

International Fire Code Institute, Uniform Fire Codes (UFC), [1998 Edition].
International Conference of Building Officials, 1998.
10th Grade Textbook Reading Level. ISBN:

IX. Student Learning Outcomes

1. Student will be able to describe the physical and chemical properties of flammable and combustible liquids.
2. Student will be able to identify terms, definitions and safe storage of hazardous materials.
3. Student will be able to describe Department of Transportation labels and placarding.