

PALOMAR COLLEGE
COURSE OUTLINE OF RECORD FOR
DEGREE CREDIT COURSE

Transfer course A.A. degree applicable course
(check all that apply)

COURSE NUMBER AND TITLE: FIRE 118 FIRE PREVENTION TECHNOLOGY

UNIT VALUE: 4

MINIMUM NUMBER OF SEMESTER HOURS: 64

BASIC SKILLS REQUIREMENTS: Appropriate language skills.

ENTRANCE REQUIREMENTS

PREREQUISITE: None

COREQUISITE: None

RECOMMENDED PREPARATION: None

SCOPE OF COURSE:

Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation and fire safety education. Provides skills necessary for California Fire Service Training and Education System, Certified Firefighter I and Fire Inspector I. Meets requirements for CFSTES Fire Prevention IA and IB classes. Contains knowledge required for State Fire Training, Firefighter I Certification. CSU.

SPECIFIC COURSE OBJECTIVES:

The successful student will demonstrate the ability to:

1. Describe the origin and history of fire prevention efforts in the United States
2. List and identify 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 construction types
6. Identify hazards of use, storage and transfer of flammable liquids and gases and other hazardous materials
7. Explain basic exiting requirements
8. Identify basic electrical fire hazards
9. List operational deficiencies in sprinkler systems and special fixed fire protection systems
10. List operational deficiencies of standpipe systems
11. List operational deficiencies of detection and alarm systems
12. Identify principles of placement, operation and inspection of portable fire extinguishers
13. Describe basic principles of fire cause determination as they relate to fire prevention and fire investigation
14. Identify the plan review function of a fire prevention bureau
15. Identify the relationship between fire safety education and fire prevention

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

I. History and Development of Fire Prevention

II. Fire Prevention Organizations

- A. Public
 - 1) Federal
 - 2) State
 - 3) Local
- B. Private
 - 1) Insurance Organizations
 - 2) Testing Laboratories
 - 3) Member Organizations

III. Fire Prevention Through Regulations

- A. Code Administration
 - 1) Responsibilities of Fire Prevention Personnel
 - 2) Understanding Reading and Using the Uniform Fire Code
 - 3) Legally Established Responsibilities and Empowerment
 - 4) IFCI Code Development Process
 - 5) ICBO Code Development Process
- B. Inspection
 - 1) Fire Incident Reporting Awareness
 - 2) Factors Relating to Life Safety
 - 3) General fire Inspection Practices

- 4) Procedure for Correcting Fire Hazards and Modification of Requirements
 - 5) Fire Drills and Emergency Evacuation
 - 6) Handling fire Prevention Complaints
- IV. Fire Prevention through Public Education**
- A. Basic Instruction Techniques for Public Education
 - B. Teaching Children about Fire Safety
 - C. Teaching Adults about Fire Safety
 - D. Teaching the Public about Fire Safety Issues
 - E. Teaching the Public about Fire and Burn Prevention
 - F. Juvenile Firesetter Awareness
- V. General Fire Safety and Electrical Safety**
- A. General Fire Safety
 - B. Basic Electrical Theory
 - C. Electrical Fire Hazards and Safety Devices
 - D. Reference Sources Related to Electrical codes and Safety
- VI. Building Construction for Fire Prevention**
- A. Classification of occupancies
 - B. Building Construction Classifications
 - C. Relationship of Fire Protection to Building Construction and Occupancy
 - D. Types and Classifications of Roof Coverings
 - E. Purpose and Location of Fire Rated Building Construction
 - F. Fire Doors and Windows
 - G. Inspecting Kitchen Cooking Equipment
 - H. Fire Safety Requirements for Decorative Materials and Furnishings
- VII. Exiting and Life Safety**
- A. The Life Safety Issue
 - B. Exit Requirements
 - C. Determination of Adequate Egress
 - D. Maintenance of Exits
 - E. Enclosed Exit Stairwells and Smokeproof Enclosures
- VIII. High Piled Combustible Stock**
- IX. Fire Protection Equipment and Systems**
- A. Portable Fire Extinguishers
 - B. Distribution and Location of Portable Fire Extinguishers
 - C. Inspection of Fire Extinguishers
 - D. Features of Fixed Fire Protection Systems
 - E. Inspection of Fixed Fire Protection Systems
 - F. Inspection of Kitchen Cooking Equipment
 - G. Private Water Supply Systems
 - H. Standpipe and Hose Systems
 - I. Inspection of Standpipe Systems
 - J. Types of Fire Sprinkler Systems
 - K. Principles and Features of Sprinkler Systems
 - L. Inspection of Dry and Wet Pipe Sprinkler Systems
 - M. Conduct Tests on Dry and Wet Pipe Sprinkler Systems
 - N. Capabilities, Limitations and Design of Sprinkler Systems

- O. Local Fire alarm Systems
- P. Classification of Fire Alarm Systems
- Q. Inspection of Fire Alarm Systems
- R. Features of Fire Alarm Systems
- S. Fire Alarm Panels and other Equipment
- X. Properties of Hazardous Materials**
 - A. Sources of Technical Information on Hazardous Materials
 - B. Basic Classes of Flammable and Combustible Liquids
 - C. Properties of Flammable and Combustible Liquids
 - D. Characteristics of Common Oxidizing Materials and organic Peroxides
 - E. Characteristics of Common Radioactive Materials
 - F. Characteristics of Common Toxic Materials
 - G. Characteristics of Unstable (Reactive) Materials
 - H. Characteristics of Combustible Metals
 - I. Characteristics of Combustible Dusts
 - J. Characteristics of Corrosives
 - K. Classification of Explosives
 - L. Technical Information on Explosives
 - M. Fire Hazards of Plastics
 - N. D.O.T. Regulatory Labeling and Placarding
- XI. Storage and Use of Hazardous Materials**
 - A. Recommended Practices and Procedures for Inside Storage of Flammable and Combustible Materials
 - B. Recommended Practices and Procedures for Outside Storage of Flammable and Combustible Liquids
 - C. Acceptable Containers for Flammable and Combustible Liquids
 - D. Transferring Flammable and Combustible Liquids, Use, Dispensing and Mixing
 - E. Control of Ignition Sources and Explosive Atmospheres
 - F. Properties of Compressed, Cryogenic and Liquefied Gases
 - G. Fire Hazards of Compressed and Liquefied Gases
 - H. Storage and Transfer Practices of Compressed and Liquefied Gases
 - I. Regulations for Storage, Handling, and Use of Natural and synthetic Fibers
 - J. Describe Hazards of Explosives/Fireworks and the Need for Security
 - K. Describe Sources of Technical Information on Explosives and Fireworks
- XII. Fire Investigation**
 - A. Determine Cause and Origin
 - B. Accidental Fires
 - C. Arson Fires
- XIII. Plan Review**
 - A. Buildings
 - B. Fire Protection Systems
 - C. Water Supplies
 - D. Underground Flammable Liquid Tanks
 - E. Life Safety Systems
 - F. Residential Subdivisions

XIV. Records and Reports

- A. Property Loss, Death and Injury Reports
- B. Record Keeping for Inspection Reports
- C. Fire Investigation Reports
- D. Computerized Record Keeping
- E. Fire Prevention Bureau Effectiveness Reports

REQUIRED READING:

1. Diamantes, David. FIRE PREVENTION, INSPECTION AND CODE ENFORCEMENT. New York: Delmar Publishers, 1997.
2. California State Fire Marshal. Fire Prevention 1A, Student Manual. Sacramento: CFSTES, 1983.
3. International Fire Service Training Association. Fire Inspection and Code Enforcement. 5th Edition. Stillwater, Oklahoma: Fire Protection Publications, 1982.

SUGGESTED READING:

1. Kote, Arthur, Ed. Fire Protection Handbook. 17th edition. Quincy, Massachusetts: National Fire Protection Association, 1986.
2. Robertson, James C. Introduction to Fire Prevention. New York: MacMillan Publishing Co. 1986.

REQUIRED WRITING:

A 4-6 page paper will be assigned. The student will research fire prevention topical information and how that topic relates to fire safety. Critical thinking and possible solutions to fire prevention problems will be required for a representative work.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short term classes.

4-6 hours per week will be required for text, suggested reading assignments, and writing assignments.

INSTRUCTIONAL METHODOLOGY:

Check all that apply:

- lecture
- laboratory
- lecture-laboratory combination
- directed study

This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.

Yes No

If yes, check all that apply. (See guidelines for preparation for definitions.)

telecourse
 mediated instruction
 computer assisted instruction

GRADING POLICY AND STANDARDS (include methods of determining whether the stated objectives have been met by students):

| | |
|-----|------------|
| 10% | Term Paper |
| 20% | Quizzes |
| 30% | Mid Term |
| 40% | Final Exam |

Note: A minimum of 70% is required for State Board of Fire Service Certification.

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?

Yes No Number of times course may be taken for credit:

If yes, identify specific provision of Title 5 Division 2 section(s) 55761-55763 and 58161 which qualifies course as repeatable:

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