

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

X Transfer Course X A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** Fire 181 Fire Prevention 1B

**UNIT VALUE:** 2

**MINIMUM NUMBER OF SEMESTER HOURS:** 40

**BASIC SKILLS REQUIREMENTS:**

Appropriate language and computation skills.

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** None

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**

Includes the relationship of life safety codes and requirements to building construction principles and building occupancy classifications. The engineering solutions to various hazards, enforcing the solution, and public relations as affected by fire prevention in handling complaints. CSU.

**SPECIFIC COURSE OBJECTIVES:**

The student will be able to:

1. Demonstrate through successful completion of the State final exam, a knowledge of the course subject matter.
2. Identify various requirements related to building exits, including flame spread, ratings of finish and decorative materials in exit ways; number, width, and arrangement of exits; door sizes and proper hardware; and, travel distances and exits.
3. Evaluate the principles of built-in fire suppression systems, including fire sprinklers, standpipe systems, and pre-engineered fire suppression systems for protection of special hazards.
4. Calculate the occupancy load of rooms or buildings.
5. Evaluate the operational readiness of private and municipal fire alarm systems, and apply the principles of heat and smoke actuated detectors.

## **CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. Building Construction Features and Its Relationship to Fire Safety
  - A. Factors Dealing with Life Safety in Buildings
  - B. Occupancy Classifications from the Uniform Building Code and the California Administrative Code, Title 24
  - C. Five Types of Construction and How they Related to Allowable Building Size, Height, and Occupancy
  - D. Types of Fire-Related Construction
  
- II. General Fire Safety Practices
  - A. California Fire Incident Reporting System (CFIRS)
  - B. Smoking- Hazards and Prevention Practices
  - C. Outdoor Housekeeping
  - D. Indoor Storage
  
- III. Flame Spread of Finish and Decorative Materials
  - A. Methods of Determining Flame Spread Ratings
  - B. Materials Covered by Requirements for Flame Spread Ratings
  - C. Flame Spread Classifications
  
- IV. Exiting and Egress Requirements
  - A. Special Terms
  - B. National Fire Protection Association (NFPA) Description of an Exit
  - C. Components of Exit Systems
  - D. Number, Size and Arrangement of Exits
  - E. Calculating the Occupancy Load of Rooms or Buildings
  - F. Maximum Travel Distance to Exits
  
- V. Built-In Fire Suppression Systems
  - A. Four types of Sprinkler Systems
  - B. Common Components of Sprinkler Systems
  - C. Capabilities and Limitations of Sprinkler Systems
  - D. Methods of Inspecting Sprinkler Systems
  - E. Need for and Features of a Private Water Supply System
  - F. Classification of Standpipe Systems
  - G. Requirements for and Location of Standpipe Outlets
  - H. State-Mandated Maintenance and Service Requirements
  - I. Pre-engineered Systems
  
- VI. Basic Electrical Information
  - A. Electrical Theory Explained
  - B. Electrical Fire Hazards
  - C. Reference Sources for Electricity Information
  
- VII. Fire Alarm Systems
  - A. Classification of Systems
  - B. Inspecting Fire Alarm Systems
  - C. Types of Detectors and How They Work
  - D. Maintenance, Service Requirements

- VIII. Miscellaneous Fire Prevention Issues
- A. Restaurant Kitchen Cooking Equipment
  - B. State and Platforms
  - C. Motion Picture Projection Rooms
  - D. Fire Drills and Emergency Evacuations
  - E. Report Preparation and Filing Techniques
  - F. Processing Plans and Specifications
  - G. Handling Citizen Complaints

**REQUIRED READING:**

California State Fire Marshal. Fire Prevention 1B Student Manual. Sacramento, CA: CFSTES, 1985.

**SUGGESTED READING:**

American Insurance Association. AIA Fire Prevention Code. San Francisco, CA: AIA, 1990.

National Fire Protection Association. National Fire Codes. Quincy, MA:

National Fire Protection Association, 1994.

State of California. Title 19, California Administrative Code. Sacramento, CA: State Printing Office, 1990.

**REQUIRED WRITING:**

A 4-6 page paper will be assigned on an individual basis. The student will research the features of building construction and how it relates to fire safety. Critical thinking of and possible solutions to fire prevention problems will be required.

**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.**

Students will be required to read required and recommended texts and prepare for examination.

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

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

**DISTANCE LEARNING:**

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

Yes  No

**If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

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

30% Quizzes  
20% Term Paper  
50% Final Exam

Note: A minimum of 70% is required for certification by the State Board of Fire Service.

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

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

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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**SIGNATURES ON FILE**