

COURSE OUTLINE

**Fire Technology 112  
Wildland Fire Control**

**I. Catalog Statement**

Fire Technology 112 is designed to provide the employed firefighter or fire science major with a fundamental knowledge of the factors affecting wildland fire prevention, fire behavior, and control techniques.

Total Lecture Units: 3.0

**Total Course Units: 3.0**

Total Lecture Hours: 48.0

**Total Faculty Contact Hours: 48.0**

Prerequisite: Fire Technology 101 or equivalent.

**II. Course Entry Expectations**

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

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

1. describe and discuss the components of the history and philosophy of the modern day fire service;
2. analyze the basic components of fire as a chemical reaction, the major phases of fire, and examine the main factors that influence fire spread and behavior;
3. differentiate between fire service training and education; fire protection certificate program and a fire service degree program; and explain the value of education in the fire service;
4. list and describe the major organizations that provide emergency response service and illustrate how they interrelate;
5. identify fire protection and emergency-service careers in both the public and in the private sector;
6. synthesize the role of national, state and local support organizations in fire protection and emergency services;
7. discuss and describe the scope, purpose, and organizational structure of fire and emergency services;
8. describe the common types of fire and emergency services facilities, equipment, and apparatus;
9. compare and contrast effective management concepts for various emergency situations;

10. identify and explain the components of fire prevention including code enforcement, public information, and public and private fire protection systems.

### **III. Course Exit Standards**

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

1. develop awareness of fire protection organizations in California;
2. recognize the functions of the protection organization;
3. identify suppression organizations available for ground and air suppression;
4. identify extinguishing agents applicable to fire type;
5. plan tactical responses.

### **IV. Course Content**

**Total Faculty Contact Hours = 48**

A. Fire Protection Organization in California	6 hours
1. Wildland values and functions	
2. Organization for wildland protection	
3. Fire terminology	
4. Fire history	
5. The fire problem in California	
B. Functions of the Protection Organization	6 hours
1. The fire prevention problem	
2. The fire prevention plan	
3. Pre-suppression planning	
C. Suppression Organization	6 hours
1. Detection	
2. Equipment	
a. Ground	
b. Air	
c. Hand and power tools	
d. Heavy equipment	
e. Communications	
f. Records	
g. Back firing equipment	
3. Manpower	
D. Fire Behavior	6 hours
1. Chemistry	
2. Fuel	
3. Weather	
4. Topography	

- E. Extinguishing Agents 6 hours
  - 1. Water
  - 2. Chemicals
  - 3. Dirt
  
- F. Tactics 6 hours
  - 1. Response
  - 2. Size-up
  - 3. Rescue
  - 4. Exposure
  - 5. Attack methods
  - 6. Effects of structures endangered
  - 7. Confine
  - 8. Extinguishment
  - 9. Mop-up (overall)
  - 10. Patrol
  
- G. Fire Organization 6 hours
  - 1. Planning
  - 2. Fire line
  - 3. Support
  
- H. Fire Survival 6 hours
  - 1. Line
  - 2. Personal
  - 3. Clothing and equipment

**V. Methods of Instruction**

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

- 1. lecture;
- 2. demonstration;
- 3. films;
- 4. simulated problem solving.

**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. quizzes;
2. midterm examination;
3. final examination.

### **VIII. Textbooks**

Clar, Raymond C., Chatten, Leonard, R., *Principles of Forest Fire Management* [Revised Edition]. Sacramento, CA: State of California, 1975  
10<sup>th</sup> Grade Textbook Reading Level.

### **IX. Student Learning Outcomes**

1. Student will be able to develop awareness of fire protection organizations in California.
2. Student will be able to recognize the functions of the protection organization.
3. Student will be able to identify suppression organizations available for ground and air suppression.
4. Student will be able to identify extinguishing agents applicable to fire type.
5. Student will be able to plan tactical responses.