

Las Positas College
3000 Campus Hill Drive
Livermore, CA 94551-7650
(925) 424-1000
(925) 443-0742 (Fax)

Course Outline for FST 1

FIRE PROTECTION ORGANIZATION

Effective: Fall 2019

I. CATALOG DESCRIPTION:

FST 1 — FIRE PROTECTION ORGANIZATION — 3.00 units

This course provides an overview to fire protection and emergency services, career opportunities in fire protection and related fields, culture and history of emergency services, fire loss analysis, organization and function of public and private fire protection services, fire departments as part of local government, laws and regulations affecting the fire service; fire service nomenclature, specific fire protection functions, basic fire chemistry and physics, introduction to fire protection systems, introduction to fire strategy and tactics, and life safety initiatives.

3.00 Units Lecture

Grading Methods:

Letter Grade

Discipline:

- Fire Technology

	<u>MIN</u>
Lecture Hours:	54.00
No Unit Value Lab	18.00
Total Hours:	72.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

- Describe the components and development of the fire and emergency services.
- Recognize and illustrate the history of the fire service.
- Recognize careers in fire and emergency services.
- Illustrate and explain the history and culture of the fire service.
- Analyze the basic components of fire as a chemical chain reaction, the major phases of fire, and examine the main factors that influence fire spread and fire behavior.
- Differentiate between fire service training and education and explain the value of higher education to the professionalization of the fire service.
- List and describe the major organizations that provide emergency response service and illustrate how they relate.
- Identify fire protection and emergency-service careers in both public and private sector.
 - Define the role of national, state and local support organizations in fire service and emergency services.
- Discuss and describe the scope, purpose, and organizational structure of fire and emergency services.
- Describe the common types of fire and emergency service facilities, equipment and apparatus.
- Compare and contrast effective management concepts for various emergency situations.
- Identify the primary responsibilities of fire prevention personnel including, code enforcement, public information, public and private protection systems.
- Recognize the components of career preparation and goal setting.
- Describe the importance of wellness and fitness as it relates to emergency services.
- Identify different programs to ensure equitable access and opportunities in fire and emergency services
- Describe equitable work environments and what constitutes discrimination and a hostile work environment.

V. CONTENT:

- Careers in Fire Protection/Emergency Services
 - Scope and content of fire technology curriculum
 - Career potential assessment
 - Work ethics and human relations
 - Available training programs
 - Personnel development programs
 - Public Fire Protection Careers
 - Private Fire Protection Careers
 - Maintaining a Fitness Profile for the Fire Service
 - CPAT vs Biddle Test and Traditional Physical Agilities
- History of Fire Protection

1. Fire Loses
2. Purpose and scope of fire service agencies
3. Fire Defense Planning
- C. Scientific Terminology and Fire Chemistry
 1. Introduction to the characteristics and behavior of fire
 - a. Theories of fire
 2. Fire triangle
 3. Fire tetrahedron
 - a. Physics of fire
 - b. Types of fuel
 - c. Flame spread characteristic
 4. Heat and temperature
 - a. BTU's
 5. Heat transfer
 6. Classification of fires
 7. Phases of fire
 8. Extinguishing agents and methods of application.
- D. Building Design and Construction
 1. Five types and names of construction
 2. Occupancy types
- E. Fire Detection and Suppression Systems
 1. Most common types
 - a. Portable Fire Extinguishers
 - b. Sprinklers
 - c. Standpipes
 - d. Smoke Detectors vs. thermal detectors
 - e. Manual Pull Stations
- F. The Role of Public and Private Support Organizations
 1. Types of organizations
 - a. Advisory and regulatory agencies
 - b. Private vs Public fire suppression organizations
 - c. Proprietary services
 - d. Volunteer
- G. Fire and Emergency Services Equipment and Facilities
 1. Types of apparatus and their function
 2. Equipment and tools carried on apparatus
 3. Types of Agency support facilities
 - a. Administration
 - b. Training
 - c. Prevention
 - d. Supplies and Facilities
 - e. Communications/Dispatch
 4. Personal safety equipment
 - a. SCBA
 - b. PPE Ensembles
- H. Management in the Fire Service
 1. ICS
 2. NIMS
 3. SEMS
 4. Theories X,Y and Z
 5. MBO - Management by Objectives
 6. Relationship of strategy to tactics
- I. Emergency operations
 1. Fire Alarm Activation
 - a. How alarms are received
 1. 9-1-1
 2. Standard operating procedures
- J. Fire prevention and public fire education
 1. Personnel/positions
 - a. Responsibilities of the fire prevention bureau
 - b. Company inspection programs
 - c. Fire information reporting systems
 - d. Arson
 - e. Relationship of codes and standards
 - f. Relationship of federal, state, and local regulations
- K. Training
 1. Personnel and positions
 - a. Skill development/maintenance
 - b. Performance standards
- L. Fire administration
 1. Personnel and positions
 - a. Functions
 - b. Rules and regulations
 - c. Unity of command
 - d. Chain of command
 - e. Span of control
 - f. Division of labor
 - g. Delegation of authority
 - h. Emergency incident management
- M. Cultural diversity and pertinent laws
 1. Cultures within the fire service and general population
 2. Individual life experiences and their impact on attitudes and behaviors
 3. Define diversity
 - a. Age
 - b. Race/color
 - c. Gender
 - d. Ethnic
 - e. Religious
 - f. Sexual Orientation
 - g. Physically disadvantaged

- h. Gender dysphoria
- 4. Equality in the workplace
- 5. Affirmative action
- 6. Discrimination and harassment laws and regulations
- 7. Hostile work environment and violence in the workplace
- 8. ADA – Americans with Disabilities Act
- 9. Teamwork – Methods to overcome hostile work environment
- 10. Verbal and non-verbal communications

VI. METHODS OF INSTRUCTION:

- A. Audio-visual presentations
- B. Role playing
- C. Group activities
- D. Problem-solving exercises
- E. **Discussion** -
- F. Diagnostic
- G. Student Workbook
- H. **Field Trips** - Fire Department Visitations
- I. **Lecture** -
- J. Reading assignments

VII. TYPICAL ASSIGNMENTS:

- A. Weekly reading assignments
 - 1. Read the chapters assigned from primary text "Introduction to Fire Protection and Emergency Services"
- B. Individual "Department Overview Project"
 - 1. Develop an agency profile based on an assigned "Agency Visitation"
- C. Problem solving exercise of fire protection
 - 1. Countertop fire-ground exercise. Basic tactics and strategies employed.
- D. Submit a completed application and resume to simulate hiring processes.
- E. Public speaking exercise with mock oral for employment.
 - 1. Prepare for a mock oral with professional panel - evaluators

VIII. EVALUATION:

Methods/Frequency

- A. Exams/Tests
 - one midterm and final exam
- B. Quizzes
 - bi-weekly
- C. Research Projects
 - one
- D. Field Trips
 - six
- E. Class Participation
 - daily
- F. Home Work
 - one resume/portfolio and application
- G. Other
 - 1. Completion of Student Workbook
 - a. One Workbook: Diversity-The Impact of Perceptions
 - 2. Completion of ICS 100 from National Fire Academy Online Services
 - 3. Completion of NIMS 700 and NIMS 800 from NIMS Online Services

IX. TYPICAL TEXTS:

- 1. Klinoff, Robert. *Introduction to Fire Protection and Emergency Services*. 5th ed., Jones and Bartlett, 2015.
- 2. IFSTA. *Essentials of Fire Fighting*. 6th ed., IFSTA, 2013.
- 3. IAFC. *Fundamentals of Fire Fighter Skills*. 3rd ed., Jones and Bartlett, 2014.
- 4. NWCG. *Incident Response Pocket Guide, NFES 001077*. Current ed., NWCG, 2014.
- 5. Teie, William. *Firefighters Handbook on Wildland Firefighting*. 3rd ed., Deer Valley Press, 2017.
- 6. FEMA. *IS-700 National Incident Management System, An Introduction (Student Manual)*. 1st ed., FEMA, 2008.
- 7. FEMA. *IS-100.HE Introduction to the Incident Command System, ICS-100 for Higher Education-Student Manual*. 1st ed., FEMA, 2008.
- 8. IFSTA. *Hazardous Materials for First Responders*. 5th ed., IFSTA, 2017.
- 9. Diversity the Impact of Perceptions-Student Workbook, CPF and CSFM

X. OTHER MATERIALS REQUIRED OF STUDENTS:

- A. Uniform
- B. Three-ring binder