COURSE OUTLINE

Fire Technology 101 Principles of Fire Emergency Services

I. <u>Catalog Statement</u>

Fire Technology 101 provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; 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.

Units -3.0Lecture Hours -3.0

Recommended Preparation: Eligibility for English 101.

II. Course Entry Expectations

Skills Expectations: Reading 5; Writing 5; Listening/Speaking 5; Math 3

III. Course Exit Expectations

Upon successful completion of the required coursework, the student will 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.

IV. <u>Course Outline</u>

Total Contact Hours = 48

A. Careers in the Fire Protection/Emergency Services	8 hours
1. Opportunities/private, industrial, local, municipal, sate and federal	I
2. Pay, hours of duty, benefits, promotion, retirement qualifications	
3. Work ethics and human relations education training	
i. Certificates	
ii. Degrees	
4. Selection process	
B. History	8 hours
1. The evolution of fire protection	
2. The U.S. fire problem; life and property	
C. Fire Prevention and Public Fire Education	4 hours
1. Fire investigation	
2. Code enforcement	
3. Public education	
D. Scientific Technology	4 hours
1. Fire behavior	
2. Flammability characteristics of solids, liquids and gases	
E. Building Design and Construction	4 hours
1. Residential Construction	
2. Commercial Construction	
F. Fire Detection and Suppression Systems	4 hours
1. Device types	
2. Techniques	
G. The Role of Public and Private Support Organizations	4 hours
1. Local	
2. State	
3. Federal	
4. International	
H. Fire and Emergency Services Equipment and Facilities	8 hours
1. Types of equipment	
2. Types of facilities	
I. Management	4 hours
1. Emergency operations	
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2. Organizational structure of fire and emergency services

V. Methods of Presentation

The following instructional methodologies may be used in the course:

- 1. lecture;
- 2. multimedia;
- 3. guest speakers;
- 4. field trips.

VI. <u>Assignments and Methods of Evaluation</u>

- 1. Midterm examination.
- 2. Individual projects. (i.e. written assignment, reading reports.)
- 3. Group projects. (i.e. Homework problems, problem solving demonstrations, discussion on textbook topics.)
- 4. Final examination.

VII. Textbook

Klinoff, R., Introduction to Fire Protection, Current edition.

New York: Delmar Cengage Learning, 2007.

10th Grade Textbook Reading Level. ISBN: 1418001775.

VIII. Student Learning Outcomes

- 1. Students will be able to describe and discuss the components of the history, philosophy, and components of the modern day fire service.
- 2. Students will be able to analyze and describe the science of fire behavior.
- 3. Students will be able to compare and contrast effective management concepts for various emergency situations.