

## APPENDIX A

### **Program Learning Goals and Outcomes:**

(Goals 1-5; Learning Outcomes a, b, c etc.)

1. Student will identify minimum qualifications and entry-level skills for fire fighter hiring.
  - a) Describe the history, functions, culture and development of local, state and federal public safety and emergency services organizations.
  - b) Identify minimum standards for fire service positions and hiring practices in public and private organizations.
  - c) Define terms, equipment, facilities, and emergency management systems associated with fire service and public safety organization.
  
2. Student will demonstrate the ability to identify health and safety violations in the station, on the apparatus, and fire ground.
  - a) Student will explain the history of the 16 life safety initiatives.
  - b) Student will explain the importance of reporting and investigating all near-misses, injuries and fatalities.
  - c) Student will define the term risk management and concepts of health, wellness, and the prevention of illness, injuries and accidents.
  
3. Student will demonstrate the ability to analyze, appraise and evaluate fire and emergency incidents.
  - a) Explain the national emergency services worker fatality problem and the history of the 16 life safety initiatives.
  - b) Explain the importance of reporting and investigating all near-misses, injuries and fatalities and how to incorporate the lessons learned to affect cultural change throughout emergency services.
  - c) Define "all risk" risk management and concepts of health, wellness, and the prevention of illness, injuries and accidents.
  
4. The student will be able to identify and comprehend laws, regulations, codes and standards that influence fire department operations.
  - a) Define the national fire problem and functions of fire prevention organizations and associations.
  - b) Identify the model codes, standards, and regulations related to fire prevention.
  - c) Identify the minimum professional qualifications at the local, state and national level for fire prevention employment opportunities.
  - d) Describe inspection practices, procedures and methods of fire and life safety education.

5. The student will be able to analyze the causes of fire, determine extinguishing agents and methods, differentiate the stages of the fire and fire development, and compare methods of heat transfer.

- a) Identify theories of fire behavior and combustion.
- b) Define classifications of fire and associated methods of extinguishment.
- c) Describe materials as they relate to fire fuels and the combustion process.
- d) Define the terms and concepts associated with the chemistry and dynamics of fire.

6. The student will identify and describe common types of building construction and conditions associated with structural collapse and firefighter safety.

- a) Describe building construction as it relates to firefighter safety, building codes and inspections, fire prevention, and firefighting strategies.
- b) Analyze the hazards and tactical considerations associated with various building types and occupancies.
- c) Identify building design, materials, and systems and their relationship to fire behavior and potential structural failure.

7. The student will differentiate between fire detection and fire suppression systems. Student will design and diagram a wet and dry fire protection system, and identify alarm system components and their operations.

- a) Describe the design, use and maintenance of fire protection systems and the codes and standards that regulate them.
- b) Explain the application and operation and water-based, non-water based and portable fire suppression systems.
- c) Identify fire detection, alarm, smoke management and monitoring systems, including their testing, maintenance, and operational requirements.