

# Fire Services Administration

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Course Learning Outcomes are measurable statements that are used to identify the specific knowledge and skills that a student should have at the end of a course.

## FSA 1101

- L1- Identify various classifications of building construction.
- L2- Understand theoretical concepts of how fire impacts major types of building construction.

## FSA 1102

- L1- Students will identify the fundamental theories of fire behavior and combustion.
- L2- Students will Differentiate the various types of extinguishing agents.

## FSA 1103

- L1- Students will Identify laws, codes, ordinances, and regulations as they relate to fire prevention.
- L2- Students will understand code enforcement as it impacts life and property loss.

## FSA 1105

- L1- Students will identify and describe various types and uses of fire protection systems.
- L2- Students will describe the basic elements of a public water supply system as it relates to fire protection.

## FSA 1106

- L1- Students will understand the history of the fire service.
- L2- Students will describe the components and development of the fire and emergency services.
- L3- Students will recognize careers in fire and emergency services.

## FSA 1107

- L1- Students will identify and explain the 16 life safety initiatives.
- L2- Students will understand the concepts of risk management and mitigation as it pertains to emergency services.

## FSA 1125

- L1- Students will develop through self-assessment questionnaires an awareness of their own leadership philosophy, traits, skills, and behaviors.
- L2- Students will describe through real-world observation exercises an understanding of the fundamental ways leadership is practiced in on-going organizations.
- L3- Students will demonstrate through reflection and action activities an understanding and appreciation for the unique dimensions of their own leadership style, their strengths and weaknesses, and ways to improve what they do as leaders.

## FSA 2202

- L1- Students will gain the ability to analyze Federal, State, and local laws and consensus standards as they pertain to the fire service.

## FSA 3301

- L1- Identify the roles of GIS as it relates to building construction.
- L2- Describe the functions of a Fire Prevention Bureau.
- L3- Describe inspection practices and procedures.
- L4- Identify and describe the standards for professional qualifications for Fire Marshal, Plans Examiner, Fire Inspector, Fire and Life Safety Educator, and Fire Investigator.
- L5- List opportunities in professional development for fire prevention personnel.
- L6- Define the benefits of residential sprinkler legislation.

L7- Analyze the basic components of fire as a chemical chain reaction, the major phases of fire, and explain the main factors that influence fire spread and fire behavior.

- L8- Differentiate between fire service training and education and explain the value of higher education to the professionalization of the fire service.
- L9- Recognize the components of career preparation and goal setting.
- L10- Describe and evaluate circumstances that might constitute an unsafe act.
- L11- Explain the concept of empowering all emergency service personnel to stop unsafe acts.
- L12- Validate the need for national training standards as they correlate to professional development inclusive of qualifications, certifications, and recertification.
- L13- Explain the need for annual medical evaluations and the establishment of physical fitness criteria for emergency service personnel throughout their careers.

L14- Explain the vital role of local departments in national research and data collection systems.

- L15- Illustrate how technical advancements can produce higher levels of emergency services safety and survival.
- L16- Describe how obtaining grants can support safety and survival initiatives.
- L17- Explain how the increase in violent incidents has impacted safety for emergency service personnel when responding to an emergency scene.
- L18- Describe the importance of public education as a critical component of life safety programs.
- L19- Define and describe the need for cultural and behavior change within the emergency services relating to safety, incorporating leadership, supervision, accountability and personal responsibility.
- L20- Describe the importance of fire sprinklers and code enforcement.
- L21- Identify career development opportunities and strategies for success.
- L22- Identify key case law decisions that have affected fire investigation.
- L23- Discuss the basic principles of electricity as an ignition source.
- L24- Analyze electrical causes of fire.
- L25- Describe fire scene investigations and the process of conducting investigations using scientific methods.
- L26- Describe and explain the basic procedures used for investigating vehicle fires.
- L27- List the sources and technology available for fire investigations.
- L28- Describe procedures for conducting background investigations.
- L29- Describe the chemistry of combustion.
- L30- Identify the common elements on the periodic table.
- L31- Distinguish between elements, compounds, and mixtures.
- L32- Explain the difference between ionic and covalent bonding.
- L33- Define the basic chemistry involved in common hydrocarbon derivatives.
- L34- Describe the basic chemical and physical properties of gases, liquids, and solids, and predict the behavior of a substance under adverse conditions.
- L35- Recognize the legal duties of emergency service members.

## FSA 3323

- L1 Define and discuss the elements of effective departmental organization.
- L2- Classify what training and skills are needed to establish departmental organization.
- L3- Analyze the value of a community-related approach to risk reduction .
- L4- Outline the priorities of a budget planning document while anticipating the diverse needs of a community.
- L5- Assess the importance of positively influencing community leaders by demonstrating effective leadership.
- L6- Analyze the concept of change and the need to be aware of future trends in fire management.

L7- Report on the importance of communications technology, fire service networks, and the Internet when conducting problem-solving analysis and managing trends.

L8- Develop a clear understanding of the national assessment models and their respective approaches to certification.

FSA 3325

L1- Identify and explain contemporary personnel management issues.

L2- Explain potential personnel management issues.

L3- Classify the collective rules, procedures, laws, policies that relate to personnel management issues.

L4- Analyze simple/complex personnel management issues from recruitment to retirement.

L5- Formulate recommendations and solutions to personnel management issues.

L6- Explore organizational development and leadership styles and how they relate to personnel relationships.

FSA 3326

L1- Describe aspects of risk reduction education and overall community risk reduction.

L2- Explain the fundamental aspects of codes and standards, and the inspection and plan review process.

L3- Describe the fire investigation process and discuss fire prevention research.

L4- Discuss historical and social influences and describe the master planning process.

L5- Describe economic and governmental influences on fire prevention.

L6- Explain the effects of departmental influences on fire prevention programs and activities.

L7- Discuss strategies for fire prevention

FSA 3327

L1- Apply knowledge to create a system that integrates human behavior factors into life safety planning and practice.

L2- Understand how psychology and sociology factors influence behavior.

L3- Demonstrate how current computer systems modeling function.

L4- Locate and analyze current human related fire research.

FSA 3328

L1- Discuss the importance of disaster planning, preparation, and mitigation.

L2- Assess hazard response and planning procedures.

L3- Define the impact of hazard occurrence or community response.

L4- Evaluate the hazard assessment process.

FSA 3329

L1- Identify potential legal and political issues in fire and emergency services.

L2- Describe legal lessons learned from recent cases, and identify best practices in the fire service to avoid legal liability.

L3- Analyze and apply legal rules and political issues to manage risk.

L4- Formulate political and legal conclusions and recommendations based on the analysis.

L5- Locate and apply recent legal and legislative online resources.

FSA 3331

L1- Become champions of risk reduction.

L2- Develop and meet risk reduction objectives.

L3- Identify and develop intervention strategies.

L4- Implement a risk reduction program.

L5- Review and modify risk reduction programs.

FSA 3332

L1- Demonstrate a technical understanding of the characteristics and impacts of fire loss and the crime of arson, which is necessary to conduct competent fire investigation and analysis.

L2- Design and integrate a variety of arson-related intervention and mitigation strategies .

L3- Analyze the legal foundation for conducting a systematic incendiary fire investigation and case preparation.

L4- Analyze the fire scenario utilizing the scientific method, fire science and relevant technology.

L5- Document the fire scene in accordance with best practice and legal requirements.

FSA 3333

L1- Locate, evaluate, and analyze fire-related research.

L2- Demonstrate the application of fire research to a research problem related to one of the course topics.

L3- Conduct a literature review of current research on a fire-related topic.

L4- Write a fire-related research proposal.

L5- Design a research plan using one or more qualitative and/or quantitative methodologies.

FSA 3334

L1- Analyze building structural components for fire endurance and fire resistance.

L2- Understand the flame spread and smoke production properties of building furnishings and materials.

FSA 3335

L1- Planning and response.

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L2- Normal and non-normal operations.

L3- Identify an operational issue with the delivery of EMS that would benefit from research.

L4- Describe Unit Hour Utilization and Break-Even financial analysis techniques.

L5- Workforce is properly prepared to function during periods of non-normal operations.

L6- Identify factors that lead to caregiver fatigue and substandard performance.

L7- Illustrate the use of research methodology to solve an EMS administrative issue.

L8- Given an EMS deployment problem and description of resources, show organizational options to resolve deployment problem.

FSA 4401

L1- Develop a value statement for your department.

L2- Devise and implement an ethics training program for your department.

L3- Review and revise minority recruitment strategies