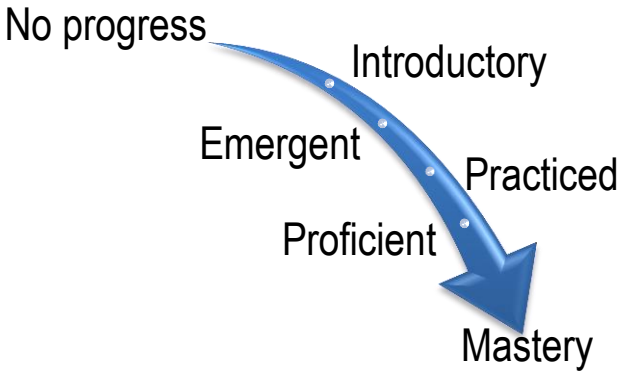
Bachelor of Science in Fire Science



At Kaplan University , we employ a method called **Course-Level Assessment**, or CLA, to determine student mastery of Course Outcomes. Through CLA, we measure how well students gain the skills, knowledge, abilities, and behaviors that employers expect of program graduates. A series of courses prepares students for employment by providing preparation, practice, and opportunities to show mastery of these program outcomes. Each course is developed around a number of learning goals, known as course outcomes, that support a student's growing mastery of program level outcomes. Faculty members assess each student's mastery of each course outcome through Course Level Assessments.

Program Measure for *Standard of Success*:

- 75% or more of students attempting the outcome will perform at the **Emergent** level or greater in **100/200** level courses
- 75% or more of students attempting the outcome will perform at the **Practiced** level or greater in **300/400** level courses.

Program Outcome	Course#/Measurement		Assessment/ Evaluation Results: % at or greater than Standard	Meets Criteria Yes/No
BSFS-1: Fire Foundations: Demonstrate an understanding of building construction as it relates to fire fighter safety, building codes, fire prevention, code inspection and firefighting strategy and tactics.	FS101	Explain heat flux as well as its implications in the danger of fire heat transfer.	FS101-2 = 95.45%	Yes
		Identify types of fire spread.	FS101-3 = 100%	Yes
		Interpret and explain factors that have an effect on the energy release rate.	FS101-4 = 94.11%	Yes
		Describe the role fire gases play in the development and spread of fire.	FS101-5 = 95.54%	Yes
	FS102	Illustrate how forces and loads act upon buildings.	FS102-2 = 85.71%	Yes
		Identify types of building designs and structures.	FS102-3 = 100%	Yes
		Define the basic codes and regulations related to building construction projects.	FS102-4 = 100%	Yes
		Examine the various types of construction materials in order to describe the dangers posed to firefighters.	FS102-5 = 100%	Yes
	FS103	Illustrate common problems firefighters face in relation to hydraulics & water supply.	FS103-1 = 100%	Yes
		Describe the principles of various water systems.	FS103-2 = 100%	Yes
		Contrast water system adequacy with reliability.	FS103-3 = 100%	Yes
		Identify community fire flow demands and water supplies.	FS103-4 = 100%	Yes
		Apply methods of pumping operations given the current incident or situation.	FS103-5 = 100%	Yes
		Discuss fire stream tactics and principles.	FS103-6 = 100%	Yes

Program Outcome	Course#	Measurement	Assessment/ Evaluation Results: % at or greater than Standard	Meets Criteria Yes/No
	FS104	Interpret fire suppression and detection systems as presented in building construction plans.	FS104-1 = 100%	Yes
	FS105	Describe development of fire safety codes, inspection procedures, and enforcement.	FS105-3 = 100%	Yes
	FS202	Explain how fire protection services are organized.	FS202-2 = 94.73%	Yes
	FS204	Identify the components of response safety plans, pre-incident planning procedures, and training safety policies.	FS204-5 = 100%	Yes
	FS302	Evaluate safety-related behaviors, which incorporate leadership, supervision, accountability, and personal responsibility.	FS302-1 = 96.96%	Yes
	FS304	Develop risk reduction objectives & determine appropriate methods to meet them.	304-1 = 74.35%	No
		Create an effective community risk reduction program.	304-3 = 42.10%	No
	FS401	Formulate effective decisions based on fire service management & leadership guidelines.	FS401-1 = 100%	Yes
		Assess the impact of codes and standards and inspection review processes as it relates to fire prevention.	FS401-4 = 96.00%	Yes
	FS402	Assess the government's role in fire, EMS, and public safety.	FS402-1 = 81.57%	Yes
		Formulate human resources policies based on government roles and impacts.	FS402-2 = 86.84%	Yes
		Examine the role of the American legal system in relation to fire and EMS systems.	FS402-3 = 90.90%	Yes
		Assess influence of legislative and political bodies upon fire and EMS policies & procedures.	FS402-4 = 86.20%	Yes
	FS498	Fire Foundations: Demonstrate an understanding of building construction as it relates to fire fighter safety, building codes, fire prevention, code inspection, and firefighting strategy and tactics. BSFS -1	FS498-8 = 100%	Yes
BSFS-2: Fire Investigation and Analysis: Investigate technical, legal, and social aspects of arson.	FS104	Interpret fire suppression and detection systems as presented in building construction plans.	FS104-1 = 100%	Yes
		Illustrate various types of fire protection systems.	FS104-2 = 100%	Yes
		Discuss extinguishment methods and effective use of clean agent systems.	FS104-3 = 84.61%	Yes
		Define the functions of a fire alarm system and proper inspection, testing and maintenance requirements.	FS104-4 = 92.30%	Yes
	FS105	Describe how the role of the fire service administration with regard to fire prevention, work municipal government.	FS105-4 = 91.66%	Yes
	FS301	Analyze the physical properties of various kinds of fuels.	FS301-2 = 100%	Yes
		Evaluate types of laboratory services that will be utilized during analysis & investigation.	FS301-3 = 89.65%	Yes

Program Outcome	Course#	Measurement	Assessment/ Evaluation Results: % at or greater than Standard	Meets Criteria Yes/No
		Analyze role of fire investigators, including in those incidents involving deaths and injuries.	FS301-4 = 92.59%	Yes
		Develop investigative processes based on various types of fires.	FS301-5 = 96.55%	Yes
	FS402	Assess the government's role in fire, EMS, and public safety.	FS402-1 = 81.57%	Yes
	FS498	Fire Investigation and Analysis: Investigate technical, legal, and social aspects of arson. BSFS-2	FS498-9 = 100%	Yes
BSFS-3: Psychology: Analyze the issues that deal with the psychological effects of fire dynamics.	FS204	Explain the history of health and safety programs for emergency service agencies.	FS204-1 = 100%	Yes
		Describe occupational health and safety programs utilized in emergency services.	FS204-2 = 94.11%	Yes
	FS304	Develop effective intervention strategies given community research and involvement.	FS304-2 = 42.10%	No
		Evaluate community risk reduction programs.	FS304-4 = 65.78%	No
		Analyze fire and EMS department and officer roles in community risk reduction.	FS304-5 = 82.05%	Yes
	FS498	Psychology: Analyze the issues that deal with the psychological effects of fire dynamics. BSFS-3	FS498-10 =	DNA
BSFS-4: Research Methods: Apply scientific methods of inquiry to arrive at reasoned decisions regarding fire science.	FS100	Describe various career opportunities in the fire service.	FS100-1 = 100%	Yes
		Demonstrate the ability to utilize university and fire and emergency service specific resources to enhance learning.	FS100-4 = 86.66%	Yes
		Identify significant historical events that directly lead to changes in the fire service.	FS100-5 = 90.90%	Yes
	FS101	Explain how motivating factors of modern fire research impact fire science.	FS101-1 = 100%	Yes
		Interpret and explain the factors that have an effect on the energy release rate.	FS101-4 = 94.11%	Yes
	FS202	Identify fire service laws, regulations, & terminology.	FS202-3 = 95.23%	Yes
		Describe how fire departments function as part of local governments.	FS202-4 = 100%	Yes
	FS204	Explain the history of health and safety programs for emergency service agencies.	FS204-1 = 100%	Yes
		Discuss the fundamentals of health and safety programs as well as the federal regulations and industry standards that impact them.	FS204-3 = 100%	Yes
		Apply risk identification and risk evaluation concepts to promote safety within emergency services settings.	FS204-4 = 100%	Yes
		Describe the 16 Firefighter Life Safety Initiatives	FS204-6 = 100%	Yes
	FS208	Describe the legal responsibilities of emergency services personnel.	FS208-1 = 88.88%	Yes
		Explain common legal issues that impact emergency services.	FS208-2 = 100%	Yes
		Discuss the aspects of criminal and civil laws that emergency services agencies are likely to encounter.	FS208-3 = 94.73%	Yes
		Discuss the state and local laws that have an effect on the management of emergency services.	FS208-4 = 100%	Yes

Program Outcome	Course#	Measurement	Assessment/ Evaluation Results: % at or greater than Standard	Meets Criteria Yes/No
		Analyze the impact of recent legal decisions on emergency services agencies.	FS208-5 = 100%	Yes
	FS301	Evaluate the characteristics of fire science analysis and investigation organizations and apply these characteristics to the management of fire departments.	FS301-1 = 96.29%	Yes
	FS302	Develop strategic and tactical decision making skill through the application of risk management concepts.	FS302-2 = 91.17%	Yes
		Evaluate the circumstances that might lead to unsafe acts.	FS302-3 = 89.28%	Yes
		Analyze investigation data and determine how to use the information to support behavioral change in emergency services personnel.	FS302-5 = 93.33%	Yes
	FS304	Develop risk reduction objectives & determine appropriate methods to meet them.	FS304-1 = 74.35%	No
	FS401	Appraise fire prevention research as a part of community risk reduction & education.	FS401-3 = 96.00%	Yes
		Select effective financial and department resource management methods.	FS401-5 = 100%	Yes
	FS402	Examine the ethical roles of government fire and EMS officials.	FS402-5 = 77.41%	Yes
	FS403	Apply the skills and actions of leadership and management.	FS403-1 = 94.44%	Yes
		Analyze a department-level budget.	FS403-2 = 88.00%	Yes
		Evaluate appropriate methods of managing standard operating procedures and departmental policies.	FS403-3 = 90.47%	Yes
		Determine effective methods and techniques for creating and maintaining a team environment.	FS403-4 = 100%	Yes
	FS413	Evaluate current fire-related research.	FS413-1 = 100%	Yes
		Apply fire research methodologies to current issues and trends.	FS413-2 = 100%	Yes
		Defend a fire-related research proposal.	FS413-3 = 100%	Yes
		Analyze a fire service safety issue using common data collection and management methodologies.	FS413-4 = 95.23%	Yes
	GEL2.1	Relate mathematics to the field of study.	GEL-2.1 =	DNA
	FS414	Compare general human resources management issues with those common to fire and EMS agencies.	FS414-1 = 100%	Yes
		Forecast the possible personnel management concerns that affect the operations of fire and EMS agencies.	FS414-2 = 90.00%	Yes
		Develop recommendations, solutions, and policies for common personnel management matters.	FS414-3 = 100%	Yes
		Analyze rules, regulations, laws, and policies that impact human resources management.	FS414-4 = 91.30%	Yes

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	FS498	Fire Investigation and Analysis: Investigate technical, legal, and social aspects of arson. BSFS-2	FS498-9 = 100%	Yes
	FS498	Research Methods: Apply scientific methods of inquiry to arrive at reasoned decisions regarding fire science. BSFS-4	FS498-11 =	DNA
BSFS-5: Technology: Analyze methods that integrate the use of technology to inform and enhance operational and strategic decisions that will enhance firefighting strategy and tactics.	FS102	Apply the standards of building construction, as well as building and fire codes, to firefighter safety.	FS102-1 = 100%	Yes
	FS201	Explain commonly used methods to formulate firefighting strategies & tactics.	FS201-1 = 100%	Yes
		Explain the importance of pre-fire planning.	FS201-2 = 95.65%	Yes
		Explain strategies and tactics that can be employed in special situations such as transportation emergencies, high-rise fires, and below ground and confined space emergencies.	FS201-6 = 100%	Yes
	FS202	Apply the components of planning and operations to multiple agency responses to major incidents.	FS202-5 = 100%	Yes
	FS204	Identify the components of response safety plans, pre-incident planning procedures, and training safety policies.	FS204-5 = 100%	Yes
	FS302	Demonstrate how technological advancements can increase the safety and survival of emergency services personnel.	FS302-4 = 96.29%	Yes
	FS401	Examine the fire officer's role within the organization, with the community, and during emergency response.	FS401-2 = 88.88%	Yes
	FS498	Technology: Analyze methods that integrate the use of technology to inform and enhance operational and strategic decisions that will enhance firefighting strategy and tactics.BSFS-5	FS498-12 =	DNA

DNA = Data Not Available