

GRADUATE CERTIFICATE PROGRAMS

Fire Protection Engineering Applications General Characteristics

The courses offered in the Fire Protection Engineering Applications graduate certificate program will prepare students for a specialized career in fire protection engineering. Students completing the certificate program will be prepared for careers in:

- Consulting/Design Engineering Firms
- Fire Equipment and Systems Manufacturers
- Hospitals and Health Care Facilities
- Insurance Industry
- Research and Testing Laboratories
- Fire Departments
- Government

Program Goals

Upon completing the requirements for the graduate certificate, students should be able to:

- a) Identify relevant fire safety codes, standards and regulations, comprehend the fire safety performance objectives and criteria associated with these documents, and apply these fire safety objectives and criteria to a broad range of applications.
- b) Understand how people interact with fire conditions in buildings and calculate evacuation times through the application of fundamental principles of people movement and the use of state-of-the-art computer-based evacuation models.
- c) Design fire detection and alarm systems, fire suppression systems, structural fire protection systems, and egress systems to achieve specified performance objectives.

To meet these program goals, the fire protection engineering applications curriculum requires that students successfully complete a total of 16 units.

Fire Protection Engineering Science General Characteristics

The courses offered in the Fire Protection Engineering Science graduate certificate program will prepare students for a specialized career in fire protection engineering. Students completing the certificate program will be prepared for careers in:

- Forensic Investigations;
- Nuclear Fire Safety;
- Fire Science Research (R&D facility, Testing Lab, etc.)
- Government
- Fire Departments

Program Goals

Upon completing the requirements for the graduate certificate, students should be able to:

- a) Apply concepts associated with the thermal sciences, including thermodynamics, fluid mechanics, and heat transfer, to the analysis of fire protection engineering problems.
- b) Analyze the flammability characteristics of different materials, interpret the results of standard and non-standard fire test methods and evaluate the fire hazards associated with different materials in a range of anticipated settings.
- c) Analyze the dynamics of fires in and around buildings and other structures through the application of fundamental principles and the use of state-of-the-art computer-based fire simulation models.

To meet these program goals, the fire protection engineering science curriculum requires that students successfully complete a total of 16 units.

FIRE PROTECTION ENGINEERING SCIENCE

Prerequisites

For admission as a classified graduate student, an applicant should hold a bachelor's degree in engineering or a closely related field from a regionally accredited institution, college, or university. An undergraduate grade point average of 3.0 is required. On occasion, where other credentials are exceptionally strong, a GPA in the 2.5-3.0 range may be accepted.

FIRE PROTECTION ENGINEERING APPLICATIONS

Prerequisites

For admission as a classified graduate student, an applicant should hold a bachelor's degree in engineering, fire science, fire protection and safety, or a closely related field from a regionally accredited institution, college, or university. An undergraduate grade point average of 3.0 is required. On occasion, where other credentials are exceptionally strong, a GPA in the 2.5-3.0 range may be accepted.

FIRE PROTECTION ENGINEERING SCIENCE & FIRE PROTECTION ENGINEERING APPLICATIONS

Tuition and Fees

As special session programs through Continuing Education and University Outreach, the MS Fire Protection Engineering and Fire Protection Engineering graduate certificate programs are administratively and academically completely self-supporting. As such, the programs carry a separate tuition and fee schedule. Please refer to <http://fpe.calpoly.edu/cost.html> for the current cost of the program.

FIRE PROTECTION ENGINEERING APPLICATIONS**Graduate Certificate**

	<i>Units</i>
Core Courses	16
FPE 521 Egress Analysis and Design (4)	
FPE 522 Fire Detection, Alarm and Communication Systems (4)	
FPE 523 Water-based Fire Suppression (4)	
FPE 524 Structural Fire Protection (4)	
	16

FIRE PROTECTION ENGINEERING SCIENCE**Graduate Certificate**

	<i>Units</i>
Core Courses	16
FPE 501 Fundamental Thermal Sciences (4)	
FPE 502 Fire Dynamics (4)	
FPE 503 Flammability Assessment Methods (4)	
FPE 504 Fire Modeling (4)	
	16