



COURSE OUTLINE : FIRE 105
D Credit – Degree Applicable
COURSE ID 001485
Cyclical Review: MAY 2021

COURSE DISCIPLINE : FIRE

COURSE NUMBER : 105

COURSE TITLE (FULL) : Fire Protection Systems

COURSE TITLE (SHORT) : Fire Protection Systems

CALIFORNIA STATE UNIVERSITY SYSTEM C-ID : FIRE 120X – Fire Protection Systems

ACADEMIC SENATE DISCIPLINE: Fire Technology

CATALOG DESCRIPTION

FIRE 105 provides information relating to the features of design and operation of fire alarm systems, water-based suppression systems special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

Total Lecture Units:3.00

Total Laboratory Units: 0.00

Total Course Units: 3.00

Total Lecture Hours:54.00

Total Laboratory Hours: 0.00

Total Laboratory Hours To Be Arranged: 0.00

Total Contact Hours: 54.00

Total Out-of-Class Hours: 108.00

Recommended Preparation: ENGL 100 or ESL 151.



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ENTRY STANDARDS

	Subject	Number	Title	Description	Include
1	ESL	151	Reading And Composition V	employ basic library research techniques;	Yes
2	ENGL	100	Writing Workshop	Read, analyze, and evaluate contemporary articles and stories to identify topic, thesis, support, transitions, conclusion, audience, and tone;	Yes

EXIT STANDARDS

- 1 compare detection devices based on type and activation premise;
- 2 identify water requirements and distribution systems;
- 3 describe the different types of fire pumps;
- 4 explain the benefits of fire protection systems in various types of structures;
- 5 identify the different types of non-water based fire suppression systems;
- 6 describe the hazards of smoke and list the four factors that can influence smoke movement in buildings.

STUDENT LEARNING OUTCOMES

- 1 Identify the various types and uses of fire protection systems;
- 2 explain the type of agents used in portable fire extinguishers;
- 3 describe how a fire sprinkler system functions in a residential home.

COURSE CONTENT WITH INSTRUCTIONAL HOURS

	Description	Lecture	Lab	Total Hours
1	Introduction to Fire Protection Systems • Overview of fire protection, detection and fire suppression systems	4	0	4



2	<p>Sprinkler Protection</p> <ul style="list-style-type: none"> • Performance records • Installations • Types • Exposure protection • Special automatic installations • Water supply • Automatic sprinklers • Special service conditions • Dry-pipe system and quick-opening devices • Water flow alarm and supervision • Deluge and pre-action valves • Self-contained system • Care and maintenance 	12	0	12
3	<p>Protection Systems for Special Hazards</p> <ul style="list-style-type: none"> • Non-water based fire suppression systems • Carbon dioxide • Dry chemical • Foam • Water spray • Inert • Explosion venting and suppression 	9	0	9
4	<p>Detection, Alarm, and Watch Services</p> <ul style="list-style-type: none"> • Municipal fire alarm facilities • Automatic signaling system • Watchman time recording system • Flammable and combustible gas detection • Smoke management systems 	12	0	12
5	<p>Water Supplies and Services</p> <ul style="list-style-type: none"> • Water for community fire protection • Connections for fire protection from public water systems • Piped systems • Water tanks • Stationary fire pumps 	12	0	12



6	Portable Fire Extinguishers	5	0	5
	<ul style="list-style-type: none"> • Description and classification • Installation • Standard types • Operation and appropriate applications 			
				54

OUT OF CLASS ASSIGNMENTS

- 1 homework (e.g. matching word problems on types of sprinkler systems and their uses)
- 2 individual projects (e.g. written assignments tied to fire systems and portable fire extinguishers)
- 3 group projects (e.g. written report and demonstration of the types of fire alarm systems)

METHODS OF EVALUATION

- 1 midterm examination
- 2 final examination

METHODS OF INSTRUCTION

- Lecture
- Laboratory
- Studio
- Discussion
- Multimedia
- Tutorial
- Independent Study
- Collaboratory Learning
- Demonstration
- Field Activities (Trips)
- Guest Speakers
- Presentations

TEXTBOOKS

Title	Type		Publisher	Edition	Medium	Author	IBSN	Date
Fire Protection, Detection and Suppression Systems	Required		International Fire Service Training Association (IFSTA)	5	Print	IFSTA	978-0-87939-599-5	2017