

ENFP250 Introduction to Life Safety Analysis

Credits: Three (3)

Contact hours: Two lectures per week, 75 minutes each. One recitation per week, 50 minutes.

Table 5-1 category: Engineering topic

Instructor: Isman

Textbook: NFPA 101, Life Safety Code (2021 edition)(On-line version provided free to students)

Other supplemental materials: OSHA Fire Service Features of Buildings and Fire Protection Systems (electronic copy provided free to students)

Catalog description:

Introduction to fire protection engineering and building regulation focusing on building safety systems, egress system design and evacuation modeling.

Prerequisites and Corequisites:

Permission of ENGR-Fire Protection Engineering department.

Table 5-1 Course Type: Required

Specific outcomes of instruction:

This course will give students an introduction to FPE, building regulation, building safety systems, egress system design and evacuation modeling. Upon completion of this course, students should be able to:

- Understand the discipline of FPE, with roles/relationships of interested parties;
- Develop an understanding of fire phenomena, including ignition, fire growth & enclosure effects
- Understand roles/ features/elements of systems used to mitigate fires in buildings
- Be able to perform life safety analyses.

Student outcomes assessed: SO2.3, SO2.4, SO3.3, SO4.1

Brief list of topics covered:

The Profession of FPE

Fire statistics, international fire problem including social and global factors

Major events that have shaped fire protection

Building regulation in the U.S. (codes and standards)

Fire protection features of buildings

Engineering Ethics

Fire service operations; life Safety Code; core chapters; occupancy chapters

Occupant load and egress capacity; egress systems; assembly occupancies; timed egress analysis

Performance-based options