

ENFP250 Introduction to Life Safety Analysis

Credits: Three credits, two 75 minute lectures and one 50 minute recitation weekly

Instructor: Kenneth E. Isman, P.E.

Textbook:

NFPA 101, Life Safety Code (2015 edition)(On-line version provided free to students)

Specific course information:

1. This course will give students an introduction to fire protection engineering, building regulation, building safety systems, and egress system design. Attention is also given to the topics of evacuation modeling, human behavior in fires and tenability analyses.
2. Prerequisites: Permission of the Department
3. Required Course

Specific goals for the course:

1. 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.
2. This course focuses on two SOs:
 - SO6 - An understanding of professional and ethical responsibility
 - SO8 - The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

Brief list of topics:

- The Profession of Fire Protection Engineering
- Fire statistics, U.S. fire problem, Major events that have shaped fire protection
- Building regulation in the U.S. (codes and standards)
- Fire protection features of buildings
- Engineering Ethics (*note that this is new to 2016 based on CAC discussion*)
- Fire service operations
- Life Safety Code
- Core chapters
- Occupancy chapters
- Occupant load and egress capacity
- Egress systems
- Assembly occupancies
- Performance-based options
- Timed egress analysis