

Industrial Fire Protection (FIRT 1347) Online



Credit: 3 semester credit hours (3 hours lecture, 0 hours lab)

Prerequisite/Co-requisite: Complete the Online Orientation and answer yes to 7+ questions on the Online Learner Self-Assessment:

<http://www.lit.edu/depts/DistanceEd/OnlineOrientation/OOStep2.aspx>

Course Description

Study of industrial emergency response teams and specific concerns related to business and industrial facilities. *This course is time-bound, structured, and completed totally online.*

Required Textbook and Materials

Industrial Fire Brigade Principles and Practice, by International Association of Fire Chiefs and National Fire Protection Association, 1st edition. Jones and Bartlett Publishers, ISBN 13:9780763735029

Course Objectives

Upon completion of this course, the student will be able to:

1. Identify hazards common to industrial facilities.
2. Identify concerns of management regarding fire protection.
3. Examine planning considerations for emergencies at industrial facilities.
4. Identify Occupational Safety and Health Administration (OSHA) requirements for fire protection.

Course Outline

- 1) Introduction
 - a) Introduction of faculty and students
 - b) Review Syllabus
 - c) Review Class Policies
 - b) Brigade member requirements
 - c) Member safety and health
 - d) Personal Protective Equipment (PPE)
 - e) Respiratory Protection: Self Contained Breathing Apparatus (SCBA)
- 2) Brigade Member Qualifications and Safety
 - a) Roles and responsibilities
 - e) Salvage & Overhaul Equipment
- 3) Salvage and Overhaul
 - a) Lighting Equipment
 - b) Salvage to Limit Water Damage
 - c) Salvage to Limit Smoke Damage
 - d) Overhauling Techniques
- 4) Fire Service Communications
 - a) The Communications Center
 - b) Communications Operations
 - c) Radio Systems
 - d) Incident Reports
 - e) Taking Calls
- 5) Incident Management System
 - a) History of IMS
 - b) IMS characteristics
 - c) IMS organization
 - d) Standard concepts and terms
- d) Review Group Project Assignment

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Syllabus

- e) Implementing IMS
- f) Working within IMS
- 6) Fire Behavior
 - a) Fire Tetrahedron
 - b) Chemistry of combustion
 - c) Products of combustion
 - d) Heat transfer
 - e) Liquid Fuel Fires
 - f) Gas Fuel Fires
 - g) Classes of fire
 - h) Phases of fire
 - i) Interior structure fires
- 7) Portable Fire Extinguishers
 - a) Classification and labeling
 - b) Extinguisher placement
 - c) Extinguisher agents
 - d) Extinguisher components
 - e) Use, care, maintenance, and testing
- 8) Brigade Tools and Equipment
 - a) Types and functions
 - b) Phases of use
 - c) Tool staging
 - d) Cleaning and inspecting
- 9) Response and Size-Up
 - a) Response (getting there)
 - b) Arrival at the incident scene
 - c) Scene size-up
 - d) Incident Action Plan
- 10) Water Supply
 - a) Types of water sources
 - b) Water distribution systems
 - c) Types of fire hydrants
 - d) Fire hydrant operation
 - e) Hydrant maintenance
- 11) Fire Hose, Nozzles, and Streams
 - a) Fire hose function and sizes
 - b) Hose care and maintenance
 - c) Hose testing & rolls
- 12) Fire Cause Determination
 - a) Determining the cause and origin
- b) Fire ground observations
- c) Securing and transferring property
- 13) Firefighting Foam
 - a) How it works
 - b) Foam Tetrahedron
 - c) Foam concentrates
 - d) Making foam
 - e) Foam equipment
 - f) Foam tactics
- 14) Brigade Member Survival
 - a) Risk-benefit analysis
 - b) Safe operating procedures
 - c) Survival procedures
 - d) Air management
 - e) Rehabilitation
 - f) Critical Incident Stress
- 15) Fire Suppression
 - a) Offensive vs Defensive Operations
 - b) Operating hose lines
 - c) Protecting exposures
 - d) Vehicle fires
 - e) Flammable Liquid Fires
 - f) Flammable Gas Fires
 - g) Electrical fires
 - h) Preservation of evidence
- 16) Pre-Incident Planning
 - a) Pre-incident Plan
 - b) Conducting a survey
 - c) Tactical information
 - d) Occupancy considerations
 - e) Special considerations
 - f) Fire prevention techniques
- 17) Fire Detection, Protection, and Suppression Systems
 - a) Fire alarm and detection systems
 - b) Fire suppression systems
 - c) Specialized extinguishing systems

Grade Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Course Evaluation

Final grades will be calculated according to the following criteria:

Chapter Pre-Tests	20%
Chapter Discussions	30%
Chapter Tests	30%
Research Paper	20%

The instructor will respond to e-mail and voice mail communication within 24 hours Monday through Friday. Assignment grades will be published within 48 hours of the assignment due date.

Course Policies

1. You must log onto Blackboard and access this course a minimum of three times per week.
2. Cheating of any kind will not be tolerated.
3. If you wish to drop a course, the student is responsible for initiating and dropping the course. If you stop logging-in to the course and do not complete the course drop process, then you will receive an “F” grade for the course
4. Internet Usage – Students are expected to use proper net etiquette while participating in course emails, assignment submissions, and online discussions.

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-](https://help.blackboard.com/en-us/Learn/9.1)

[us/Learn/9.1](https://help.blackboard.com/en-us/Learn/9.1) 2014 04/Student/015 Browser Support/015 Browser Support Policy

A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations

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for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the online resource:

<http://www.lit.edu/depts/stuserv/special/defaults.aspx>

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office.

Starfish

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

