

Industrial Fire Protection (FIRT 1347)



INSTRUCTOR CONTACT INFORMATION

Instructor: John Randall

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Office Phone: 409 344-1997

Office Location: Online

Office Hours: Online

CREDIT

3 Semester Credit Hours (3 hours lecture, 0 hours lab)

AI Statement

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI / ChatGPT in their courses.

MODE OF INSTRUCTION

Online

PREREQUISITE/CO-REQUISITE:

None

COURSE DESCRIPTION

Study of industrial emergency response teams and specific concerns related to business and industrial facilities.

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.

REQUIRED TEXTBOOK AND MATERIALS

1. *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

ATTENDANCE POLICY

Online Only

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the [Academic Calendar](#). If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Friday August 29 th 2025	Course Introduction – Syllabus, instructor, netiquette, and course navigation Syllabus, netiquette link Learning Module 1: Chapter 1 Brigade Member Qualifications and Safety pp. 1-54	Module 1: Chapter 1 Brigade Member Qualifications and Safety pp. 1-54	Chapter 1 Online Discussion: Post answers to You Are the Brigade Member. Chapter 1 test
Friday, September 5, 2025 11:59PM	Chapter 3 Fire Service Communications pp. 66-86	Chapter 3 Fire Service Communications pp. 66-86	Chapter 3 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 88-

			89 Online Complete Chapter 3 Pre-Test Complete Chapter 3 Test Online Online
Friday, September 12, 2025 11:59PM	Learning Module 4: Chapter 4 IMS	Learning Module 4: Chapter 4 IMS	Chapter 4 Online Discussion: Post answers to You Are pp. 90-117 pp. 115-117 the Brigade Member Scenario Online Complete Chapter 4 Pre-Test Complete Chapter 4 Test Online Online
Friday, September 19, 2025 11:59PM	Learning Module 5: Chapter 5 Fire Behavior pp. 118-137	Learning Module 5: Chapter 5 Fire Behavior pp. 118-137	Chapter 5 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 138-139 Online Complete Chapter 5 Pre-Test Complete Chapter 5 Test Online Online
Friday, September 26, 2025 11:59PM	Learning Module 7: Chapter 7 Portable Fire Extinguishers pp. 168-204	Learning Module 7: Chapter 7 Portable Fire Extinguishers pp. 168-204	Chapter 7 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 205 Online Complete Chapter 7 Pre-Test Complete Chapter 7 Test Online Online
Friday, October 3, 2025 11:59PM	Learning Module 8: Chapter 8 Brigade Member Tools and Equipment pp. 206-230	Learning Module 8: Chapter 8 Brigade Member Tools and Equipment pp. 206-230	Chapter 8 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 231 Online Complete Chapter 8 Pre-Test Complete Chapter 8 Test Online Online
Friday, October 10, 2025 11:59PM	Learning Module 10: Chapter 10 Response and Size-Up pp. 268-284	Learning Module 10: Chapter 10 Response and Size-Up pp. 268-284	Chapter 10 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 285 Online Complete Chapter 10 Pre-Test Complete Chapter 10 Test Online Online 8 Learning Module 15: Chapter

Friday, October 17, 2025 11:59PM	Learning Module 15: Chapter 15 Water Supply pp. 438-454	Learning Module 15: Chapter 15 Water Supply pp. 438-454	Chapter 15 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 455 Online Complete Chapter 15 Pre-Test Complete Chapter 15 Test Online Online
Friday, October 24, 2025 11:59PM	Learning Module 16: Chapter 16 Fire Hose, Nozzles, and Streams pp. 456-522	Learning Module 16: Chapter 16 Fire Hose, Nozzles, and Streams pp. 456-522	Chapter 16 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 523 Online Complete Chapter 16 Pre-Test Complete Chapter 16 Test Online Online
Friday, October 31, 2025 11:59PM	Learning Module 17: Chapter 17 Foam pp. 524- 542	Learning Module 17: Chapter 17 Foam pp. 524- 542	Chapter 17 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 543 Online Complete Chapter 17 Pre-Test Complete Chapter 17 Test Online Online
Friday, November 7, 2025 11:59PM	Learning Module 18: Chapter 18 Brigade Member Survival pp. 544- 560	Learning Module 18: Chapter 18 Brigade Member Survival pp. 544-560	Chapter 18 Online Discussion: Post Answers to You Are pp. 561 the Brigade Member Scenario Online Complete Chapter 18 Pre-Test Complete Chapter 18 Test Online Online
Friday, November 14, 2025 11:59PM	Learning Module 21: Chapter 21 Fire Suppression pp. 612-640	Learning Module 21: Chapter 21 Fire Suppression pp. 612-640	Chapter 21 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 641 Online Complete Chapter 21 Pre-Test Complete Chapter 21 Test Online Online Research Papers Due Online
Friday, November 21, 2025 11:59PM	Learning Module 22: Chapter 22 Pre-incident Planning pp. 642-664	Learning Module 22: Chapter 22 Pre-incident Planning pp. 642-664	Chapter 22 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 665 Online Complete Chapter 22 Pre-Test Complete

			Chapter 22 Test Online Online
Friday, November 28, 2025 11:59PM	Learning Module 25: Chapter 25 Fire Detection, Protection, and Suppression Systems pp. 718-750	Learning Module 25: Chapter 25 Fire Detection, Protection, and Suppression Systems pp. 718-750	Chapter 25 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 751 Online Complete Chapter 25 Pre-Test Complete Chapter 25 Test Online Online
Wednesday, December 5, 2025 11:59PM	Learning Module 26: Chapter 26 Fire Cause Detection pp. 752-772	Learning Module 26: Chapter 26 Fire Cause Detection pp. 752-772	Chapter 26 Online Discussion: Post answers to You Are the Brigade Member Scenario pp. 754 Online Complete Chapter 26 Pre-Test Complete Chapter 26 Test Online Online

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Final grades will be calculated according to the following criteria:
- Chapter Pre-Tests 20%
- Chapter Discussions
- Chapter Tests 30%
- 30%
- Research Paper 20%

GRADING SCALE

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

LIT does not use +/- grading scales

ACADEMIC DISHONESTY

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at <http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty>.

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

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. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

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.

ADDITIONAL COURSE POLICIES/INFORMATION

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.

- You must log onto Blackboard and access this course a minimum of three times per week. Cheating of any kind will not be tolerated.

- 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
- Internet Usage – Students are expected to use proper net etiquette while participating in course emails, assignment submissions, and online discussions. Please read the material on proper netiquette then send the instructor a message using the course email stating the same.
- Introduction
 1. Introduction of faculty and students
 2. Review Syllabus
 3. Review Class Policies
 4. Review Group Project Assignment
- A. Brigade Member Qualifications and Safety
 1. Roles and responsibilities
 2. Brigade member requirements
 3. Member safety and health
 4. Personal Protective Equipment (PPE)
 5. Respiratory Protection: Self-Contained Breathing Apparatus (SCBA)
- B. Salvage and Overhaul
 1. Lighting Equipment
 2. Salvage to Limit Water Damage
 3. Salvage to Limit Smoke Damage
 4. Overhauling Techniques
 5. Salvage & Overhaul Equipment
- C. Fire Service Communications
 1. The Communications Center
 2. Communications Operations
 3. Radio Systems
 4. Incident Reports
 5. Taking Calls
- E. Incident Management System
 1. History of IMS
 2. IMS characteristics
 3. IMS organization
 4. Standard concepts and terms
 5. Implementing IMS
 6. Working within IMS
- F. Fire Behavior
 1. Fire Tetrahedron
 2. Chemistry of combustion
 3. Products of combustion
 4. Heat transfer
 5. Liquid Fuel Fires
 6. Gas Fuel Fires
 7. Classes of fire
 8. Phases of fire
 9. Interior structure fires
- G. Portable Fire Extinguishers
 1. Classification and labeling

2. Extinguisher placement
 3. Extinguisher agents
 4. Extinguisher components
 5. Use, care, maintenance, and testing
- H. Brigade Tools and Equipment
1. Types and functions
 2. Phases of use
 3. Tool staging
 4. Cleaning and inspecting
- I. Response and Size-Up
1. Response (getting there)
 2. Arrival at the incident scene
 3. Scene size-up
 4. Incident Action Plan
- J. Water Supply
1. Types of water sources
 2. Water distribution systems
 3. Types of fire hydrants
 4. Fire hydrant operation
 5. Hydrant maintenance
- K. Fire Hose, Nozzles, and Streams
1. Fire hose function and sizes
 2. Hose care and maintenance
 3. Hose testing & rolls
- L. Fire Cause Determination
1. Determining the cause and origin
 2. Fire ground observations
 3. Securing and transferring property
- M. Firefighting Foam
1. How it works
 2. Foam Tetrahedron