Introduction to Industrial Maintenance (INMT 1305)

Credit: 3 semester credit hours (2 hours lecture, 2 hours lab)

Course Description

Basic mechanical skills and repair techniques common to most fields of industrial maintenance. Topics include precision measuring instruments and general safety rules common in industry, including lock-out/tag-out, motorized equipment operation and basic industrial safety knowledge competency testing.

Required Textbook and Materials

1. NCCER Core Curriculum Introductory Craft Skills, Edition 5 Trainee Guide
    a. ISBN number is 978-0-13-413143-6

1. Equipment to be furnished by students: Required at instructor discretion.
    a. Safety Glasses (Z 87+)
    b. Gloves (leather or equal)
    c. Long pants and long sleeve shirt
    d. Shoes or Boots (substantial leather or equal w/ heels - no open toes)

Course Objectives

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

1. Identify various types of fasteners common to industrial maintenance.
2. Identify and use precision measuring instruments.
3. Demonstrate proper lock-out/tag-out procedures.

Course Outline

1. Demo proper application of fasteners, washers, and nuts
    a. Apply nuts w/o washers
    b. Apply nuts w/ washers
2. Identify hand tools and proper safe use
    a. Identify selected tools
    b. Demo proper use
3. Identify power tools and proper safe use
    a. Identify selected tools
    b. Demo proper use
4. Identify measuring instruments
    a. Identify selected measuring instruments
    b. Explain when required
5. Demonstrate proper use of measuring instruments
    a. Demo proper use
    b. Demo proper care
6. Discuss proper Lockout/Tagout
    a. Explain LO/TO
    b. Explain need for LO/TO
7. View proper Lockout/Tagout videos
    a. View videos
    b. Discuss videos
8. Discuss hazards of shop without Lockout/Tagout
    a. Electrical Hazards
    b. Motion hazards
9. Demonstrate proper safety permitting techniques
    a. Write a permit
    b. Apply permit to work

Approved mm/yyyy

10. Identify different types of fire extinguisher and discuss uses
    a. Demo Extinguishers
    b. Demo applications
11. Identify different types of Industrial clothing and discuss uses
    a. ID Nomex
    b. ID FRC
12. Discuss and Review ISTC Basic Plus Testing
    a. Discuss test w/ students
    b. Review test material
13. Encourage students to take the ISTC Test
    a. Explain the need of ISTC to industry
    b. Explain advantages of Certification

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:

Activity	**Percentage**
Major test	75%
Class participation	25%
Total	**100%**

Course Requirements

1. Understand Basic Safety Requirements of Industry
2. Competently complete simple math problems
3. Safely and competently use hand tools
4. Safely and competently use power tools
5. Be able to read and understand Construction drawings
6. Safely use basic rigging of equipment
7. Use basic communication skills (verbal and written)
8. Participate in an interview for employment
9. Use various material handling devices

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 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.

Course Schedule

Week	Topic	Reference

1	Basic Safety • Lecture • Lab: Practice	Chapter 1
2	Basic Safety • Lecture • Lab: Practice	Chapter 1
3/4	Introduction to Construction Math • Lecture • Lab: Practice	Chapter 2
5/6	Introduction to Hand Tools • Lecture • Lab: Practice	Chapter 3
7/8	Introduction to Power Tools • Lecture • Lab: Practice	Chapter 4
9/10	Introduction to Construction Drawings • Lecture • Lab: Practice	Chapter 5
13	Basic Communication Skills • Lecture • Lab: Practice	Chapter 7
14	Basic Employability Skills • Lecture • Lab Practice	Chapter 8
15/16	Introduction to Materials Handling • Lecture • Lab Practice	Chapter 9