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Course Prefix/No.: IMT 123  
Course Title: Air Compressors  
Lecture Hours/Week: 2.0  
Lab Hours/Week: 0.0  
Credit Hours/Semester: 2.0

[Distance Learning Attendance/VA Statement](#)  
[Textbook Information](#)

## COURSE DESCRIPTION

This course covers methods used to install and/or maintain various types of air compressors.

## COURSE COMPETENCIES

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

### Module 1 - Pneumatic Principles and Compressor types

- Demonstrate personal and shop safety at all times.
- Explain the principles of the compressibility of air.
- Explain the process of air compression.
- Explain the relationship between pressure, force and area.
- Explain the relationship between pressure, volume and temperature.
- Identify and explain the components of different types of air compressors.
- Demonstrate the proper storage and maintenance of equipment.

### Module 2 - Air Treatment and Delivery Systems

- Demonstrate personal and shop safety at all times.
- Explain the need for primary and secondary air treatment.
- Identify different methods and explain the components used for removing water and oil from compressed air.
- Identify different methods and explain the components used for cleaning and lubricating the compressed air.
- Properly size and lay out an air distribution system.
- Demonstrate the proper storage and maintenance of equipment.

### Module 3 - Control Valving and Pneumatic Devices

- Demonstrate personal and shop safety at all times.
- Disassemble, define internal parts, repair and reassemble pneumatic power components.
- Draw simple pneumatic schematics and explain how the system operates.
- Demonstrate the proper storage and maintenance of equipment.

## MINIMAL STANDARDS

Assignments and attendance must be completed as designated in "Evaluation Strategies/Grading." Criteria for minimal acceptable performance will be provided by the instructor.

## REQUIREMENTS

### Attendance Policy

The college attendance policy, stated in the college handbook, will be honored. The instructor will provide specific requirements for the course.

### Academic Honesty

Students are expected to adhere to the college policy regarding student conduct as stated in the college handbook.

### Assignments

Students are expected to complete all assignments and any supplementary exercises designated by the instructor.

## EVALUATION STRATEGIES/GRADING

Successful completion of the course requires the completion of all modules with an average of 70 points. Grades will be calculated from work attitude, all tests/projects, homework assignments, and laboratory assignments.

### Grading Scale:

A = 90.0 - 100

B = 80.0 - 89.9

C = 70.0 - 79.9

D = 60.0 - 69.9

F = 00.0 - 59.9

### Evaluation Method:

Tests/Projects (minimum of four total)

75% for each Module

Work Attitude

25% for each Module

Total

100%

Work Attitude is defined as:

- Participation
- Cooperation
- Appearance
- Effort
- Safety
- Responsibility
- Professionalism
- Attendance
- Self Motivation
- Works Independently

## METHODS OF INSTRUCTION

This course may be offered in traditional classroom format or as a self-paced, CD-based hybrid delivery format. Lectures, reading assignments, projects, discussions, video presentations, multimedia presentations, and web content are the major teaching methods used in this course.

## ENTRY LEVEL SKILLS

A student entering this course should have an appropriate entrance score indicating an understanding of shop math and mechanical aptitude demonstrating interest in industrial mechanics.

**PREREQUISITES:** RDG 031 or equivalent and MAT 031 or equivalent

**CO-REQUISITES:** None

**Disabilities Statement:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.

Effective: 2010SP