



DMT 1240

Division: Career and Technical Education

Department: Automotive Technology

Course: DMT 1240

Title: Air Conditioning Technology Theory and Lab

Catalog Description:

This course provides theory and lab experience for students on air conditioning systems used on mobile equipment. Instruction covers evacuation, service procedures, safety, charging, and emission regulations. Students completing this course should pass basic Freon purchase regulation testing.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 2; Lecture: 1; Lab: 3

Clock/Hour Requirements: 60

Offered for Non-Credit: No

Prerequisites: DMT 1110

Corequisites: None

Justification:

This course is designed to teach students air conditioning (A/C) systems and their controls. The information contained in this course enables the student to repair, service, and troubleshoot current A/C systems. Students will test A/C systems to meet government regulations. This curriculum was developed using the nationally recognized Automotive Service Excellence (ASE) task lists, manufacturer training materials, advisory committee input, Utah Valley State College syllabi, and Salt Lake Community College documentation.

Student Learning Outcomes:

Upon successful completion, students should be able to:

- understand A/C principles
- understand A/C terms
- understand A/C components and function
- troubleshoot A/C systems
- apply service and repair procedures.

Content:

Course objectives will be accomplished by providing students with learning experiences in the following

subject areas:

- principles of air conditioning systems
- A/C systems
- orifice tube systems
- service procedures
- operational procedures
- operational inspection.

General Education Outcomes:

2) Write clearly, informatively, and persuasively.

Students will complete written service reports on each laboratory project. These reports must be written in a clear, concise, and effective manner as this is the means by which customers make repair decisions. These reports are reviewed and returned to students with suggestion for improvement.

4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media.

Students will utilize electronic and written reference manuals and computer diagnostics to identify, troubleshoot, and repair air conditioning systems.

6) Apply computational skills to a variety of contexts.

Students are required to perform mathematic computations with regard to capacity, quantity, and pressures in an air conditioning system.

Key Performance Indicators:

In class:

- Student scores will be based on: written assignments (20%-30%), lab exercises (40%-50%), and quizzes and tests (20%-30%).

Following class:

- Students will be able to use the terms and follow service procedures applicable to most A/C systems.

Representative Text and/or Supplies:

- Dwiggins, *Automotive Air Conditioning*, current edition, Delmar Publishers.

Optimum Class Size: 10

Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

Dale Jensen, ,

I hereby find this course consistent with the goals and resources of the Automotive Technology Department:

Brent Reese, BS, Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)