

Course Code: DPE 234**Course Title:** Vehicular Air Conditioning I**Department:** Agricultural Technologies**Effective Date:** Summer 2026**PCS Code:** 1.2 - Occupational/Technical Instruction**CIP Code:** 47.0604**Repeatability:** 0

Credit Hours

Catalog Notation: 2-0-2**Credit Hour Distribution:**

Lecture: 2

Lab: 0

Clinical: 0

Total: 2

General Course Information

Catalog Description

Principles and theory of air conditioning systems on agricultural heavy equipment and trucks.

General Course Objectives

Students will learn the principles behind the theory and application of mobile refrigeration and climate control systems.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 060

Prerequisites

Credit in DPE 130

Methods of Evaluation

The minimum number of evaluation methods include: 8 objective quizzes and 2 exams.

Instructional Materials and Additional Supplies

Auto Heating and Air Conditioning (textbook), 5th edition, Chris Johanson. 978-1-61960-763-7

Auto Heating and Air Conditioning (workbook), 5th edition, Chris Johanson. 978-1-60525-014-4

Students will need the required tool set for the Diesel Power program.

Course Content

General Learning Outcomes (GLOs)

- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Principles and Theory of R-1234yf	1. Restate the operating principles and theory of R-1234yf systems.	9	0	0
Principles and Theory of R-134A	1. Restate the operating principles and theory of R-134A systems.	9	0	0
Component Identification	1. Recite components in both R-1234yf and R-134A systems. 2. Describe which components can be repaired versus replaced. 3. Demonstrate the ability to recognize component differences between R-1234yf and R-134A.	5	0	0
Retrofitting Systems	1. Evaluate an R-1234yf system to determine when to recommend a retrofit to R-134A. 2. Describe how to retrofit a system. 3. Describe what components need to be replaced.	7	0	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	0	0