



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title – Automotive Climate Control Systems

Course Prefix and Number - AUMT 1345

Department - Automotive Technology

Division - Vocational Science

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours # : Lecture hours# : Lab/other hours # 3:2:4

Equated Pay hours for course - 4

Course Catalog Description – Diagnosis and repair of manual/electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. May be taught manufacturer specific.

List Lab/ Other Hours
Lab Hours 4
Clinical Hours
Practicum Hours
Other (list)

Prerequisites/Co requisites - Credit for AUMT 1301

Co-requisite: AUMT 1316

Prepared by Curtis Cline

Date 1/12/2015

Reviewed by department head Curtis Cline

Date 1/12/2015

Accuracy verified by Division Chair Timothy Guin

Date 1/12/2015

Approved by Dean or Vice President of Instruction

Date 1-15-15



I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

The instructor will organize the course in such a manner that all areas of the course objectives will be covered in a balanced manner. It is within the prerogative of the instructor to assign exact amounts of time to each of the objectives which are:

- Health and Safety
- Temperature and Pressure Fundamentals
- The Refrigeration System
- System Components
- Compressors and Clutches
- System Servicing and Testing
- Case and Duct Systems
- Retrofit (CFC-12 to HFC 134a)
- System Controls
- Engine Cooling and Comfort Heating Systems

II. Course Learning Outcomes

Learning Outcomes	Method of Assessment
<p>Upon successful completion of this course, students will:</p> <ol style="list-style-type: none"> 1. Use safety procedures including proper refrigerant handling 2. Explain the refrigeration cycle. 3. Diagnose and repair systems. 	<ol style="list-style-type: none"> 1. Quizzes and assignments Completion of priority 1,2, and 3 items on the ASE task list, job sheets. 2. Quizzes and assignments Completion of priority 1,2, and 3 items on the ASE task list, job sheets. 3. Quizzes and assignments Completion of priority 1,2, and 3 items on the ASE task list, job sheets.

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

CDX Online eTextbook. & Fundamentals of Automotive Technology CDX Automotive Jones & Bartlett Learning textbook. Complete set of tools in compliance with the tool list.

IV. Suggested Course Maximum - 24

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

Complete auto shop lab with all the tools required by NATEF to meet the standards for Automotive Heating and Air Conditioning Certification.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Quizzes and assignments will count 30% of the course grade. At the end of the course a final exam will be given that will count 10% of the course grade. The auto shop lab grade will count 60% of the course grade. Lab work will be evaluated on attendance, percentage completion of priority 1,2, and 3 items on the ASE task list, job sheets, having the required tools to perform lab work, cleanliness, and attitude.

90% to 100%	= A
80% to 89%	= B
70% to 79%	= C
60% to 69%	= D
Below 60%	= F

The grade is based on the percentage basis between lecture and lab. .

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:
 - Basic Intellectual Competencies
 - Perspectives
 - Exemplary Educational Objectives

- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.