



**TRINITY VALLEY COMMUNITY COLLEGE  
ADMINISTRATIVE-MASTER SYLLABUS**

The Administrative- Master Syllabus is an administrative tool; it is **not intended to be distributed to students**. 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 TVCC, 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. The Administrative-Master Syllabus will demonstrate that there is consistency and comparability in course offerings.

**Course Title**

Heating and Air Conditioning

**Course Prefix and Number**

AUMT 1445

**Department – Division**

Workforce Education

**Course Type** – select from one of the following categories.

- Academic General Education Course (from ACGM – but not in TVCC Core)
- Academic TVCC Core Course
- WECM Courses

**Semester Credit Hours: Lecture Hours: Lab/other hours**

Semester Credit Hours	Lecture Hours	Lab/Other* Hours
4	4	6

Other hours include practicum, clinical or other types of non-lecture instruction. \*If other, please specify: \_\_\_\_\_

## Course Catalog Description

Theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunction. Covers EPA guidelines for refrigerant handling and new refrigerant replacement.

## Prerequisites/co requisites

None

## Topical Outline

- I. Automotive Air Conditioning**
  - A. Principles of Air Conditioning**
  - B. Automobile Heating System**
  - C. Types of Refrigerant**
  - D. Need of Refrigerant Oil**
  - E. Air Conditioning Service Tools and Equipment**
- II. Servicing the Air Conditioning System**
  - A. Discharging and Recovering Refrigerant**
  - B. Evacuating the Air Conditioning System**
  - C. Charging the Air Conditioning System**
  - D. Retrofitting R-12 Air Conditioning Systems**
  - E. Automatic Temperature Control**

## Course Learning Outcomes

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

1. Evacuate and charge the Air Conditioning System
2. Diagnosis problems in the Heating and A/C System
3. Repair Heating and A/C malfunctions

**Relationship to General Education Outcomes** – In addition to the core competencies, Trinity Valley Community College has established ten general education goals which specify knowledge and skills that students should gain from completing courses in the various component areas of the core curriculum. Information regarding curriculum and assessment as a means for the improvement of student learning through the general education component. (Select all that apply.)

Mark with an "X"	General Education Outcome
	A. To communicate clearly and effectively in both oral and written English.
	B. To improve reading skills focused on comprehending, analyzing, interpreting, and evaluating printed materials.

	C. To understand mathematical information and utilize mathematical skills.
X	D. To demonstrate qualitative and quantitative critical thinking skills.
	E. To understand and appreciate cultural and ethnic diversity.
X	F. To utilize computer based technology in accessing information, solving problems, and communicating.
	G. To recognize and evaluate artistic achievements in the visual and performing arts.
	H. To improve basic understanding of political, economic, and social systems.
	I. To demonstrate knowledge of the physical universe and living systems.
X	J. To develop skills and strategies to become an engaged learner.

**Required Text(s)**

Automotive Encyclopedia

**Optional Text(s)**

None

**Material/Technology to be supplied by the student.**

None

**Course Requirements/Grading System** – describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course; not intended to restrict the individual nature by which each faculty member who teaches the course determines course requirements and final student performance, but should offer consistency within reason for all sections taught for those departments without a standardized format.

1. Attend class and lab regularly and participate in assigned projects.
2. Take 8 daily tests, 2 major exams and complete assigned lab work.

***Approvals – the contents of this document have been reviewed and are found to be accurate.***

Prepared by	Signature	Date
Department Head	Signature	Date

Division Chair	Signature	Date
Vice President	Signature	Date