



Southern California Regional Transit Training Consortium

## SYLLABUS

**COURSE NAME:** *Introduction to HVAC for Transit*

**Course Item Number:** SC-HV-3000-I

**Prerequisites:** DVOM (preferred) or thorough understanding of meters and meter testing or equivalent experience.

**Course Description:** This course is designed to introduce the technician to the air conditioning systems used on transit vehicles. The class will concentrate on building a strong foundation in the theory of operation of air conditioning systems. This foundation will enable the technician to successfully deal with changing systems and refrigerants. The student will identify the system components and functions used in air conditioning systems. Integrated into this course are the components used on transit specific applications. The student will be working with the tools of air conditioning service such as, Manifold Gauge Sets, P/T Charts, and Pressure/Temperature Measurement. Safety will be emphasized. Basic compressor clutch circuits and electrical testing will be covered. An introduction into Gauge Diagnosis will also be presented to help prepare the student for the service and diagnostic procedures in course HVAC-II.

**Course Benefits:** The benefit of this course is for the technician to understand the air conditioning system components and function. Trouble shooting and diagnosis require a thorough understanding of this foundation. The technician would also be able to safely use the basic tools of air conditioning service. Students will gain knowledge about the need for the correct refrigerants and oil for the diverse air conditioning systems.

**What you will learn:**

- The need for EPA 608, 609, ASE technician certification.
- Safety Concerns on Air Conditioning
- Introduction to A/C Tools: Manifold Gauge Sets, Leak Testing, etc.
- Heat, Temperature, Pressure
- Refrigerants and Oils
- A/C Basic Circuit Flow and Function
- Transit Specific A/C Components
- Basic Clutch Circuit and Electrical Testing
- Transit Systems Overview
- Fundamentals of Gauge Diagnosis

**Course Times:** 7:00 am – 3:30 pm

**Number of Days:** 2

**Continuing Education Units (CEU):** 0

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