Course Outline

AUTO 201

Repairing Automotive Heating and Air-Conditioning Systems

4 Credit Hours
3 Lecture Hours
3 Lab Hours

The Community College of Baltimore County

Description

Repairing Automotive Heating and air-conditioning Systems
Discusses diagnosis and repair of automotive heating and air-conditioning systems and components; includes component and system testing and diagnosis as well as component repair, replacement, and adjustment. $20.00 fee required. Prerequisite: AUTO 101 and AUTO 131

Overall Course Objectives

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

1. Diagnose A/C system and determine needed repairs.
2. Conduct performances test of the A/C system and determine needed repairs.
3. Leak test A/C system to determine needed repairs.
4. Inspect, test, and replace A/C compressor clutch components or assembly.
5. Diagnose temperature control problems in the heater/ventilation system and determine needed repairs.
6. Diagnose failures in the electrical controls of heating and A/C systems to determine needed repairs.
7. Evacuate and charge A/C system.
8. Inspect and test A/C heater blower, motors, resistors, switches, relays, wiring, and protection devices and repair or replace as needed.
9. Verify correct operation and maintenance of refrigerant handling equipment.
10. Identify and recover A/C system refrigerant.
11. Recycle refrigerant.
12. Label and store refrigerant.

Major Topics

1. Theory of heat transfer
2. A/C operation repair
3. A/C component operation and repair
4. A/C control operation and repair
5. A/C diagnosis and repair

Course Requirements

One Term Paper

1. Topic of the paper will be selected by the student and should relate to the subject material of the course.
2. The paper should be 6 to 8 pages in length, typewritten, and double-spaced. It should include in addition to the 6 to 8 pages of text, an author and title page and bibliography utilizing a minimum of three reference resources excluding classroom materials.
3. All papers are due when 80% of the class sessions are completed. Papers submitted late will be deducted one letter grade.

Grading/Exams:

Grading procedures will be determined by the individual faculty member and will be provided on the first day of class. A student can expect a minimum of eight grades from the following categories:

1. Quizzes
2. Lab projects
3. Written paper
4. Homework assignments
5. Midterm exam
6. Class participation
7. Comprehensive final (required)

Other Course Information

This course is an Automotive Technology elective.