Common Course Outline
DEMT 102
Electrical / Electronic System Repair II
4 Semester Hours

The Community College of Baltimore County

Description

DEMT 102-- 4 Credits-- Electrical / Electronic System Repair II

prepares students to diagnose and repair electronic systems and components in heavy duty trucks and equipment. Topics include diagnosis, disassembly, overhaul and repair of starting systems, accessories and chassis wiring. Laboratory experiences include diagnosis disassembly, and repair of electronic components such as computerized engine control, electronic ignition and fuel injection, and other electronic accessories.
4 credits: 3 lecture hours per week; 3 laboratory hours per week

Prerequisite: DEMT 101

Overall Course Objectives

Upon completion of this course, students will be able to:

1. comply with personal and environmental safety practices associated with an electrical/ electronic systems;
2. inspect and clean battery boxes, mounts, and hold downs, repair or replace as needed;
3. inspect and test starter relays and solenoids/switches, replace as needed;
4. locate and use relevant service information to include diagnostic procedures, flow charts and wiring diagrams;
5. interface with vehicle's onboard computer to perform diagnostic procedures;
6. inspect and replace electrical connector terminals, seals, and locks;
7. inspect and test switches, sensors, controls, actuator components, and circuits and adjust or replace as needed;
8. use recommended electronic diagnostic tools, including PC based software and/or data scan tools, to access and change customer parameters;
9. perform engine timing sensor calibration;
10. inspect and test preheater/inlet air heater or glow plug system and controls and perform needed action; and
11. perform other recommended tasks from the NATEF master course list.

Major Topics

I. Battery diagnosis and repair
II. Starting system diagnosis and repair
III. Charging system diagnosis and repair
IV. Lighting systems diagnosis and repair

V. Gauges and warning devices diagnosis and repair
VI. Related electrical systems

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member and will be provided on the first day of class.
The following will be required for this course:

1. Written paper or suitable practical project
2. Midterm exam
3. Comprehensive final (including a practical exam).

If a written paper is assigned, the following will apply:

a. Topic of the paper will be selected by the student and should relate to the subject material of the course.
b. The paper should be six (6) to eight (8) pages in length, typewritten, and double-spaced. It should include in addition to the six (6) to eight (8) pages of text, an author and title page and bibliography utilizing a minimum of three reference resources excluding classroom materials.
c. All papers are due when 80% of the class sessions are completed.

In addition, students can expect additional grades from the following areas:

4. Quizzes
5. Lab Projects
6. Homework Assignments.

Other Course Information

This course is a Diesel and Equipment Maintenance Technology core course.

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.

(8) Date Revised: 10/17/06