

Common Course Outline
DEMT 115
Suspension & Steering Repair
4 Semester Hours

The Community College of Baltimore County

Description

DEMT 115 -- 4 Credits – Suspension & Steering Repair

covers diagnosis and repair of steering and suspension systems and their components. Student diagnose problems, disassemble and repair suspension systems, and practice wheel alignment.

4 credits: 3 lecture hours per week; 3 laboratory hours per week

Prerequisite or Co-requisite: 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 suspension and steering systems;
2. diagnose fixed and driver adjustable steering column and shaft noise, looseness, and binding problems and determine needed action;
3. inspect steering shaft U-joint(s), slip joints bearings, bushings, and seals and determine needed action;
4. disable and enable supplemental restraint system (SRS) in accordance with manufacturers' procedures;
5. diagnose power steering system noise, steering binding, darting/oversteer, reduced wheel cut, steering wheel kick, pulling, non-recovery, turning effort, looseness, hard steering, overheating, fluid leakage, and fluid aeration problems and determine needed action;
6. perform power steering system pressure, temperature, and flow tests and determine needed action;
7. adjust manual and automatic steering gear poppet/relief valves;
8. inspect and align pitman arm and replace as needed;
9. inspect leaf springs, center bolts, clips, eye bolts and bushings, shackles, slipper, insulators, brackets, and mounts and determine needed action;
10. inspect axle aligning devices such as radius rods, track bars, stabilizer bars, and related bushings, mounts, shims, and cams and determine needed action;
11. diagnose vehicle wandering, pulling, shimmy, hard steering, and off-center steering wheel problems and adjust and repair as needed;
12. diagnose turning/Ackerman angle (toe-out-on-turns) problems and determine needed action;
13. diagnose unusual tire wear patterns, check tread depth, mismatched tread design and determine needed action;

14. inspect sliding fifth wheel, tracks, stops, locking systems, air cylinders, springs, lines, hoses, and controls; and
15. inspect, install, or repair frame hangers, brackets, and cross members in accordance with manufacturers' recommended procedures.

Major Topics

- I. Steering systems diagnosis and repair
- II. Suspension system diagnosis and repair
- III. Wheel alignment diagnosis and repair
- IV. Wheels and tires diagnosis and repair
- V. Frame service and repair

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