

BELLINGHAM TECHNICAL COLLEGE

DIESEL EQUIPMENT TECHNOLOGY

COURSE NUMBER: DET 203

COURSE TITLE: DRIVE TRAIN

CLOCK HOURS: 3 CR

COURSE DESCRIPTION: This course will address the basic operation of drive train systems, with the emphasis on preventive maintenance and logical troubleshooting.

OUTCOME: Systematically repair and maintain various drive train systems and logically troubleshoot problems within those systems.

OUTLINE:

1. Clutches
2. Standard Transmissions
3. Torque Converters
4. Automatic Transmissions
5. Drive Shafts
6. Heavy Duty Axles

STUDENT PERFORMANCE OBJECTIVES:

Given, reference materials, tools of the trade and following industry approved safety procedures the student will:

1. identify operating fundamentals of fluid and mechanical drive systems
2. identify major system components
3. troubleshoot systems to 1.5 times industry standard times
4. read and evaluate schematics with 90% accuracy
5. identify different types of drive systems and their troubleshooting procedures

METHOD OF INSTRUCTION:

1. demonstration
2. Team Based Learning methods
3. discussion
4. interactive software
5. lecture
6. field trips and audio/visual

Provide opportunity for disadvantaged or disabled students by providing alternate modes of learning.

STUDENT ASSIGNMENTS/REQUIREMENTS:

The following must be completed before a grade can be given:

1. 90% class attendance required
2. Completion of assigned competencies and tasks required
3. Completion of self evaluation forms required

EVALUATION AND GRADING:

1. Assigned competencies, tasks, quizzes are required. The class teams will select grading criteria the first day of class
2. Completion of quarterly self evaluation **required** by the last class day of each month. The self evaluation grade weight will be set by each class.
3. You have 2 free days for attendance. Absence of more than 2 days will lower your grade by one letter. 2 tardy instances count for one day absence.
4. Letter grades:

0 - 61 = F 63 - 72 = D 73 - 82 = C 83 - 92 = B 93 - 100 = A

REQUIRED STUDENT SUPPLIES AND MATERIALS:

REQUIRED TEXT: HEAVY DUTY TRUCK SYSTEMS

4th Edition DELMAR

ADDITIONAL INSTRUCTIONAL RESOURCES:

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| 1. <u>CONCRETE CONSTRUCTION</u> | trade magazine |
| 2. <u>CRANE WORKS</u> | trade magazine |
| 3. <u>CONSTRUCTION EQUIPMENT</u> | trade magazine |
| 4. <u>DIESEL PROGRESS</u> | trade magazine |
| 5. <u>HYDRAULICS AND PNEUMATICS</u> | trade magazine |