

\_\_\_\_\_SOUTH SEATTLE COMMUNITY COLLEGE\_\_\_\_\_

Technical Education Division

### COURSE OUTLINE

Revision: Doug Clapper-2012

DEPARTMENT:	Heavy Duty Diesel Technology
CURRICULUM:	Diesel and Heavy Equipment Technology
COURSE TITLE:	Shop Practice
COURSE NUMBER:	HDM 212
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	6 weeks
CREDIT HOURS:	10
LECTURE HOURS:	60
LAB HOURS:	90
CLASS SIZE:	20
PREREQUISITES:	HDM 211 (Basic Shop Practice)

#### COURSE DESCRIPTION:

Practical application of previously acquired skills with emphasis on diagnosis, repair, replacement and servicing procedures required for truck engines and related systems.

#### STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Verbal and written documentation on the cause of the failure and the procedure required to make the repair.
2. Critical Thinking and Problem Solving - Analyzing the failure, determining the cause, planning and implementing the most cost effective repair.

HDM 212 Shop Practice  
July 16, 2002

STUDENT LEARNING OUTCOMES ADDRESSED: (cont.

3. Personal Responsibility - Perform all repair work to the best of your abilities and be thorough and professional.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Diagnose and make general repairs to truck and heavy equipment.
2. Remove and replace engine and power transmission units.
3. Diagnose and make general repairs to common portable tools and equipment used in the construction trade.

TOPICAL OUTLINE:	APPROX. HOURS
I. Complaint	10
A. Cause	
B. Correction	
II. Major component replacement	100
A. Removal	
B. Grooming the replacement component	
C. Reinstallation	
D. Testing for proper operation	
III. Portable tools and equipment	40
A. Compactors and hammers	
B. Air compressors	
C. Saws and drills	
Total	<u>150</u>

### Program Outcomes

1. Identify function, read diagrams and manufacturer specifications, inspect, diagnose problems, replace/repair, and service all major components of heavy duty equipment and vehicles. (SLO 1.1 & 7.2)

2. Using IVISDS sheets, OSHA and WISHA standards, demonstrate safety procedures relating to equipment, personal safety, and safety of others. (SLO 6.4)
3. Demonstrate proficiency in using hand and electronic testing and repair equipment. (SLO 6.3)
4. Consistently apply standards and guidelines for safe work procedures. (SLO 6.4 & 6.5)
5. Work independently and in groups to service, complete repairs, test, and maintain heavy duty vehicles to meet industry standards. (SLO 3.1)
6. Use industry tools to measure service. (SLO 2.2)
7. Use technology to test and repair equipment. (SLO 5.1)
8. Identify and strategize own career plans within the field. (SLO 6.2)
9. Practice good customer service. (SLO 3.2)
10. Work with accuracy, dependability, proficiency and speed when servicing equipment. (SLO 6.1)
11. Explain the expectations of employers for employees within the diesel industry. (SLO 7.1)
12. Communicate and document service records. (SLO 1.2)
13. Demonstrate basic competency in use of computers to access repair/replacement data and to document service. (SLO 5.1 & 7.1)

### Student Learning Outcomes (SLO)

STUDENT LEARNING OUTCOMES are the knowledge and abilities every student graduating with a certificate or degree from South Seattle Community College will have. Students will achieve these outcomes as well as the specific curriculum outcomes for their academic or technical area of study.

#### **1. Communication**

- 1.1 Read and listen actively to learn and communicate.
- 1.2 Speak and write effectively for personal, academic and career purposes.

#### **2. Computation**

- 2.1 Use arithmetic and other basic mathematical operations as required by program of study.
- 2.2 Apply quantitative skills for personal, academic, and career purposes.

2.3 Identify, interpret and utilize higher level mathematical and cognitive skills (for those students who choose to move beyond the minimum requirements are stated above).

### **3. Human Relations**

- 3.1 Use social interactive skills to work in groups effectively.
- 3.2 Recognize the diversity of cultural influences and values.

### **4. Critical Thinking and Problem-Solving**

- 4.1 Think critically in evaluating information, solving problems and making decisions.

### **5. Technology**

- 5.1 Select and use appropriate technological tools for personal, academic and career tasks.

### **6. Personal Responsibility**

- 6.1 Be motivated and able to continue learning and adapt to change.
- 6.2 Value one's own skills, abilities, ideas and art.
- 6.3 Manage personal health and safety.
- 6.4 Be aware of civic and environmental issues.

### **7. Information Literacy**

- 7.1 Access and evaluate information from a variety of sources and contexts, including technology.
- 7.2 Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society.

REVISED BY: Doug Clapper  
DATE: September 2012