

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

Technical Education Division

### COURSE OUTLINE

Revision: Doug Clapper-2012

DEPARTMENT:	Heavy Duty Diesel Technology
CURRICULLUM:	Diesel and Heavy Duty Equipment Technology
COURSE TITLE:	Shop Practices
COURSE NUMBER:	HDM 201
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	91 Hours
CREDIT HOURS:	5
LECTURE HOURS:	11 hours
LAB HOURS:	80 hours
CLASS SIZE:	18 Maximum
PREREQUISITES:	Completion of all related mechanical skills units in the Diesel and Heavy Duty Equipment Technology Program, or instructor's permission.

#### COURSE DESCRIPTION:

Application of the knowledge and tasks learned in prior mechanical skills units. Includes repair and service work on a variety of heavy-duty trucks and equipment. Repair procedures and shop policies will simulate work site situations.

Students electing to work within the industry will complete a minimum of 66 supervised hours in trade related employment.

#### STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Writing skills to accurately describe on the repair order the cause of the failure and the necessary repairs.

2. Critical Thinking and Problem Solving - Evaluate information from the repair order and isolation of the repair problem.
3. Information Literacy - Proper use of service and technical manuals to determine specifications and repair procedures.

#### GENERAL COURSES OBJECTIVES:

At the end of the course the student will:

1. Demonstrate knowledge of safety and environmental procedures consistent with trade standards while working in a shop.
2. Demonstrate the ability to properly complete and interpret the shop repair order.
3. Perform routine maintenance service work on trucks and heavy equipment.
4. Perform D.O.T. safety inspections
5. Demonstrate the proper use of material handling as well as tools and equipment standard to the industry.

TOPICAL OUTLINE:	APPROX. HOURS
1. Shop safety and operations	9
A. Personal safety	
B. Work are safety	
C. Hazardous Materials and disposal	
2. Preventive maintenance	32
A. Lubricants	
B. Coolants	
C. Scheduling	
3. Inspections	30
A. Maintenance	
B. D.OT.	
4. Material handling	20
A. Lift trucks	
B. Cranes	
C. Chains and slings	
D. Safety	
TOTAL	<u>91</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