

CATALOG INFORMATION

Dept and Nbr: DET 80

Title: DIESEL SHOP PRACTICES

Full Title: Diesel Shop Practices

Last Reviewed: 1/22/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.25	17.5	Lecture Scheduled	39.38
Minimum	3.00	Lab Scheduled	2.25	8	Lab Scheduled	39.38
		Contact DHR	0		Contact DHR	0
		Contact Total	4.50		Contact Total	78.75
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 78.75

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly: DET 60

**Catalog Description:**  
Introduction to diesel equipment and truck repair. Includes overview of trucks, agricultural equipment and construction equipment. Workplace skills, safety, tool use and career information are included.

**Prerequisites/Corequisites:**

**Recommended Preparation:**  
Course Eligibility for ENGL 100 OR Course Eligibility for EMLS 100 ( or ESL 100)

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Introduction to diesel equipment and truck repair. Includes overview of trucks, agricultural equipment and construction equipment. Workplace skills, safety, tool use and career information are included. (Grade Only)  
Prerequisites/Corequisites:  
Recommended: Course Eligibility for ENGL 100 OR Course Eligibility for EMLS 100 ( or ESL 100)

Limits on Enrollment:  
Transfer Credit: CSU;  
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>			Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>			Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>			Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective:	Fall 2000	Inactive:	Fall 2014
<b>UC Transfer:</b>		Effective:		Inactive:	

### **CID:**

#### **Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon successful completion of this course, the student will be able to:

1. Describe the general layout and function of truck, agricultural equipment and construction equipment components.
2. Summarize general and specific industrial shop safety standards and practices and evaluate their appropriate application in a specific shop setting.
3. Determine and describe the appropriate use and maintenance of hand, shop, and precision tools and demonstrate the same in a shop setting.
4. Correctly identify and use fasteners and mechanical fitting devices and evaluate appropriate use for each.
5. Compare theory of operation of basic systems on trucks, agricultural equipment, and construction equipment.
6. Describe the environmental issues and chose appropriate procedures involved with the disposal of hazardous materials.
7. Discuss the diesel repair industry career field and employment opportunities.

### **Topics and Scope:**

1. Introduction
  - a. Overview of trucks
  - b. Overview of agricultural equipment
  - c. Overview of construction equipment
2. Engine operating principles
3. Powertrain operating principles
  - a. Mechanical drivetrain
  - b. Hydrostatic drivetrain
4. Electrical system operation

5. Fuel system operation
6. Steering suspension operation
7. Brake system operation
8. Career information
  - a. Categories of industrial occupations
  - b. Wages, salaries, benefits
  - c. Local and regional opportunities
  - d. Shop expectations, practices, and routines
9. Shop safety standards and practices
  - a. Fire and disaster procedures
  - b. Cleanliness and order in the workplace
  - c. Fire and emergency prevention and intervention practices
  - d. Proper lifting procedures
  - e. Personal safety practices
  - f. Environmental health and safety compliance
10. Use and maintenance of hand, shop and precision tools
  - a. Precision measuring tools
  - b. Hand and shop tools
  - c. Tool and equipment maintenance
11. Fasteners and mechanical fitting devices
  - a. Appropriate fastener use
  - b. Fastening techniques
  - c. Fitting application
  - d. General torque specifications

### Assignment:

1. Reading 25 pages a week
2. Written exercises - 400 word essay.
3. Lab assignments and worksheets.
4. 3 to 5 quizzes.

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework: essay

Writing  
5 - 20%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Lab Worksheets

Problem solving  
35 - 50%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Performance exams

Skill Demonstrations  
10 - 30%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion, quizzes

Exams  
20 - 40%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

None

Other Category  
0 - 0%

**Representative Textbooks and Materials:**

Heavy Duty Truck Systems, Thompson Learning, 4th ed., 2006