

SYLLABUS

COURSE # AND TITLE DIME 111 Fuel Systems # OF CREDITS 5

CATALOG DESCRIPTION

Study of the theory and operation of diesel fuel injection systems. Transfer pumps, distributor injection pumps and in-line injection pumps, injectors and injection nozzles, governors, air fuel ratio controls, mechanical, electronic, H.E.U.I. systems will be covered. Diagnosis and repairs will be performed on various manufacturer's equipment and components. Safety will be strictly enforced.

Semester Offered: Fall even numbered years

Prerequisites: DIME 110 Diesel Engine Overhaul

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will...

<i>Learn</i>	<i>Students will actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.</i>
<i>Think</i>	<i>Students will think analytically and creatively to explore ideas, make connections, draw conclusions, and solve problems.</i>
<i>Communicate</i>	<i>Students will exchange ideas and information with clarity and originality in multiple contexts.</i>
<i>Integrate</i>	<i>Students will demonstrate proficiency in the use of technologies in the broadest sense related to their field of study.</i>
<i>Act</i>	<i>Students will act purposefully, reflectively, and respectfully in diverse and complex environments.</i>

GENERAL LEARNING OBJECTIVES

1. To provide the student with the techniques and procedures to correctly diagnose, and repair a malfunctioning fuel injection system.

SPECIFIC LEARNING OUTCOMES

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

1. Check fuel level, contamination and consumption; determine needed repairs.
2. Check fuel system for air; determine needed repairs.
3. Prime and bleed fuel system; check, repair/replace priming pump.
4. Test fuel supply pressure; determine needed repairs.
5. Inspect, repair/replace throttle control linkages and cables.
6. Diagnose caused of engine fuel leaks; determine needed repairs.
7. Perform on-engine inspections, remove, test, and adjust injectors (nozzle); determine needed repairs.
8. Inspect high and low pressure lines, fittings, and seals; replace as needed.
9. Check and adjust fuel injection pump to engine timing (rotary and in-line type pumps).
10. Remove and install a PT type injection pump and injectors.
11. Inspect air/fuel ratio controls; determine needed repairs.
12. Test engine governor, adjust, and repair as needed.
13. Inspect, test, adjust engine fuel shutdown controls; determine needed repairs.

Syllabus developed by _____ Date: _____

Syllabus reviewed by _____ Date: _____

A current syllabus must be on file in the dean's office for every course being taught during a given semester.