# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
## COURSE OUTLINE

**DEPT. DSL**

**COURSE NUMBER:** 2136

<table>
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<th>NUMBER OF CREDITS: 5</th>
<th>Lecture: 5 Lab: 0 OJT 0</th>
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### Course Title:
Fuel Systems Theory

### Catalog Description:
Fuel Systems Theory studies the theory of all mechanical fuel systems and introduces electronically controlled engines and fuel systems.

### Prerequisites or Necessary Entry Skills/Knowledge:
DSL1135

### FULFILLS MN TRANSFER CURRICULUM AREA(S)
- ☐ Goal 1: Communication: By meeting the following competencies:
- ☐ Goal 2: Critical Thinking: By meeting the following competencies:
- ☐ Goal 3: Natural Sciences: By meeting the following competencies:
- ☐ Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- ☐ Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- ☐ Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- ☐ Goal 7: Human Diversity: By meeting the following competencies:
- ☐ Goal 8: Global Perspective: By meeting the following competencies:
- ☐ Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- ☐ Goal 10: People and the Environment: By meeting the following competencies:

### Topics to be Covered
- Distributor and inline mechanical fuel systems
- Combination mechanical and electronic injection systems
- Diagnosis, service and repair of fuel systems

### Student Learning Outcomes
- Describe fuel control systems
- Explain distributor and inline type pumps
- Describe the process of the delivery of fuel from the injection system to the engine
- Inspect engine and fuel systems to determine best methods of repair for maximum performance
- Correlate fuel system operation and engine performance
- Correlate governor controls and fuel system operation
- Identify the differences in all fuel injected systems
- Explain the evolution from the mechanical to present day high-pressure common rail
Is this course part of a transfer pathway: Yes ☐ No ☒

Revised Date: 8/2021