

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. DSL

COURSE NUMBER: 2150

NUMBER OF CREDITS: 5

Lecture: 0 Lab: 5 OJT 0

| Course Title: |
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| Advanced Engine Lab |

| Catalog Description: |
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| Advanced Engine Lab provides hands-on shop experiences. Students will practice reconditioning of the larger and electronically controlled engines. |

| Prerequisites or Necessary Entry Skills/Knowledge: |
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| DSL1100 and DSL1110 |

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 |
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| Valve cycles |
| Large and Advanced Diesel Engine Repair |
| Large Diesel Engine Rebuild |
| Overhead Cams |
| Engine braking systems |
| Injectors |

| Student Learning Outcomes |
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| Build a valve cycle |
| Disassemble and rebuild engine using the student-built cycle |
| Diagnose and repair larger engines with overhead cams and multiple valve cylinders |
| Diagnose and repair components such as engine braking systems and unit type injectors |

Disassemble, inspect, evaluate, repair and adjust, and reassemble valve, valve train components, cylinder blocks, crankshafts, bearings, sleeves, pistons, and rings

Is this course part of a transfer pathway: Yes ☐ No ☒

Revised Date: 8/2021