

MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

COURSE OUTLINE

DEPT. DSL

COURSE NUMBER: 2111

NUMBER OF CREDITS: 4

Lecture: 0 Lab: 4 OJT 0

Course Title:
Advanced Powertrain Lab

Catalog Description:
Advanced Powertrain Lab demonstrates disassembly, inspection, evaluation, repair, reassembly, and testing of various power shift transmissions and related components. The student will work in the lab environment to diagnose and repair these various electro hydraulic systems.

Prerequisites or Necessary Entry Skills/Knowledge:
DSL1120 or DSL1125

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
Electro-hydraulically controlled transmissions
Advanced drive trains
Computer controlled powertrain systems
Power and hydraulic flows

Student Learning Outcomes
Diagnose and repair issues with power shift, shuttle transmissions, hydro/ IVT and other new systems
Demonstrate operation and repair of electrical hydraulics and test different systems
Determine high-pressure and low-pressure standby
Demonstrate operation and repair of computer controlling powertrain systems

Overhaul transmissions and drive train components

Rebuild transmissions and drive train components
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Is this course part of a transfer pathway: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Revised Date: 8/2021