Course Title: Powertrain Principles

Catalog Description: Powertrain Principles explains theory of clutch, pressure plate assembly, standard transmissions, differentials, power take-off, brakes, axles, and components that compliment powertrain operations.

Prerequisites or Necessary Entry Skills/Knowledge: None

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
- Powertrain Fundamentals
- Powertrain Service
- Powertrain Repair
- Powertrain Diagnosis

Student Learning Outcomes
- Describe a manual transmission
- Diagnose powertrain component issues
- Explain how clutches operate
- Discuss drivetrain operations
| List steps for servicing powertrains |
| Identify powertrain repair procedures |

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

Revised Date: 8/2021