Course Title:
Steering/Suspension/Alignment

Catalog Description:
Steering/Suspension/Alignment identifies the skills necessary to diagnose and repair steering and suspension systems. The course teaches suspension systems using leaf springs, coil springs, MacPherson struts, torsion bars and wheel balance. The course also covers the principles of operation, disassembly, checks and adjustments of power and manual steering gears, and manual and power rack and pinion systems. The procedures required for checking and adjusting wheel alignment will also be covered.

Prerequisites or Necessary Entry Skills/Knowledge:
None

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)
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
Steering system operation
Diagnosis and repair of steering systems
Hydraulic assisted steering
Diagnosis and repair of hydraulic assisted steering systems
Suspension system operation
Diagnosis and repair of suspension systems
Alignment geometry
Basic alignment performance
Tire and wheel relationship to steering and alignment
Tire maintenance and repair

**Student Learning Outcomes**

- Perform a basic alignment
- Replace common hydraulic steering components
- Replace common steering components
- Replace common suspension components
- Repair and replace tires
- Diagnose and repair basic steering problems
- Diagnose and repair basic suspension problems
- Comply with personal and environmental safety practices associated with clothing, eye protection, hand tools, power equipment, and proper ventilation
- Demonstrate safe handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations

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

Revised Date: 6/2021