**Course Title:**
Brakes

**Catalog Description:**
Brakes explains service of automotive brake systems. Included will be diagnosis of problems, system theory and repair, machine procedures, customer satisfaction and safety.

**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**
- Brake system operation
- Hydraulic brakes
- Drum brakes
- Disc brakes
- Power boosters
## Parking Brake Systems

## Antilock Brake Systems

### Student Learning Outcomes

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
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<tbody>
<tr>
<td>Identify brake system components and configuration</td>
<td>Describe, inspect, diagnose, and repair hydraulic brake systems.</td>
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<tr>
<td>Describe, inspect, diagnose, and repair drum brake systems.</td>
<td>Describe, inspect, diagnose, and repair disc brake systems.</td>
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<tr>
<td>Identify components of the brake power assist; and check pedal travel to verify proper power booster operation.</td>
<td>Check parking brake system components for wear, binding, and corrosion; clean, lubricate, adjust and/or replace as needed.</td>
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<tr>
<td>Remove, clean, inspect, repack, and install wheel bearings; replace seals; install hub and adjust bearings.</td>
<td>Identify traction control/vehicle stability control system components and describe operation.</td>
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<tr>
<td>Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations. <em>The required outcomes follow the Auto Service Technician (AST) model of the National Automotive Technical Education Foundation (NATEF) certification program.</em></td>
<td></td>
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### Is this course part of a transfer pathway: **Yes** ☐ **No** ☒

Revised Date: 6/2021