DEPT. AUTO  COURSE NUMBER: 1120
NUMBER OF CREDITS: 3  Lecture: 1 Lab: 2  OJT 0

Course Title:
Air Conditioning

Catalog Description:
Air Conditioning identifies and defines the theory, principles, diagnosis, testing, and repairs of the air conditioning and heater system operations.

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
Air conditioning fundamentals
Air conditioning systems
Testing and repairing of air conditioning systems
## Student Learning Outcomes

<table>
<thead>
<tr>
<th>Student Learning Outcomes</th>
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<tbody>
<tr>
<td>Identify heating, ventilation and air conditioning (HVAC) components and configuration.</td>
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<tr>
<td>Inspect and replace A/C compressor drive belts, pulleys, and tensioners; determine necessary action.</td>
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<tr>
<td>Identify hybrid vehicle A/C system electrical circuits and the service/safety precautions.</td>
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<tr>
<td>Inspect A/C condenser for airflow restrictions; determine necessary action.</td>
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<tr>
<td>Inspect engine cooling and heater systems hoses and pipes; determine necessary action.</td>
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<tr>
<td>Inspect A/C-heater ducts, doors, hoses, cabin filters, and outlets; identify the source of A/C system odors, and determine necessary action</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</td>
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*The required outcomes follow the Auto Service Technician (AST) model of the National Automotive Technical Education Foundation (NATEF) certification program.*

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

Revised Date: 6/2021