Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT.  PLHT      COURSE NUMBER: 1150

NUMBER OF CREDITS: 2  Lecture: 0  Lab: 2

<table>
<thead>
<tr>
<th>Course Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet Metal Technology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Catalog Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain experience using sheet metal tools with proper applications. Measuring and layout, pattern matching, making edges and seaming will be taught. Students will be exposed to sizing, measuring pressures and calculating losses.</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Prerequisites or Necessary Entry Skills/Knowledge:</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

### Topics to be Covered:

- Sheet metal fabrication for duct work preparation in accordance with Minnesota State Plumbing and HVAC code
- Proper use of hand tools and manual fabrication equipment
- Design and layout of materials to construct duct work
- Proper use of measuring tools and techniques
- Safe handling practices for metal fabrication equipment and personal protective equipment

### Student Learning Outcomes

1) Design ductwork for a heating system using a house plan.
2) Construct and assemble metal ducts.
3) Layout sheet metal elbows.
4) Determine the codes that are needed for proper installation.
5) Demonstrate all types of seams and edging.
6) Use proper tools and techniques for building the ductwork.
7) Explain heating, air conditioning and ventilation methods.
8) Measure duct velocities, pressures and duct losses in air flow.
9) Use hand tools and manual fabrication equipment properly.
10) Demonstrate proper use of personal protective equipment.

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

Revised Date:  May 2020