## Machining & Mfg Technology Program Alignment – CIP: 48.0501

### Certificate A
16-29 Credit Hours

- Safety/OSHA 10 or 30
- Quality Control & Inspection
- Metallurgy
- Workplace Ethics
- Print Reading

### Certificate B
30-44 Credit Hours

- Level 1 Requirements
- Bench Work
- CNC Operations
- Machining I or CNC Milling I

### Certificate C
45-59 Credit Hours

- Level 2 Requirements
- Machining II or CNC Lathe
- Machine Tool Processes

### A.A.S.
60-68 Credit Hours

- Level 3 Requirements
- Minimum of 15 Credit Hours of General Education

### Required Courses within Program

#### Common Courses 13-14 credits:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Control &amp; Inspection</td>
<td>1</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>1</td>
</tr>
<tr>
<td>Bench Work</td>
<td>1</td>
</tr>
<tr>
<td>CNC Operations</td>
<td>3</td>
</tr>
<tr>
<td>Machining I or CNC Milling I</td>
<td>3</td>
</tr>
<tr>
<td>Machining II or CNC Lathe</td>
<td>3</td>
</tr>
<tr>
<td>Machine Tool Processes</td>
<td>1-2</td>
</tr>
</tbody>
</table>

#### Support Courses* 4-8 credits:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety/OSHA 10 or 30</td>
<td>1-3</td>
</tr>
<tr>
<td>Workplace Ethics</td>
<td>1-2</td>
</tr>
<tr>
<td>Print Reading</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Course list sequence has no implication on course scheduling by colleges.

Institutions may add additional competencies based on local demand.

Competencies identified within the Common Courses and/or Support Courses represent opportunities for articulation with K-12.

*Institutions may utilize existing like course titles for Support Courses that adhere to the agreed upon course lengths.

### Notes

Specifics pertaining to Machining & Manufacturing Technology programs:

1. Add courses as needed specific to local B&I needs to meet the minimum credit hours at each level.

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