## COURSE SYLLABUS

<table>
<thead>
<tr>
<th><strong>Course Title:</strong></th>
<th>Intermediate Machine Technology</th>
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<tbody>
<tr>
<td><strong>Department:</strong></td>
<td>Advanced Manufacturing Technology</td>
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<tr>
<td><strong>Curriculum:</strong></td>
<td>Technology Studies</td>
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### Prerequisites:
- Introduction to Machine Technology (MFG*150)

### Catalog Course Description:
Intermediate Machine Technology provides the student an in-depth exposure to the lathe and milling manual operations. Students will perform lathe operations consisting of center alignment, facing, center-drilling, chuck turning, turning between centers, boring, reaming, tapping, grooving, tapers, knurling, and threading. Vertical and Horizontal Milling Operations will include an introduction to the Offset Boring Head, Side Milling Cutters, and Face Milling Cutters.

### Topical Outline:
- **1. Lathe Operations: Turning Between Centers**

### Course Code:
- MFG*165

### Course Type:
- X

### Elective Type:
- G

### Credit Hours:
- 3

### Developmental:
- No

### Lecture:
- 2

### Clinical:
- 0

### Lab:
- 1

### Studio:
- 0

### Other:
- 0

### Total Contact Hours:
- 3

### Class Maximum:
- 24

### Semesters Offered:
- Fall, Spring
### COURSE SYLLABUS

**Intermediate Machine Technology**

<table>
<thead>
<tr>
<th>Course Topics</th>
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<tbody>
<tr>
<td>2. Lathe Turning Operations: Alignment of Centers</td>
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<tr>
<td>3. Lathe Turning Operations: Drilling Boring, Reaming &amp; Tapping</td>
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<tr>
<td>4. Lathe Turning Operations: Cutting Threads</td>
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<tr>
<td>5. Vertical Milling: Boring Head &amp; Projects</td>
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<tr>
<td>6. Horizontal Milling Side &amp; Face Milling Cutters &amp; Projects</td>
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Upon successful completion of this course, the student will be able to do the following:

### COURSE: Abilities

- Demonstrate an understanding of the fundamentals of Lathe Operations.
- Demonstrate an understanding of the fundamentals of Vertical Milling.
- Demonstrate an understanding of the fundamentals of Horizontal Milling.

### PROGRAM: Electronics Technology Certificate and A.S. Degree

- Demonstrate an understanding of Shop Safety.
- Demonstrate an understanding the theory of electrical structure, voltage, current, resistance, and electrical circuit and their measurement.
- Demonstrate an understanding of the basic laws of arithmetic.
- Demonstrate an understanding of several number systems and codes that are the foundation of digital theory and digital applications.
- Make comparisons with personal computers; as well as, develop an understanding of its origin and growth since conception.
- Demonstrate an understanding of the fundamentals of Automated Manufacturing systems.

### GENERAL EDUCATION: (Numbering reflects General Education Outcomes as they appear in the college catalog)

- No General Education outcomes.

### Evaluation

Assessment will be based on the following criteria:

- Quizzes
- Exams
- Projects
<table>
<thead>
<tr>
<th>Instructional Resources:</th>
<th>Required: Full manufacturing machine lab including basic metal machining equipment (lathe, miller, drill press, saw, and grinding wheels), vertical and horizontal mills, and all necessary accessories.</th>
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<tbody>
<tr>
<td></td>
<td>Desired: None</td>
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<tr>
<td>Textbook(s)</td>
<td>None</td>
</tr>
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