This course aims to provide students with a range of practical skills and an understanding of engineering principles required to machine or fabricate engineering components. Exposure to these workshop skills will give the student an understanding and an underpinning knowledge on which to base future engineering design considerations or decisions.

On successful completion of this course, students will be able to:

1. Apply workshop safety procedures.
2. Interpret basic engineering drawings and use appropriate measuring equipment to manufacture components to a specified tolerance.
3. Manufacture basic engineering components using:
   - Hand tools
   - Hand Power tools
   - Power machines (radial drills bench presses etc...)
   - Lathes
   - Milling machines
   - Engravers
   - CNC machines
   - MMAW (Manual metal arc welding)
   - GMAW (Gas metal arc welding)
   - GTAW (Gas Tungsten arc welding)
   - Hard soldering/brazing/soft soldering

Interpret basic engineering drawings and use appropriate measuring equipment to manufacture components to a specified tolerance.
The major emphasis is on practical achievement. Problem and project based learning, tutorials. During workshop sessions students will be given group demonstrations and individual instruction as required. They will also be given the opportunity to discuss their work in detail at anytime.

To obtain a Pass grade, a student must achieve a minimum of 60% aggregated over all assessments.
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Assessment Task Description</th>
<th>Weight (%)</th>
<th>Must Pass (Y/N)</th>
<th>Learning Outcomes Assessed</th>
<th>Form of Assessment Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practical Project:</td>
<td>Practical project covers a broad range of underpinning knowledge and practical skills specified in 'course context' Emphasis is on developing practical problem solving skills</td>
<td>60%</td>
<td>N</td>
<td>1,2,3</td>
<td>Practical project</td>
</tr>
<tr>
<td>Workshop Exercises:</td>
<td>A range of smaller workshop exercises will extend experience gained from the practical project and/or provide consolidation</td>
<td>20%</td>
<td>N</td>
<td>1,2,3</td>
<td>Practical project</td>
</tr>
<tr>
<td>Workshop Report:</td>
<td>Report will demonstrate relevant underpinning knowledge gained and provide consolidation. (Assessed in conjunction with English tutors) Workshop logbook will be reference source for report content</td>
<td>20%</td>
<td>N</td>
<td>1,2,3</td>
<td>Reflection</td>
</tr>
</tbody>
</table>

Assessment Method: Achievement