**Description: Mechanical Practice 1**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-Nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
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<td>MEC</td>
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<td>1, 2003</td>
<td>ONC</td>
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**Academic Group:** FOENS  
**Academic Org:** FOES02  
**HECS Band:** 2  
**ASCED Code:** 030799

**STAFFING**

Examiner: Peter Penfold  
Moderator: Bob Fulcher

**RATIONALE**

The successful practice of the profession of Mechanical Engineering requires a clear understanding of the relationship between engineering theory and engineering practice. An ability to recognise when a particular theory is applicable and an ability to accommodate the deviations from the theory that occur in the real world is essential. Some knowledge of a wide range of practical techniques, propriety devices, materials, production and assembly methods is also necessary. The engineer must be able to assess a complex situation to identify the critical elements and develop a workable, cost-effective solution. This all requires considerable self-confidence, and the ability to work in and also lead a team. This course continues the step by step development of these skills commenced in ENG1901 Engineering Practice 1 but within a Mechanical Engineering context.

**SYNOPSIS**

This course presents a series of activities designed to develop specific skills and knowledge relevant to Mechanical Engineering. These activities are to be carried out on an individual or small group basis.

**OBJECTIVES**

On completion of this course, students should be able to:

- conduct and evaluate mechanical tests in accordance with set procedures;
- use common engineering length measurement instruments;
- operate Milling and Turning Machine tools to produce a simple component;
- adhere to safe working practices.
TOPICS

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tr>
<td>1. Linear measurement</td>
<td>5.00</td>
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<tr>
<td>2. Meast. fundamental properties</td>
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<td>3. Milling exercise</td>
<td>10.00</td>
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<tr>
<td>4. Performance tests (basic)</td>
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<td>5. Electrical Engineering Activity</td>
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<tr>
<td>6. Turning exercise</td>
<td>5.00</td>
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<tr>
<td>7. Strip and assembly</td>
<td>15.00</td>
</tr>
<tr>
<td>8. Safety in manufacturing</td>
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REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.


STUDENT WORKLOAD REQUIREMENTS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Directed Study</td>
<td>10</td>
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<tr>
<td>Laboratory or Practical Classes</td>
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ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg (%)</th>
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<tr>
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<td>TASK B</td>
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<td>TASK C</td>
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<tr>
<td>TASK D</td>
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<tr>
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<td>TASK E</td>
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<tr>
<td>TASK F</td>
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<tr>
<td>TASK G</td>
<td>1.00</td>
<td>12.00</td>
<td>Y</td>
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</table>
IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:
   (i) It is the students’ responsibility to attend and participate appropriately in all
   activities (such as lectures, tutorials, laboratories and practical work) scheduled
   for them, and to study all material provided to them or required to be accessed by
   them to maximise their chance of meeting the objectives of the course and to be
   informed of course-related activities and administration. (ii) Students must attend
   and complete the requirements of the Workplace Health and Safety training program
   for this course before they are able to undertake any practical work in the electrical
   laboratories.

2 Requirements for students to complete each assessment item satisfactorily:
   To complete the practical component satisfactorily, students must complete at least
   6 of the 7 activities and obtain at least 50% of the marks available for each activity,
   indicated by staff signing off the activity in the log book summary.

3 Penalties for late submission of required work:
   If students submit assignments after the due date without prior approval then a
   penalty of 5% of the total marks available for the assignment will apply for each
   working day late.

4 Requirements for student to be awarded a passing grade in the course:
   (i) To be assured of receiving a passing grade students must complete at least 85%
   of the practical and other activities at a satisfactory standard, as stated in 2 above.
   (ii) This course is considered to be satisfactorily completed when lecturing staff
   have signed off each activity on the log book summary. (ii) Students who do not
   qualify for a Passing grade may, at the discretion of the Examiner, be assigned
   additional work to demonstrate to the Examiner that they have achieved the required
   standard. It is expected that such students will have gained at least 45 % of the
   total marks available for all summative assessment items.

5 Method used to combine assessment results to attain final grade:
   As P is the only passing grade available for this course, all students who are
   qualified for a passing grade, under the requirements in 4 above, will be given a
   grade of P. Other students will be given either a Failing grade or an Incomplete
   grade.

6 Examination information:
   There is no examination in this course.

7 Examination period when Deferred/Supplementary examinations will be held:
   Not applicable.

8 University Regulations:
   Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10
   Academic Misconduct for further information and to avoid actions which might
   contravene University Regulations. These regulations can be found at the URL:
   http://www.usq.edu.au/SECARIAT/calendar/Part5/ or in the printed version of the
   current USQ Handbook.