The University of Southern Queensland

Course Specification

Description: Mechanical Practice 2

<table>
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<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>24654</td>
<td>2, 2003</td>
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Academic Group: FOENS
Academic Org: FOES02
HECS Band: 2
ASCED Code: 030701

STAFFING
Examiner: Chris Snook
Moderator: Bob Fulcher

RATIONALE
The successful practice of the profession of Mechanical Engineering requires an ability to analyse engineering systems and an ability to synthesise new designs. Much of the students coursework in other courses develops these analytical skills. In addition, the engineer must be able to assess a complex situation, identify the critical elements and develop a workable, cost effective solution. All of this requires considerable self-confidence, and the ability to work with and lead teams. In this course the synthesis of new ideas is developed whilst the student participates in a team-based design and build activity.

SYNOPSIS
This course falls naturally into three parts: Part One consists of a design activity where a small team of students develop a design concept for a device capable of satisfying a broadly specified task. Part Two comprises the procurement of appropriate resources and the construction of the device in accord with the design specification developed in Part One. Part Three covers the testing of the device and encourages the student to reflect on the activities and outcomes of the work conducted in Part One and Part Two above.

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

- develop design concepts in accordance with a generic requirement;
- apply, as appropriate to the design, the operation and construction features of a range of common mechanical devices;
- co-operate in a teamwork environment;
- identify and explain critical elements in practical situations and propose solutions;
- conduct a simple product development from initial specification to prototype stage;
• observe safety procedures in a workshop environment.

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Part One - Design Specification</td>
<td>20.00</td>
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<tr>
<td>2. Part Two - Design Activity</td>
<td>70.00</td>
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<tr>
<td>3. Part Three - Reflection and Evaluation</td>
<td>10.00</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>Laboratory or Practical Classes</td>
<td>45</td>
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<tr>
<td>Report Writing</td>
<td>5</td>
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**ASSESSMENT DETAILS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg(%)</th>
<th>Required</th>
<th>Due Date</th>
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<tr>
<td>LABORATORY REPORT</td>
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<td>GROUP REPORT</td>
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<td>22 Jul 2003</td>
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**NOTES:**

Students will be advised of the due date when each assessment item is issued.

**IMPORTANT ASSESSMENT INFORMATION**

1. Attendance requirements:
   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. 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 engineering laboratories.

2 Requirements for students to complete each assessment item satisfactorily:
   To complete the practical component satisfactorily, students must submit, by the due date, a practical report which meets the requirements of the assessment scheme. To complete the practical component satisfactorily, the students in each team must produce a working device that complies with the task specification and achieve a valid performance score.

3 Penalties for late submission of required work:
   Practical reports submitted after the due date will not be assessed.

4 Requirements for student to be awarded a passing grade in the course:
   To be assured of receiving a passing grade students must complete the practical and other activities at a satisfactory standard, as stated in 2 above.

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.