MODULE DESCRIPTION FORM

ME521 ADVANCED RESEARCH PROJECT B

<table>
<thead>
<tr>
<th>Module Registrar: Dr A McLaren</th>
<th>Taught To (Course): Cohorts for whom class is optional</th>
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<tbody>
<tr>
<td><a href="mailto:andrew.mclaren@strath.ac.uk">andrew.mclaren@strath.ac.uk</a></td>
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<tr>
<td>Other Lecturers Involved: Supervisors</td>
<td>Credit Weighting: 20 Semester: 2</td>
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<tr>
<td>Assumed Prerequisites: ME520 Advanced Research Project A</td>
<td>Optional class Academic Level: 5</td>
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Module Format and Delivery (HOURS i.e. 1 credit = 10hrs of study):

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Tutorial</th>
<th>Laboratory</th>
<th>Groupwork</th>
<th>External</th>
<th>Online</th>
<th>Project</th>
<th>Assignments</th>
<th>Private Study</th>
<th>Total</th>
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Educational Aim

The object of the project is to expand and enlarge on work completed in the individual 4th year project, in order to prepare a full paper for submission to a refereed engineering journal. This may involve further research and background study, further experimental and/or simulation work, more detailed analysis and discussion of results, or other activities, to be agreed by the individual supervisor. The full paper will be prepared by the student, under supervision, in the correct format for submission to the chosen journal. In exceptional circumstances, work carried out during a university based summer research internship may be written up for submission of a journal paper.

Learning Outcomes

On completion of the module the student is expected to:

LO1   Have submitted a professional standard technical paper to a refereed engineering journal (or prepared a draft in a suitable format, ready for submission).

LO2   Have had the opportunity to deepen and broaden the knowledge gained in the 4th year individual project (or equivalent)

LO3   Have gained gain significant experience of the practice of engineering research, and been trained in the care and discipline required for publication of research in refereed journals.

Syllabus

The student will carry out appropriate research and scholarship to prepare a paper for submission.

Assessment of Learning Outcomes

Criteria

For each of the Module Learning Outcomes the following criteria will be used to make judgements on student learning:

LO1
C1   The paper must have been submitted, or (in the opinion of the supervisor) be in a draft form in the appropriate format for submission in the near future.
C2   The quality of the paper must be such that the supervisor is willing to be a named co-author.

LO2
C1   The oral panel will interview the student to assess the degree of deepening and broadening of knowledge developed during the project.

LO3
C1   An assessment of the quality of the paper, and the amount of work carried out, over and above that completed in 4th year.
The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

**12 Principles of Assessment and Feedback**
(on Learning & Teaching web pages: [www.strath.ac.uk/learnteach/informationforstaff/staff/assessfeedback/12principles/](http://www.strath.ac.uk/learnteach/informationforstaff/staff/assessfeedback/12principles/))

**Help clarify what good performance is.**
Regular feedback will be obtained through meetings with the supervisor, to give clear guidance about performance and progress. This will tend to be informal in nature, but students should recognise this as feedback, and be encouraged to reflect on it.

**Encourage 'time and effort' on challenging learning tasks.**
Regular meetings with the supervisor will encourage the student to work steadily over the whole project to achieve a high quality end result.

**Ensure that summative assessment has a positive impact on learning.**
Students will be shown the assessment criteria in advance, and given guidance on the numerical marking scheme. This will allow them to focus effort on achieving good learning outcomes with the aim of achieving a high mark.

**Facilitate the development of self-assessment and reflection in training**
Students will be encouraged to reflect on their progress towards the publication, and plan their work effectively to meet the deadline.

**Encourage positive motivational beliefs and self-esteem**
Publication in a peer reviewed journal is a demanding exercise. Completion of this task is highly motivating and a source of satisfaction for the students.

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**Assessment Method(s) Including Percentage Breakdown and Duration of Exams**

<table>
<thead>
<tr>
<th>Examinations</th>
<th>Courseworks</th>
<th>Projects</th>
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<tbody>
<tr>
<td><strong>Number</strong></td>
<td><strong>Month(s)</strong></td>
<td><strong>Duration</strong></td>
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Indicate which learning outcomes (LO1, LO2 etc) are to be assessed by exam/coursework/project as required.

**Coursework / Submissions deadlines:** Copy of research paper to be handed in by 30 April.

**Resit Assessment Procedures:** Resubmission and new oral examination.

**PLEASE NOTE:**
Students need to gain a summative mark of 50% to pass the module. Students who fail the module at the first attempt will be re-examined during the August diet. This re-examination will consist entirely of coursework and viva.

**Recommended Reading**

Reading appropriate to project topic.

**Additional Student Feedback**

*(Please specify details of when additional feedback will be provided)*

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Session: 2014/15 Each student will be given individual detailed feedback at the May oral examination in May.

**Approved:**

**Course Director Signature:** [Signature]

**Date of Last Modifications:** 31 August 2014
**MODULE TIMETABLE**

<table>
<thead>
<tr>
<th>Module Code:</th>
<th>ME521</th>
<th>Module Title:</th>
<th>Advanced Research Project B</th>
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**Brief Description of Assessment:**

Journal paper and oral examination: May

**Assessment Timing:-**

Indicate on the table below the start/submission dates for each assignment/project and the timing of each exam/assessment(s).

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<th>WK7</th>
<th>WK8</th>
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<th>WK11</th>
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Oral Paper