Module Description Form

16402 (16460 sem1/16464 sem2) Case Studies in Engineering

Module Registrar: Prof M M Stack
margaret.stack@strath.ac.uk

Other Lecturers Involved: Dr Shayan Sharifi
+ Guest Lecturers

Taught To (Course): Cohorts for whom class is compulsory / optional / elective

Credit Weighting: 10 (ECTS 5)

Semester: 1 and 2

Assumed Prerequisites:

Compulsory / optional / elective class

Academic Level: 4

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>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>2 x 1.5hr (one each semester on a Friday between 1400 and 1700hrs on date tbc by Class Registrar)</td>
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<td>2 (3hrs each)</td>
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Educational Aim

Professional engineers need to have an awareness of the impact of engineering and technology on society. The class aims to highlight this by taking case studies from the whole spectrum of engineering industries.

Learning Outcomes

On completion of the module the student is expected to be able to:
LO1 be aware of the importance of engineering and technology and appreciate its interaction with society
LO2 understand the importance of careful design through case studies from a variety of fields
LO3 appreciate importance of good management, technical skills and industrial relations in industry
LO4 have had an opportunity to engage in presentations both oral and written in a variety of subjects

Syllabus

The module will teach the following:
(a) important engineering achievements
(b) look at examples of product design
(c) investigate failure analysis

Examples will be taken from the bio-medical, energy (including renewable), oil & gas, aerospace and civil field and will cover project management, technical sales, planning and industrial relations as well as the more traditional topics. Full use will be made of visiting professors as well as senior representatives from industry.

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 Awareness Importance of Engineering Issues through Case Study.
C2 Discussion of Key Engineering issues during tutorial sessions.
LO2 C1 Knowledge of importance of design in the context of best practice in safety and standardization.
C2 Enable comparison between Case Studies in a variety of disciplines demonstrating design concepts.
LO3  
C1 Understand the importance of team work in the industrial context.  
C2 Develop team work skills through tutorial sessions.

LO4  
C1 Develop skills in critical analysis through submission of two essays (one in each semester) of c1500 words each.  
C2 Develop presentation skills through team presentation (one in each semester).

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/teaching/staff/assessfeedback/12principles/)  

Formal, summative feedback will be provided by the return of essay and tutorial marks to students after assessment. Informal feedback will be provided after tutorial sessions primarily through verbal discussion with groups on tutorial exercises attempted in advance by students.  

(a) Essays will be corrected within 1 month of receipt. On-line feedback will be provided. The oral presentation marks will also be provided on-line. On-line feedback will also be provided for the presentations.  

(b) The oral presentation and essay marks will be issued at the end of each of semester. A marking scheme for both the essay and presentation will be provided on the tutorial data sheet and feedback on marked essays will be provided.

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

<table>
<thead>
<tr>
<th>L/Outcomes</th>
<th>Examinations</th>
<th>Courseworks</th>
<th>Projects</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Month(s)</td>
<td>Duration</td>
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<tr>
<td>LO1 and LO4</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:  
Essays should be handed in no later than two weeks after the tutorial date.

Resit Assessment Procedures:  
Re-submission of coursework to be submitted prior to the commencement of the August Examination diet.

PLEASE NOTE:  
Students need to gain a summative mark of 40% 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.

Recommended Reading

Additional Student Feedback  
(Please specify details of when additional feedback will be provided)

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<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tr>
<td>End of lecture week 10</td>
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Session: 2014/15

Approved:

Course Director Signature:  

Date of Last Modifications: 04 September 2014
## Module Timetable

**Module Code:** 16402  
**Module Title:** Case Studies in Engineering

### Brief Description of Assessment:
Essay and Tutorial Presentation

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

#### Tutorial

<table>
<thead>
<tr>
<th>Semester One</th>
<th>WK1</th>
<th>WK2</th>
<th>WK3</th>
<th>WK4</th>
<th>WK5</th>
<th>WK6</th>
<th>WK7</th>
<th>WK8</th>
<th>WK9</th>
<th>WK10</th>
<th>WK11</th>
<th>WK12</th>
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#### Essay

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