Description: Principles of Professional Engineering and Surveying

Subject  Cat-nbr  Class  Term  Mode  Units  Campus
ENG        1001  66369  2, 2007  EXT  1.00  Toowoomba

Academic group: FOENS
Academic org: FOENSV
Student contribution band: 2
ASCED code: 039999

STAFFING
Examiner: Bruce Varnes
Moderator: Ron Ayers

SYNOPSIS
The purpose of this course is to introduce students to engineering and surveying in a stimulating way and to provide them with some understanding and skills which will enable them to effectively learn and understand their profession. Areas covered are the nature of engineering and surveying, the interaction of engineering and surveying with society and the environment, and exposure to a range of professional skills. These areas are covered by a selection of case studies and a number of modules on simple engineering planning and effective communication.

OBJECTIVES
The course objectives define the student learning outcomes for a course. The assessment item(s) that may be used to assess student achievement of an objective are shown in parenthesis. On completion of this course, students should be able to:

1. explain the conception and development process for engineering and surveying projects (folio 2, 3, 4, 7, part A and B of exam);
2. discuss the interrelation between the various branches of engineering within a project (folio 4, 7 and part B of exam);
3. identify the different functions of engineers, surveyors and technicians working in design, manufacturing and construction operations (folio 2, 3, 4, 7, part A and B of exam);
4. discuss the roles of engineers and surveyors in the modern world (folio 4, 7 and part B of exam);
5. write grammatically correct technical English (folio 1, 2, 3, 4, 5, 6, 7 and part B of exam);
6. prepare and verbally present technical information in clear and precise English (folio 8);
7. select and use appropriate styles and formats for technical memos, letters and reports (folio 3, 4, 5 and part B of exam);
8. explain the need for concise, unambiguous communications in technical projects (folio 1, 6 and part B of exam);
9. demonstrate an understanding of ethical behaviour in their work (folio 1, 2, 3, 4, 6, 7 and part B of exam);
10. use standard referencing and citation conventions (folio 1, 2, 3, 4, 6, 7 and part B of exam).

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
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<tbody>
<tr>
<td>1. Case studies in branches of engineering and surveying with emphasis on the role of communications in engineering and surveying.</td>
<td>30.00</td>
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<tr>
<td>2. The place and role of engineers in society, including the interaction between technology, society and the environment.</td>
<td>10.00</td>
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<td>3. The importance of technical communication.</td>
<td>5.00</td>
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<td>4. Building blocks used in written communication.</td>
<td>10.00</td>
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<td>5. Written technical communication.</td>
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<td>6. Oral communication.</td>
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<td>7. The elements of engineering project work, including project planning, budgeting, resource planning and contracts.</td>
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<td>8. Principles for effective team functioning.</td>
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<td>9. Approaches to problem and conflict resolution.</td>
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**TEXT and MATERIALS required to be PURCHASED or ACCESSED**

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at http://bookshop.usq.edu.au click 'Semester', then enter your 'Course Code' (no spaces).


**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>
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<tbody>
<tr>
<td>Assessment</td>
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<td>Directed Study</td>
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<tr>
<td>Examinations</td>
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<tr>
<td>Private Study</td>
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ASSESSMENT DETAILS

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<tr>
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<th>Marks out of</th>
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<tbody>
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<td>CMA 2</td>
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<td>ASSIGNMENT 1</td>
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<tr>
<td>PART B OF 2 HOUR OPEN EXAM</td>
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</tr>
</tbody>
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NOTES

1. The CMA tests in this course are formative (ie they carry no weighting) and do not contribute to the final mark. The due dates for CMAs are recommended completion dates only.

2. The 2 hour examination is in two parts. Part A requires an Examination Answer Sheet. Part B requires an Answer Booklet. Student Administration will advise students of the dates of their examinations during the semester.

IMPORTANT ASSESSMENT INFORMATION

1. Attendance requirements:
   There are no attendance requirements for this course. However, it is the students' responsibility 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.

2. Requirements for students to complete each assessment item satisfactorily:
   To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks or a grade of at least C-. (Depending upon the requirements in Statement
4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)

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 gained by the student for the assignment will apply for each working day late. For students enrolled in the EXTERNAL mode, the due date for an assignment is the date by which a student must submit the assignment to the USQ. The onus is on the student to provide proof of the submit date, if requested by the Examiner.

4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade, a student must achieve at least 30% for each of the eight folio tasks that make up the three assignments, achieve an aggregated mark of at least 50% in the total marks allocated for the assignments, achieve at least 45% in each of Part A and Part B of the examination, achieve at least 50% in the examination overall, and at least 50% of the total weighted marks available for the course.

5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the weighted aggregate of the marks (or grades) obtained for each of the summative assessment items in the course.

6 Examination information:
In an Open Examination, candidates may have access to any material during the examination except the following: electronic communication devices, bulky materials, devices requiring mains power and material likely to disturb other students. Any electronic devices capable of circumventing the objectives of examinations or of disrupting other candidates shall not be permitted in the examination for this course. Laptop or palm computers are not permitted in the examination.

7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held during the examination period at the end of the semester of the next offering of this course.

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/corporateservices/calendar/part5.htm or in the current USQ Handbook.

ASSESSMENT NOTES

1 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner.

2 Students must retain a copy of each item submitted for assessment. This must be despatched to USQ within 24 hours if required by the Examiner.

3 In accordance with University’s Assignment Extension Policy (Regulation 5.6.1), the examiner of a course may grant an extension of the due date of an assignment in extenuating circumstances.

4 The Faculty will normally only accept assessments that have been written, typed or printed on paper-based media.

5 The Faculty will NOT accept submission of assignments by facsimile.
6 Students who do not have regular access to postal services or who are otherwise
disadvantaged by these regulations may be given special consideration. They should
contact the examiner of the course to negotiate such special arrangements.

7 In the event that a due date for an assignment falls on a local public holiday in their area,
such as a Show holiday, the due date for the assignment will be the next day. Students are
to note on the assignment cover the date of the public holiday for the Examiner's
convenience.

8 Students who have undertaken all of the required assessments in a course but who have
failed to meet some of the specified objectives of a course within the normally prescribed
time may be awarded one of the temporary grades: IM (Incomplete - Make up), IS
(Incomplete - Supplementary Examination) or ISM (Incomplete -Supplementary
Examination and Make up). A temporary grade will only be awarded when, in the opinion
of the examiner, a student will be able to achieve the remaining objectives of the course
after a period of non directed personal study.

9 Students who, for medical, family/personal, or employment-related reasons, are unable
to complete an assignment or to sit for an examination at the scheduled time may apply
to defer an assessment in a course. Such a request must be accompanied by appropriate
supporting documentation. One of the following temporary grades may be awarded IDS
(Incomplete - Deferred Examination; IDM (Incomplete Deferred Make-up); IDB
(Incomplete - Both Deferred Examination and Deferred Make-up).

10 This is a communication benchmark course and a major component of the assessment of
this course will be associated with the demonstration of communication skills.