



The University of Southern Queensland

## Course specification

The current and official versions of the course specifications are available on the web at  
<<http://www.usq.edu.au/coursespecification/current>>.  
Please consult the web for updates that may occur during the year.

### Description: Principles of Professional Engineering and Surveying

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
ENG	1001	86976	1, 2009	ONC	1.00	Springfield

<b>Academic group:</b>	FOENS
<b>Academic org:</b>	FOENSV
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	039999

### STAFFING

Examiner: Steven Goh  
Moderator: Ron Ayers

### SYNOPSIS

The purpose of this course is to introduce students to the engineering and surveying profession, and to provide them with relevant understanding and skills to effectively study the relevant courses, and also to progressively develop the relevant graduate attributes required of their profession throughout their tertiary studies. 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, including self-management, communications, information literacy, information technology, and project management. These areas are covered by a selection of case studies and a number of modules on simple engineering planning and effective communication. Additionally, a self-managed learning module in engineering fundamentals will be covered. ENG1101 Engineering Problem-Solving 1 will be introducing to the students the principles of multi-disciplinary team-oriented projects in engineering & surveying.

### 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. demonstrate an understanding and work towards establishing their graduate attributes and professional skills (Assignment 1, Assignment 2, Assignment 3, Exam);
2. demonstrate an understanding of the roles of the engineering and surveying profession and their impact on society and environment (Assignment 1, Assignment 2, Assignment 3, Exam);
3. demonstrate an understanding of ethical behaviour in the profession (Assignment 1, Assignment 2, Assignment 3);
4. demonstrate an awareness of the engineering & surveying career and the role of the Career Episode Reports (Assignment 3);

5. demonstrate an ability to critically self-assess, manage and reflect on their learning, and communicate this in the form of a report (Assignment 2, Assignment 3);
6. demonstrate an ability to research and synthesis information, and apply analytical and critical thinking to that information(Assignment 1, Assignment 2, Assignment 3, Exam);
7. demonstrate an understanding of the need for accurate, concise, unambiguous communications in technical projects (Assignment 1, Assignment 2, Assignment 3, Exam);
8. competently utilise software for the production of technical reports and presentations (Assignment 1, Assignment 2, Assignment 3);
9. competently write grammatically correct technical English and appropriately cite references (Assignment 1, Assignment 2, Assignment 3, Exam);
- 10.competently prepare and verbally present technical information (Assignment 3);
- 11.select and use appropriate formats for technical memos, letters and reports (Assignment 1, Assignment 2, Assignment 3);
- 12.demonstrate an understanding of the conception and development process for engineering and surveying projects (Assignment 1, Assignment 2, Assignment 3, Exam);
- 13.demonstrate an understanding of basic engineering fundamentals in the engineering context, and communicate this in the form of an essay or report (Assignment 1, Assignment 2, Assignment 3, Exam);

## TOPICS

	Description	Weighting (%)
1.	An introduction to the program structures of engineering and surveying and a review of professional skills and graduate attributes.	10.00
2.	Case studies in branches of engineering and surveying with emphasis on the role of communications in engineering and surveying.	30.00
3.	Sustainability & Ethics: The place and role of engineers in society, including the interaction between technology, society and the environment	10.00
4.	Written and oral technical communication and information literacy.	20.00
5.	Utilisation of information technology aids for word processing and presentations.	10.00
6.	Learning and self-management including information search and synthesis	10.00
7.	The elements of engineering project work, including project planning, budgeting, resource planning and contracts.	10.00

## 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).

*ENG1001 Principles of professional engineering and surveying: external study package*, USQ Publication, Toowoomba.

Blicq, R & Moretto, L 2004, *Technically write!*, 6th edn, Pearson Prentice Hall, Toronto.

## 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.

Beer, D & McMurrey, D 2004, *A guide to writing as an engineer*, 2nd edn, John Wiley, New York.

Ellis, R 1997, *Communication for engineers - bridge that gap*, Arnold, London.

Eunson, B 1995, *Writing technical documents*, John Wiley & Sons, Milton, Australia.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessments	35.00
Examinations	2.00
Lectures	13.00
Private Study	66.00
Tutorials	39.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
CMA 1	100.00	0.00	13 Mar 2009 (see note 1)
ASSIGNMENT 1	100.00	10.00	20 Apr 2009
ASSIGNMENT 2	100.00	10.00	18 May 2009
ASSIGNMENT 3	100.00	10.00	01 Jun 2009
PART A OF 2 HOUR OPEN EXAM	250.00	25.00	END S1 (see note 2)
PART B OF 2 HOUR OPEN EXAM	450.00	45.00	END S1

### 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:  
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.
- 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 extenuating circumstances then a penalty of 5% of the assigned mark may apply for each working day late up to a maximum of ten working days at which time a mark of zero can be recorded for that assignment.
- 4 Requirements for student to be awarded a passing grade in the course:  
To be assured of receiving a passing grade in a course a student must obtain at least 50% of the total weighted marks 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.