



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: Technology and Society

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
ENG	2002	86286	1, 2009	EXT	1.00	Toowoomba

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

STAFFING

Examiner: David Thorpe
Moderator: David Dowling

SYNOPSIS

Students of engineering and surveying need to understand and be convinced that through their future professional work they will relate to the rest of society. Throughout their careers they will need to strive to ensure that this relationship is meaningful and successful. Only then will they earn respect for themselves and their profession, and ensure their work will be valued and recognised. For engineers and surveyors to meet their responsibilities towards society they must be able to appreciate how politics, culture, economics and the law affect their work and how their work impacts on different sections of the community and the physical environment. They must also be prepared to deal with the issue of long-term sustainability. The goal of this course is to provide students with the opportunity to develop skills and attitudes that would help them promote and defend their work within their profession and within society at large.

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. deduce the causal factors behind technological developments in different cultures and during different periods of human history (Assignment 1, Exam);
2. assess the basis of common criticisms of modern technology (Assignment 1, Exam);
3. determine the relevance of social structure and cultural values to the engineering or surveying professions (Exam);
4. propose strategies that would help professionals to function effectively in a multi-cultural environment (Assignment 2, Exam);
5. illustrate the political dimension of engineering and surveying activities (Assignment 1, Exam);
6. identify ethical and legal constraints that are most likely to concern professional engineers or surveyors (Assignment 2, Exam);

7. identify and discuss conflicts between client and societal expectations (Exam);
8. assess the likely effects of economic policies on technological enterprises (Assignment 2, Exam);
9. examine the basic philosophies behind modern technological management (Exam);
10. justify the need to move towards sustainable practices (Assignment 1, Exam);
11. apply the principles of environmental impact assessment (Exam);
12. recognise the impacts of globalisation on engineering industries (Exam);
13. demonstrate an awareness of the key factors that may influence the practice of engineering in an overseas country (Exam).

TOPICS

	Description	Weighting (%)
1.	History of Engineering and Surveying	10.00
	1.1. Technology from different civilisations	
	1.2. Technological development in Australia	
	1.3. Reasons behind technological development at different times and places	
	1.4. Recent criticisms of technological development	
2.	Models of Society	10.00
	2.1. Self-Interest versus Community Interest	
	2.2. Social Structure	
	2.3. The social importance of work	
3.	Politics and Power	10.00
	3.1. Nature and role of Government	
	3.2. Government in Australia	
	3.3. Key models in Government	
4.	Law and Regulation	10.00
	4.1. The Australian Legal System	
	4.2. International Law	
	4.3. Legal and Ethical Responsibilities of the Engineer or Surveyor	
5.	Cultural Impacts	10.00
	5.1. Diversity of human ideas, values ,beliefs and behaviour	
	5.2. Strategies for successful inter-cultural communication and professional relationships	

6.	The Economy	20.00
	6.1. Economic theories and policies	
	6.2. Overview of national and global economies	
	6.3. Effect of tariffs, government subsidies and other forms of government assistance to industry	
	6.4. Cost benefit analysis	
7.	Management Concepts for Engineers and Surveyors	10.00
	7.1. Modern organisations	
	7.2. Overview of management skills needed by professional engineers or surveyors	
	7.3. Quality concepts	
8.	Sustainability	10.00
	8.1. The Environmental System	
	8.2. Ecologically Sustainable Development	
9.	Environmental Impact	10.00
	9.1. Human impact on the environment	
	9.2. Environmental Regulations	
	9.3. Environmental Impact Studies	

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).

Students will need access to email and the Internet.
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Johnston, S, Gostelow, P & Jones, E 1999, *Engineering and society*, 2nd edn, Longman, South Melbourne.

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

ACTIVITY	HOURS
Assessments	30.00
Directed Study	60.00
Examinations	2.00
Private Study	63.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	100.00	10.00	02 Apr 2009
ASSIGNMENT 2	200.00	20.00	22 May 2009
2 HOUR CLOSED EXAMINATION	700.00	70.00	END S1 (see note 1)

NOTES

1. 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 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 a Closed Examination, candidates are allowed to bring only writing and drawing instruments into 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 produced within five days 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).