



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: Civil Design Practice

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIV	4908	90344	2, 2009	EXT	0.00	Toowoomba

<b>Academic group:</b>	FOENS
<b>Academic org:</b>	FOES03
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	030903

## STAFFING

Examiner: Trevor Drysdale  
Moderator: Thiru Aravinthan

## REQUISITES

Pre-requisite: CIV4508 or Students must be enrolled in the following Program: MEPR

## RATIONALE

The Preamble to the Code of Ethics of the Institution of Engineers, Australia, describes engineering as 'a creative process of synthesising and implementing the knowledge and experience of humanity to enhance the welfare, health and safety of all members of society with due regard to the environment in which they live and the sustainability of the resources employed.' Thus engineering is dependent on: knowledge, understanding and skills as developed throughout the course of human history; the current needs of society with respect to welfare, health and safety of its members; the future needs of society as embodied in the concept of sustainability. To a large extent engineering education focuses on the first of these in presenting knowledge and developing the student's understanding and skills in using a variety of logical and mathematical processes to analyse a problem and formulate solutions to it. For example if the problem is to design a bridge spanning 500 metres a student should have at least the basis of the knowledge and skills necessary to analyse the various technical aspects of this problem and devise some solution to it. While an engineer can have pride in being able to do this, it represents only a narrow interpretation of engineering design. Engineering is not just about 'solving a problem' but is also concerned with correctly assessing the nature of the problem in the context of society's needs and of assessing the validity of a proposed solution not just on a technical basis but also on the basis of the solution's impact on individuals and society both now and in the future. This course looks at engineering design in a broad sense. It focuses on human, societal and environmental issues which may prompt a different understanding of the nature of the engineering problem and on new approaches to solving that problem with the emphasis on people and society being at least equal to that on technology.

## SYNOPSIS

In this course, students will work as part of a design team with other students. A number of design topics will be suggested in the form of specified client requirements. Each team will choose a particular design topic and will work towards a group presentation to the other teams. This oral and written presentation will be in the form of a preliminary design report to the client that will address the issues discussed in the above rationale.

## 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. work effectively as part of a team; (Group Presentation; Group Written Report; Individual Written Report)
2. develop questions that will need to be asked and answered to fully define the nature of the design problem and to devise solutions to that problem; (Group Presentation; Group Written Report)
3. break up a design project into a number of separate activities and develop a schedule for undertaking those activities; (Group Presentation; Group Written Report)
4. develop alternative solutions for the design topic. Analyse the technical and economic feasibility of the alternative solutions, with due regard to legal constraints, and environmental and sustainability concerns; (Group Presentation; Group Written Report; Individual Written Report)
5. contribute effectively to a group presentation to the entire class in the form of a preliminary design report from the design team to the client; (Group Presentation; Group Written Report; Individual Written Report)

## TOPICS

	Description	Weighting (%)
1.	Teamwork	20.00
2.	Questions	10.00
3.	Scheduling	10.00
4.	Design development and analysis	40.00
5.	Presentation	20.00

## 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).

## 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.

Students should have access to the texts and study books supporting the pre-requisite courses.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Directed Study	17.00
Seminars	8.00
Tutorials	25.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
GROUP PRESENTATION	600.00	60.00	25 Sep 2009
INDIVIDUAL WRITTEN REPORT	100.00	10.00	25 Sep 2009
GROUP WRITTEN REPORT	300.00	30.00	25 Sep 2009

## IMPORTANT ASSESSMENT INFORMATION

- Attendance requirements:**

This course requires attendance at a residential school. 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.
- 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.)
- 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.
- Requirements for student to be awarded a passing grade in the course:**

To be assured of receiving a passing grade students must complete at least 80% of the practical and other activities at a satisfactory standard, as stated in 2 above.
- Method used to combine assessment results to attain final grade:**

As P is the only passing grade available for this course, all students who are qualified for a passing grade will be given a grade of P. Other students will be given either a Failing grade or an Incomplete grade.
- Examination information:**

- There is no examination in this course.
- 7 Examination period when Deferred/Supplementary examinations will be held:  
Not applicable.
  - 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 the temporary grade: IM (Incomplete - Make up). An IM 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).