



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: Steel and Building Technology

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIV	2502	78624	2, 2008	EXT	1.00	Toowoomba

Academic group: FOENS

Academic org: FOES03

Student contribution band: 2

ASCED code: 030903

STAFFING

Examiner: Angela Fry

Moderator: Ron Ayers

SYNOPSIS

Engineering Technologists in all areas of employment are likely to be involved in building design and construction, and steel design, detailing and construction. This course therefore seeks to introduce the student to these commonly encountered areas of civil engineering. The Steel Technology component deals with weldability; fracture mechanics; fusion welding processes; distortion and tolerances; weld defects and Non Destructive Testing; cutting of steel; bolting technology; corrosion of steelwork. The Building Construction component of the course provides a broad overview of current building construction practice, embracing the structural, architectural and building services aspects.

OBJECTIVES

On completion of this course students will be able to:

1. interpret information from site investigations and apply it in the selection of appropriate building foundations; (Assignment 1; Part A of 2 Hour Examination; Part B of 2 Hour Examination)
2. describe and differentiate the methods for the construction of building superstructure using reinforced concrete, prestressed concrete, masonry, timber and steel; (Assignment 1; Part A of 2 Hour Examination; Part B of 2 Hour Examination)
3. discuss the concepts of weldability and fracture mechanics of steel, differentiate the various fusion welding processes, describe the forms of distortion in welded members, select appropriate methods to detect defects in welds and describe typical steel fabrication processes; (Assignment 2; Part A of 2 Hour Examination; Part B of 2 Hour Examination)
4. select and apply appropriate methods for weather-, sound-, and fire-proofing buildings; (Part A of 2 Hour Examination; Part B of 2 Hour Examination)
5. determine the requirements for services within a building and the structural requirements for the location of these services. (Part A of 2 Hour Examination; Part B of 2 Hour Examination)

TOPICS

	Description	Weighting (%)
1.	Building Technology	50.00
2.	Steel Technology	50.00

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).

Firkins, A & Hogan, TJ 1990, *Bolting of Steel Structures*, 3rd edn, Australian Institute of Steel Construction, Sydney.

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.

Jackson, N & Ravindra, KD 1996, *Civil Engineering Materials*, 5th edn, MacMillan Press Ltd, London.

Taylor, JS 2001, *An Engineer's Guide to Fabricating Steel Structures Volume 1: Fabrication Methods*, 1st edn, Australian Institute of Steel Construction, North Sydney.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Directed Study	39.00
Examinations	2.00
Field Trips or Excursions	8.00
Private Study	76.00
Report Writing	30.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	200.00	20.00	01 Sep 2008
ASSIGNMENT 2	200.00	20.00	13 Oct 2008
PART A OF 2 HOUR CLOSED EXAM	120.00	12.00	END S2 (see note 1)
PART B OF 2 HOUR CLOSED EXAM	480.00	48.00	END S2

NOTES

1. 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 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 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).

OTHER REQUIREMENTS

- 1 Students will require access to e-mail and internet access to USQConnect for this course.
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