



The University of Southern Queensland

Course specification

Description: Road and Street Engineering						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIV	5704	50898	1, 2006	EXT	1.00	Toowoomba

Academic group:	FOENS
Academic org:	FOES03
Student contribution band:	2
ASCED code:	030909

STAFFING

Examiner: Ron Ayers

Moderator: Jo Devine

RATIONALE

The road system in Australia varies from single lane unformed roads carrying low traffic volumes, to multi-lane roads carrying large volumes of traffic. The road engineer must be able to plan, design, and supervise the construction, operation and maintenance of these facilities in order to provide a safe and convenient road network to the community.

SYNOPSIS

This course revises basic principles of road and street engineering introduced in undergraduate programmes. The course also continues the development of principles and techniques of road and street engineering to the post graduate level. Postgraduate development is concentrated in the areas of pavement materials, pavement design, pavement evaluation, traffic surveys and equipment, local area traffic management and intersection design; and some aspects of bituminous surfacing, road construction, traffic control measures and road design.

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. design road pavement structures and surfacings (Assignment 1, Exam);
2. select and supervise the testing of pavement materials (Exam);
3. supervise the construction of pavements and surfacings (Exam);
4. evaluate the requirements for road rehabilitation and maintenance (Exam);
5. organise the execution of, and critically analyse the data from, common traffic engineering studies (Exam);
6. select and design appropriate traffic control measures, including the design of local area traffic management schemes (Exam);
7. conceptually design, and supervise the detailed geometric design of intersections (Assignment 1, Exam);

8. conceptually design, and supervise the detailed geometric design of parking facilities (Exam);
9. conceptually design, and supervise the detailed geometric design of roads, streets and bicycleways (Assignment 1, Exam);

TOPICS

	Description	Weighting (%)
1.	Introduction	2.00
2.	Road Design	10.00
3.	Intersection Design	8.00
4.	Pavement Materials	8.00
5.	Stabilisation	8.00
6.	Bituminous Surfacing Materials	5.00
7.	Pavement Design	5.00
8.	Bituminous Surfacing Design	5.00
9.	Road Construction Practice	5.00
10.	Pavement Construction Practice	5.00
11.	Bituminous Surfacing Practice	5.00
12.	Pavement Evaluation	5.00
13.	Road Maintenance	5.00
14.	Traffic Surveys	10.00
15.	Traffic Control Measures	7.00
16.	Traffic Management	7.00

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).

Rural road design: a guide to the geometric design of rural roads, Austroads Publications,

Pavement design - a guide to the structural design of road pavements, Austroads Publications,

As the USQ Library subscribes to the Austroads Publications Database, both of the above texts may be downloaded in electronic format by going to the USQ Library website, and then to the Austroads website [they cannot be downloaded free without going through the USQ Library website].

Institute of Transport Studies 2003, *Traffic engineering and management*, Monash University, Vol 1&2.

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.

'Road Planning and Design Manual' (Available: Library Catalogue or by going to the Qld Main Roads site at www.mainroads.qld.gov.au).

Urban Road Design: A Guide to the Geometric Design of Major Urban Roads, Austroads,

Guide to Traffic Engineering Practice, Austroads,

Sprayed Sealing Guide, Austroads,

*Guide to the Selection of Road Surfacing*s, Austroads,

Asphalt Guide, Austroads,

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessment	20.00
Directed Study	70.00
Examinations	3.00
Private Study	72.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
ASSIGNMENT 1	300.00	30.00	19 May 2006 (see note 1)
3 HOUR OPEN EXAMINATION	700.00	70.00	END S1 (see note 2)

NOTES

1. Further details about the due dates are detailed in the assessment section of the Course Specifications.
2. Further details about the due dates are detailed in the assessment section of the Course Specifications.

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 assessment item a student must achieve at least 50% of the marks or a grade of at least C-. Students do not have to satisfactorily complete each assessment item to be awarded a passing grade in this course. Refer to Statement 4 below for the requirements 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 20% of the total marks available for the assignment will apply for each working day late.

- 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% in each of the weighted assessment items, achieve at least 50% in the examination 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.
- 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).