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: Road Design and Location

Subject	Cat-nbr	Term	Mode	Units	Campus
CIV	2701	1, 2010	ONC	1	Springfield

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

STAFFING

Examiner: Trevor Drysdale
Moderator: Ron Ayers

REQUISITES

Pre-requisite: MAT1500 or ENG1500 or Students must be enrolled in one of the following Programs: GCST or GDGS

SYNOPSIS

The design and construction of roads impacts on almost all sectors of society. The design of a safe and efficient road network requires an understanding of the planning systems, environmental issues, driver characteristics, traffic profiles and many other factors. The course introduces students to the concept of road location with particular emphasis on the design of the geometric elements of the road including horizontal and vertical alignments. The design will be examined from the context of rural road design, however some application to urban roads will be examined. Theory will be supported by the use of computer aided design and modelling packages.

OBJECTIVES

The course objectives define the student learning outcomes for a course. On completion of this course, students should be able to:

1. recognise the importance of the planning process in the design of roads;
2. apply basic design parameters and relevant geometric principles to the preliminary design of urban and rural roads;
3. explain and apply process of horizontal and vertical road alignment for rural and urban road design;
4. differentiate the different design parameters as applied to urban vs rural roads;
5. integration of design elements incorporating standard road alignment calculations

TOPICS

	Description	Weighting (%)
1.	History of road design and planning	10.00
2.	Elements of road design	10.00
3.	Theory of geometric design elements	30.00
4.	Horizontal and vertical alignment	30.00
5.	Considerations for urban road design	15.00
6.	CAD design	5.00

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).

(A hand held battery operated calculator.)

AustRoads2003, *Rural road design: guide to the geometric design of rural roads*, 8th edn, AustRoads, 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.

(Any of the Introduction to Engineering Surveying textbooks.)

(Road Planning and Design Manual, Department of Main Roads, Queensland - see www.mainroads.qld.gov.au and the search for the manual.)

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessments	30.00
Examinations	2.00
Lectures	26.00
Private Study	71.00
Tutorials	26.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date	Objectives assessed	Graduate skill	Level assessed
CMA1	100	10	25 Apr 2010 (see note 1)	1, 2, 4		
CMA2	200	20	30 May 2010	2, 3, 4		
2 HOUR RESTRICTED EXAMINATION	700	70	END S1 (see note 2)	All		

NOTES

1. CMA1 and CMA2 will be open for 5 days each, closing on the due date at midnight.
2. 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 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 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 Restricted Examination, candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during 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 usual method of assessment submission for the Faculty is by written, typed or printed paper-based media (i) submitted to the Faculty Office for students enrolled in the course in the on-campus mode, or (ii) mailed to the USQ for students enrolled in the course in the external mode. The due date for the assessment is the date by which a student must (i) submit the assessment for students enrolled in the on-campus mode, or (ii) mail the assessment for students enrolled in the external mode.

5 The Faculty will NOT normally accept submission of assessments by facsimile or email.

6 If electronic submission of assessments is specified for the course, students will be notified of this in the course Introductory Book and on the USQ Study Desk. All required electronic submission must be made through the Assignment Drop Box located on the USQ Study Desk for the course, unless directed otherwise by the examiner of the course. The due date for an electronically submitted assessment is the date by which a student must electronically submit the assignment.

7 Students who do not have regular access to postal services for the submission of paper-based assessments, or regular access to Internet services for electronic submission, or are otherwise disadvantaged by these regulations may be given special consideration. They should contact the examiner of the course to negotiate such special arrangements prior to the submission date.

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 Harvard (AGPS) is the referencing system required in this course. Students should use Harvard (AGPS) style in their assignments to format details of the information sources

they have cited in their work. The Harvard (AGPS) style to be used is defined by the USQ Library's referencing guide. http://www.usq.edu.au/library/help/referencing/default.htm

EVALUATION AND BENCHMARKING

In meeting the University's aims to establish quality learning and teaching for all programs, this course monitors and ensures quality assurance and improvements in at least two ways. This course: 1. conforms to the USQ Policy on Evaluation of Teaching, Courses and Programs to ensure ongoing monitoring and systematic improvement. 2. forms part of the Bachelor of Engineering and/or Bachelor of Engineering Technology program and Bachelor of Spatial Science program and is benchmarked against the: - USQ accreditation/reaccreditation processes which include (i) stringent standards in the independent accreditation of its academic programs, (ii) close integration between business and academic planning, and (iii) regular and rigorous review; and - professional accreditation standards of Engineers Australia and Surveyors Board of Queensland.