



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: Mobile Internet Technology

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CSC	3420	87450	1, 2009	EXT	1.00	Toowoomba

Academic group:	FOSCI
Academic org:	FOS003
Student contribution band:	2
ASCED code:	029999

STAFFING

Examiner: Zhongwei Zhang
Moderator: David Lai

REQUISITES

Pre-requisite: CSC3407 or USQIT16 exemption

RATIONALE

Networks are of increasing importance in commerce, education, and culture and absorb an ever-increasing share of the national budget. This course focuses on two topics of great interest and importance at the moment : (i) quality of service in the Internet and the means by which it can be achieved; and (ii) wireless communication technology as used in mobile phone networks and the 802.11 standards (also known as Wifi). These topics are at the leading edge of development of modern communication networks and an understanding of them will help to equip the student with the insights they need in a career in communications technology. Note that post-graduate students may not enrol in this course and may take CSC8407 Wireless and Internet Technology instead.

SYNOPSIS

The first topic in the course is quality of service in the Internet, with particular emphasis on AQM's such as RED & ARED, and also the Diff Serv standard for managing quality of service. Students will use the NS2 simulator to gain an understanding of these topics. The second topic treated is wireless communication as used in GSM and CDMA mobile phones and the 802.11 standard for wireless LANs. The assessment for this undergraduate course consists of assignments and an end-of-semester examination. Note that post-graduate students may not enrol in this course and may take CSC8407 Wireless and Internet Technology instead.

OBJECTIVES

On successful completion of this course students should be:

1. aware of the range of new communication technologies and designs (Assignment 1, 2 & 3; Exam);
2. able to analyse these technologies and design networks which make use of them (Assignment 1, 2 & 3; Exam);
3. able to analyse the performance of networks including queuing delays, loss, and security and reliability (Assignment 1, 2 & 3; Exam)

TOPICS

	Description	Weighting (%)
1.	Internet Technology: Performance	15.00
2.	Internet Technology: Quality of Service	14.00
3.	Internet Technology: Simulation	14.00
4.	Mobile Technology: Wireless Transmission	15.00
5.	Mobile Technology: Antennas, Propagation & Spread Spectrum	14.00
6.	Mobile Technology: Medium Access Control	14.00
7.	Mobile Technology: Security for Wireless Networking	14.00

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.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assignments	30.00
Laboratory	13.00
Lectures	26.00
Private Study	90.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	30.00	30.00	24 Apr 2009 (see note 1)
ASSIGNMENT 2	30.00	30.00	29 May 2009
2HR CLOSED EXAMINATION	100.00	40.00	END S1 (see note 2)

NOTES

1. As assignments are submitted electronically they are due 11:59:59pm Australian Eastern Standard Time on each due date. Due date TBA.
2. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

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 complete each of the assessment items satisfactorily, students must obtain at least 50% of the marks available for each assessment item.
- 3 Penalties for late submission of required work:
If students submit assignments after the due date without (prior) approval of the examiner then a penalty of 5% of the total marks gained by the student for the assignment may apply for each working day late up to ten working days at which time a mark of zero may be recorded. No assignments will be accepted after model answers have been posted.
- 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 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 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 next examination period.
- 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

- 9 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.
- 10 Students may be required to provide a copy of assignments submitted for assessment purposes. Such copies should be despatched to the USQ within 24 hours of receipt of a request to do so.
- 11 In accordance with University Policy, the Examiner of a course may grant an extension of the due date of an assignment in extenuating circumstances.
- 12 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.

OTHER REQUIREMENTS

- 1 Students will require access to an appropriate computer either via the student's own arrangements or a USQ study centre.
 - 2 No further assignments will be accepted for assessment purposes after assignments or sample solutions have been released, except in extenuating circumstances.
 - 3 Students will require email and internet access for this course.
 - 4 Assignment specifications are available on the course website.
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