



The University of Southern Queensland

## Course specification

This version produced 20 Dec 2007.

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: Networks and Distributed Systems

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CIS	3003	62448	1, 2007	ONC	1.00	Fraser Coast

<b>Academic group:</b>	FOBUS
<b>Academic org:</b>	FOB005
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	020113

### STAFFING

Examiner: Srecko Howard  
Moderator: Jianming Yong

### OTHER REQUISITES

Students are required to have access to a personal computer, e-mail capabilities and Internet access to USQConnect. Current details of computer requirements can be found at  
<http://www.usq.edu.au/handbook/current/busgeninfo.html>

### RATIONALE

The climate of rapid technological change which characterises modern society and the desire for increased efficiency and effective decision making in today's business has resulted in enterprise information systems and inter-organisational systems being brought into sharp focus for information systems professionals. Data networks, interoperability and distributed systems philosophies are key components in the delivery of such systems. Therefore it is vital that they form an integral part of all contemporary information systems design and not simply an afterthought at the implementation stage.

### SYNOPSIS

This course seeks to broaden the student's knowledge of telecommunications and networking fundamentals and to provide a greater depth of understanding of networking concepts introduced earlier in the course. In addition, the student will expand upon their knowledge of distributed systems models and concepts. Finally, the student will be provided with the opportunity to combine their knowledge of networking fundamentals and distributed systems to provide tailored solutions for contemporary business problems.

### 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 is/are shown in parentheses after each objective. On successful completion of this course, students should be able to:

1. review applicable concepts and techniques learned earlier in the course and integrate these ideas with the concepts and approaches developed in this course (Assignment 1, Assignment 2, Examination)
2. demonstrate an understanding of telecommunications fundamentals (Assignment 1, Assignment 2, Examination)
3. demonstrate an understanding of local area network architectures (Assignment 1, Assignment 2, Examination)
4. demonstrate an understanding of metropolitan and wide area network architectures (Assignment 1, Assignment 2, Examination)
5. discuss and provide solutions for interconnectivity problems (Assignment 1, Assignment 2, Examination)
6. demonstrate a basic understanding of the various problems associated with the management of networks (Assignment 1, Assignment 2, Examination)
7. demonstrate an understanding of Open Systems and contemporary Distributed Systems models and concepts (Assignment 1, Assignment 2, Examination)
8. given a specific business problem, design and justify a suitable networked solution using sound arguments expressed in either spoken or written forms as required (Assignment 1, Assignment 2, Examination).

## TOPICS

	Description	Weighting (%)
1.	Review of applicable concepts and techniques from earlier courses	10.00
2.	Network mechanisms	15.00
3.	Network architectures	15.00
4.	Network design methodologies	25.00
5.	Business applications and distributed systems issues	25.00
6.	Network management fundamentals	10.00

## 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).

CIS3003 study package available from the USQ Bookshop.

Fitzgerald, J & Dennis, A 2006, *Business data communications and networking*, 9th edn, John Wiley & Sons, New York.

Summers, J & Smith, B 2006, *Communication skills handbook: how to succeed in written and oral communication*, 2nd edn, John Wiley & Sons, Milton, Queensland.

## 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.

Halsall, F 1996, *Data communications, computer networks and OSI*, 4th edn, Addison-Wesley, New York.

Renaud, PE 1996, *Introduction to client/server systems: a practical guide for systems professionals*, 2nd edn, Wiley Computer Publications, New York.

Smith, P 1994, *Client/server computing: all-in-one reference for total systems development!*, Sams Publishing, Indianapolis, Indiana.

Stallings, W 2005, *Business data communications*, 5th edn, Pearson Education, Upper Saddle River, New Jersey.

Stallings, W 2004, *Data and computer communications*, 7th edn, Pearson Education, Upper Saddle River, New Jersey.

Stallings, W 1999, *ISDN and broadband ISDN with frame relay and ATM*, 4th edn, Prentice Hall, Upper Saddle River, New Jersey.

Stallings, W 2000, *Local and metropolitan area networks*, 6th edn, Prentice Hall, Upper Saddle River, New Jersey.

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Lectures	14.00
Private Study	128.00
Tutorials	28.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
ASSIGNMENT 1	100.00	10.00	30 Apr 2007
ASSIGNMENT 2	100.00	20.00	28 May 2007
2 HOUR EXAMINATION	100.00	70.00	END S1 (see note 1)

### NOTES

1. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date after the timetable has been finalised.

## 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 individual assessment item a student must achieve at least 50% of the marks. (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 prior approval then a penalty of 20% of the total marks gained by the student 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 submit all of the assessment items, achieve at least 50% for 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 aggregate of the weighted marks obtained for each of the summative assessment items in the course.
  - 6 Examination information:  
This is a restricted examination. Candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the examination for this course are (i) Writing materials: non-electronic and free from material which could give the student an unfair advantage in the examination; (ii) Translation dictionaries: with the examiner's approval, candidates may, take an appropriate non-electronic translation dictionary into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed.
  - 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>. Students should also read the Faculty of Business Guide to Policies and Procedures of the Faculty which can be found at the URL <http://www.usq.edu.au/handbook/current/buspolproc.html>.

## **ASSESSMENT NOTES**

- 1 Assignments: (i) The due date for an assignment is the date by which a student must submit the assignment to the USQ. (ii) Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the examiner. (iii) In accordance with university policy, the examiner may grant an extension of the due date of an assignment in extenuating circumstances. (iv) The examiner will normally only accept assessments that have been written, typed or printed on paper-based media. (v) 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.
- 2 Course weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper.
  - 3 Referencing in assignments: Unless otherwise directed by the examiner, all written and oral assignments submitted by students must conform to the guidelines laid out in the 'Communication skills handbook: how to succeed in written and oral communication'. Any work not prepared in accordance with these guidelines may be subject to penalty or requirement for resubmission.
  - 4 Make-up work: 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.
  - 5 Deferred work: 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).
  - 6 Appeals: Any appeal against the award of a grade in the course will be conducted in accordance with university regulations. These regulations are published in the university handbook.

## **OTHER REQUIREMENTS**

- 1 Learning resources: Prescribed texts and materials (see above); recommended reference materials (see above); printed Introductory Book\*, Book/s of Selected Readings\*, and Study Book/s\*; and course Website accessible via USQConnect. \*part of the study package available from the USQ Bookshop
  - 2 E-mail and Internet access: Students will require access to e-mail and Internet access to USQConnect for this course.
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