



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: System and Security Administration

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
CSC	3412	90213	2, 2009	ONC	1.00	Toowoomba

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

STAFFING

Examiner: Leigh Brookshaw
Moderator: Zhongwei Zhang

OTHER REQUISITES

Recommended: Pre-requisite: CSC2408 or USQIT16 or Students must be enrolled in the following Program: MCOP or MPIT Recommended: Co-requisite: CSC2404.

RATIONALE

System and security administration is management and configuration of one or more computers with multiple operating systems, multiple hardware architectures, multiple software suites, together with the shared resources necessary, such as wired and wireless networks, to make them work effectively and securely. System administration requires an understanding of how computer systems work, an attention to detail, problem solving, people skills, security and planning. Computers which function as servers may run Unix-like systems, although others run proprietary software such as Novell, IBM or Microsoft.

SYNOPSIS

This course introduces students to the administration of computer systems and computer networks. Coverage includes system administration tools, security techniques, system initialisation, resource management, backups, performance measurement, and network and security administration. Further topics include documentation policy development and disaster recovery. Practical work requires use of Unix-like operating systems on dedicated Intel-architecture PCs or equivalent hardware and software negotiated with the lecturer prior to commencement of the semester.

OBJECTIVES

On completion of this course students will be able to:

1. demonstrate an intermediate level of understanding of general principles of computer system administration (Assignment 1, Exam);

2. apply security techniques to enhance computer system security and communication (Assignment 1, Exam);
3. select, install, and configure applications on an Open Source operating system (Assignment 1 and 2, Exam);
4. manage and implement a system for backup and recovery (Assignment 2, Exam);
5. maintain routing tables and firewalls (Assignment 2, Exam);
6. demonstrate an appreciation for the intrusion detection systems and techniques (Assignment 2, Exam).

TOPICS

	Description	Weighting (%)
1.	Introduction	10.00
2.	Linux basics	15.00
3.	System Programming	5.00
4.	Encryption, Authentication Techniques	10.00
5.	File system, Partitioning	10.00
6.	Security, monitoring, audit	10.00
7.	Resource management	5.00
8.	Network services, DNS, FTP,SSH,SAMBA	15.00
9.	Data and network security	20.00

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).

Although subject to change, at this stage, it is expected students may require access to Semester 1, Department of Mathematics and Computing DVDROM SET, 2009 (available from the USQ Bookshop). This DVD set contains, Windows software and a complete Linux distribution necessary for this course.

Students will require access to the Internet. All course material can be found at <http://www.sci.usq.edu.au/courses>.

Nemeth, E, Snyder, G & Hein, TR *Linux administration handbook*, 2nd edn, Prentice Hall, Upper Saddle River, NJ.

(2nd Addition) ISBN 0-13-148004-9)

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
Examinations	2.00
Lectures	26.00
Private Study	110.00
Tutorials	26.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
ASSIGNMENT 1	100.00	20.00	07 Sep 2009
ASSIGNMENT 2	100.00	20.00	26 Oct 2009
2 HR OPEN EXAMINATION	100.00	60.00	END S2 (see note 1)

NOTES

1. 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 aggregate of the weighted marks 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 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 must retain a copy of each item submitted for assessment. If requested, students will be required to provide a copy of assignments submitted for assessment purposes. Such copies should be despatched to USQ within 24 hours of receipt of a request being made.

OTHER REQUIREMENTS

- 1 Computer requirements: Students must have exclusive and fully privileged access to an Intel x86 architecture PC with at least 500MB free disk space and an unused disk partition.
 - 2 To complete the examination satisfactorily, students must obtain at least half of the marks available for the examination.
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