COIT11238 *Networked Infrastructure Foundations*
Term 1 - 2017

Profile information current as at 23/04/2024 07:54 pm

All details in this unit profile for COIT11238 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview
The unit provides the foundation knowledge of computer and network infrastructure that relate to the ACS core body of knowledge requirements in the areas of Technology Resources, Services Management and Outcomes Management. Students study the physical and logical components of ICT including the concepts and terminologies relating to computers and networking. Specifically, the unit focuses on computer architecture components, operating systems, network evolution, network hardware, network protocols and security. This unit provides the pre-requisite knowledge required for advanced networking and security units. NOTE: If students have undertaken COIT11233 then this unit should NOT be taken.

Details
Career Level: *Undergraduate*
Unit Level: *Level 1*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
There are no requisites for this unit.
Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 1 - 2017

- Adelaide
- Brisbane
- Cairns
- Distance
- Melbourne
- Rockhampton
- Sydney
- Townsville

Attendance Requirements
All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website
This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Online Quiz(zes)**
Weighting: 10%
2. **Online Quiz(zes)**
Weighting: 10%
3. **Written Assessment**
Weighting: 30%
4. **Examination**
Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the CQUniversity Policy site.
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Student evaluations / emails

Feedback
Create additional video resources

Recommendation
Refresh and add-to the "fast-forward" video clip summaries of weekly content and special concepts.

Action
Content has been refreshed and added to.

Feedback from Student evaluations / emails

Feedback
Weekly communication and forum posts keep students "connected", motivated and engaged, especially those studying in FLEX mode.

Recommendation
Ensure that weekly communications and summaries are prepared in order to keep students engaged and "connected".

Action
Weekly emails and communication with students via the forums forms a key part of the engagement strategy for this unit. This continues to be positively commented on in student feedback.

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Describe the technologies used in Information and Communication Technology including computer and network hardware and software components.
2. Discuss the elements of network security, including threats, attacks, vulnerabilities, policy and protection mechanisms.
3. Identify solutions to the problems related to the economics, design, and management of computer networks
4. Compare and contrast the hardware and software standards and protocols within the layered structure of typical network architecture
5. Explain the underlying technologies and security mechanisms required for successful wired and wireless communication.
6. Discuss the operation of TCP/IP protocols with respect to the encapsulation and delivery of data over the Internet
7. Compare and contrast the operation of typical client-server, P2P and cloud networked application protocols
8. Discuss the function, components and services provided by a modern networked operating system.

Australian Computer Society (ACS) recognises the Skills Framework for the Information Age (SFIA). SFIA is in use in over 100 countries and provides a widely used and consistent definition of ICT skills. SFIA is increasingly being used when developing job descriptions and role profiles.
ACS members can use the tool MySFIA to build a skills profile at
https://www.acs.org.au/professionalrecognition/mysfia-b2c.html
This unit contributes to the following workplace skills as defined by SFIA. The SFIA code is included:

- Network Support (NTAS)
- IT Operations (ITOP)
- Problem Management (PBMG)

Alignment of Learning Outcomes, Assessment and Graduate Attributes

N/A Level | Introductory Level | Intermediate Level | Graduate Level | Professional Level | Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes							
	1	2	3	4	5	6	7	8
1 - Online Quiz(zes) - 10%	•			•		•		
2 - Online Quiz(zes) - 10%	•			•	•			•
3 - Written Assessment - 30%	•		•	•	•	•		•
4 - Examination - 50%	•	•	•	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes							
	1	2	3	4	5	6	7	8
1 - Communication	•	•	•		•	•	•	•
2 - Problem Solving			•					
3 - Critical Thinking			•					
4 - Information Literacy	•	•	•	•	•	•	•	•
5 - Team Work								
6 - Information Technology Competence	•	•	•	•	•	•	•	•
7 - Cross Cultural Competence								
8 - Ethical practice								
9 - Social Innovation								
10 - Aboriginal and Torres Strait Islander Cultures								

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Online Quiz(zes) - 10%				•		•				
2 - Online Quiz(zes) - 10%	•					•				
3 - Written Assessment - 30%	•	•	•	•		•				
4 - Examination - 50%	•	•	•	•						

Textbooks and Resources

Textbooks

COIT11238

Prescribed

Guide to Networking Essentials
Edition: 7th (2016)
Authors: Greg Tomsho
Cengage
Boston , MA , USA
ISBN: 978-1-305-10543-0
Binding: Paperback

Additional Textbook Information
Important!. An e-book version of the textbook is available, but you will not be able to use this in your exam if you purchase it. Only the printed version of the textbook can be taken into the exam.

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Kieren Jamieson Unit Coordinator
k.jamieson@cqu.edu.au

Schedule

Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Computer Networks	Chapter 1	

Week 2 - 13 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Hardware Essentials	Chapter 2	

Week 3 - 20 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Topologies and Technologies	Chapter 3	

Week 4 - 27 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Media	Chapter 4	

Week 5 - 03 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Protocols	Chapter 5	

Vacation Week - 10 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
-- MID-TERM BREAK --		

Week 6 - 17 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
IP Addressing & Network Reference Models and Standards	Chapters 6 & 7	**Quiz 1** Due: Week 6 Thursday (20 Apr 2017) 2:00 pm AEST

Week 7 - 24 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Hardware in Depth	Chapter 8	

Week 8 - 01 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Introduction to Network Security	Chapter 9	

Week 9 - 08 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Wide Area Networking and Cloud Computing	Chapter 10	

Week 10 - 15 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Operating System Fundamentals	Chapter 11	

Week 11 - 22 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Network Management and Administration	Chapter 12	**Quiz 2** Due: Week 11 Thursday (25 May 2017) 2:00 pm AEST **Short-Answer Questions** Due: Week 11 Thursday (25 May 2017) 2:00 pm AEST

Week 12 - 29 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Troubleshooting and Support	Chapter 13	

Review/Exam Week - 05 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 12 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Quiz 1

Assessment Type
Online Quiz(zes)

Task Description
Complete this Moodle online quiz by the due date. It consists of 30 True/False/Multiple-Choice questions. You may attempt the quiz as

many times as you wish, however your result will be based on your FINAL attempt. Details of how and where you can complete the quiz will be available on the Moodle unit website. Note that assignment extensions are NOT possible for quizzes (i.e. you will not be able to attempt the quiz once the due date has passed).

Number of Quizzes
1

Frequency of Quizzes

Assessment Due Date
Week 6 Thursday (20 Apr 2017) 2:00 pm AEST
Warning: the Quiz closes after this time and no further attempts are allowed.

Return Date to Students
Week 6 Friday (21 Apr 2017)
Immediately after the quiz closes.

Weighting
10%

Assessment Criteria
The quiz is automatically graded by the system based on the selection of correct or incorrect answers.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
See Moodle unit website for details.

Learning Outcomes Assessed

- Describe the technologies used in Information and Communication Technology including computer and network hardware and software components.
- Compare and contrast the hardware and software standards and protocols within the layered structure of typical network architecture
- Discuss the operation of TCP/IP protocols with respect to the encapsulation and delivery of data over the Internet

Graduate Attributes

- Information Literacy
- Information Technology Competence

2 Quiz 2

Assessment Type
Online Quiz(zes)

Task Description
Complete this Moodle online quiz by the due date. It consists of 30 True/False/Multiple-Choice questions. You may attempt the quiz as many times as you wish, however your result will be based on your FINAL attempt. Details of how and where you can complete the quiz will be available on the Moodle unit website. Note that assignment extensions are NOT possible for quizzes (i.e. you will not be able to attempt the quiz once the due date has passed).

Number of Quizzes
1

Frequency of Quizzes

Assessment Due Date
Week 11 Thursday (25 May 2017) 2:00 pm AEST
Warning: the Quiz closes after this time and no further attempts are allowed.

Return Date to Students
Week 11 Friday (26 May 2017)
Immediately after the quiz closes.

Weighting
10%

Assessment Criteria
The quiz is automatically graded by the system based on the selection of correct or incorrect answers.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
See Moodle unit website for instructions.

Learning Outcomes Assessed

- Describe the technologies used in Information and Communication Technology including computer and network hardware and software components.
- Compare and contrast the hardware and software standards and protocols within the layered structure of typical network architecture
- Explain the underlying technologies and security mechanisms required for successful wired and wireless communication.
- Discuss the function, components and services provided by a modern networked operating system.

Graduate Attributes

- Communication
- Information Technology Competence

3 Short-Answer Questions

Assessment Type
Written Assessment

Task Description
The purpose of this assignment is to respond in your own words to a series of short-answer questions relating to content in weeks 1 - 10. You will also be required to develop ten of your own questions and responses, one for each week (1 - 10). Details of the task and what you are required to submit will be available on the Moodle unit website.
Note that late penalties apply (5% of the total available marks per calendar day late or part thereof). Assignments received 14 days or more after the due date will not be marked and will receive zero. Students may apply for extensions but must provide documentary evidence to support their request. See the unit website for details.

Assessment Due Date
Week 11 Thursday (25 May 2017) 2:00 pm AEST

Return Date to Students

Review/Exam Week, Thursday 18 Feb 2016

Weighting
30%

Assessment Criteria
A detailed tabular marking criteria is provided as part of your submission template - please ensure you read it before attempting the assignment. You will be assessed on your responses in regards to their clarity and detail. You will be assessed on your questions with respect to how challenging they are and the level of detail you provide in your sample answers.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Your assignment must be submitted in doc/docx format. See moodle unit website for details.

Learning Outcomes Assessed

- Describe the technologies used in Information and Communication Technology including computer and network hardware and software components.
- Identify solutions to the problems related to the economics, design, and management of computer networks
- Compare and contrast the hardware and software standards and protocols within the layered structure of typical network architecture
- Explain the underlying technologies and security mechanisms required for successful wired and wireless communication.

- Discuss the operation of TCP/IP protocols with respect to the encapsulation and delivery of data over the Internet
- Discuss the function, components and services provided by a modern networked operating system.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

Examination

Outline
Complete an invigilated examination.

Date
During the examination period at a CQUniversity examination centre.

Weighting
50%

Length
120 minutes

Exam Conditions
Open Book.

Materials
Calculator - non-programmable, no text retrieval, silent only
Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?
A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?
A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?
For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem