



MONASH University
Information Technology

FIT1005
Networks and data communications

Unit Guide

Semester 2, 2014

Copyright © Monash University 2014. All rights reserved. Except as provided in the Copyright Act 1968, this work may not be reproduced in any form without the written permission of the host Faculty and School/Department.

The information contained in this unit guide is correct at time of publication. The University has the right to change any of the elements contained in this document at any time.

Last updated: 23 Jun 2014

Table of Contents

<u>FIT1005 Networks and data communications - Semester 2, 2014</u>	1
<u>Mode of Delivery</u>	1
<u>Workload Requirements</u>	1
<u>Unit Relationships</u>	1
<u>Prohibitions</u>	1
<u>Chief Examiner</u>	1
<u>Campus Lecturer</u>	1
<u>Caulfield</u>	1
<u>Tutors</u>	1
<u>Caulfield</u>	1
<u>Your feedback to Us</u>	2
<u>Previous Student Evaluations of this Unit</u>	2
<u>Academic Overview</u>	3
<u>Learning Outcomes</u>	3
<u>Unit Schedule</u>	4
<u>Teaching Approach</u>	4
<u>Assessment Summary</u>	4
<u>Assessment Requirements</u>	6
<u>Assessment Policy</u>	6
<u>Assessment Tasks</u>	6
<u>Participation</u>	6
<u>Examinations</u>	7
<u>Examination 1</u>	8
<u>Learning resources</u>	8
<u>Reading list</u>	8
<u>Feedback to you</u>	8
<u>Extensions and penalties</u>	8
<u>Returning assignments</u>	9
<u>Assignment submission</u>	9
<u>Online submission</u>	9
<u>Prescribed text(s)</u>	9
<u>Other Information</u>	10
<u>Policies</u>	10
<u>Faculty resources and policies</u>	10
<u>Graduate Attributes Policy</u>	10
<u>Student Charter</u>	10
<u>Student services</u>	10
<u>Monash University Library</u>	11
<u>Disability Liaison Unit</u>	11

FIT1005 Networks and data communications - Semester 2, 2014

This unit introduces students to fundamentals of distributed networked environment. It provides knowledge of internetworking standards and understanding of the networking architecture, technology and operation.

Mode of Delivery

Caulfield (Day)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

(a.) Contact hours for on-campus students:

- Two hours lectures
- Two hours laboratories

(b.) Additional requirements (all students):

- A minimum of 8 hours independent study per week for completing lab and project work, private study and revision.

Unit Relationships

Prohibitions

BUS2062, BUS3150, CPE1007, CSE2004, CSE2318, CSE3318, CSE9801, GCO3812, FIT2008

Chief Examiner

Dr Abdul Khan

Campus Lecturer

Caulfield

Malik Khan

Tutors

Caulfield

Malik Khan

Your feedback to Us

Monash is committed to excellence in education and regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through the Student Evaluation of Teaching and Units (SETU) survey. The University's student evaluation policy requires that every unit is evaluated each year. Students are strongly encouraged to complete the surveys. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

For more information on Monash's educational strategy, see:

www.monash.edu.au/about/monash-directions/ and on student evaluations, see:
www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this Unit

The unit now includes hands-on practicals and a mid-term (unit) test. The coursework contents have been revised with emphasis on network design and industry practices.

If you wish to view how previous students rated this unit, please go to
<https://emuapps.monash.edu.au/unitevaluations/index.jsp>

Academic Overview

Learning Outcomes

At the completion of this unit, students should be able to:

- discuss network architecture standards for open systems;
- describe OSI reference Internet models;
- explain fundamentals and technologies of physical, data-link and network layers;
- describe the functions and architectures of LAN and WAN;
- analyse and design LAN architecture for organisational requirements;
- analyse data communication networks;
- cooperate effectively within small groups;
- present their work in various forms.

Unit Schedule

Week	Activities	Assessment
0	Students should register for tutorials	No formal assessment or activities are undertaken in week 0
1	LN1: Introduction to Data Communications, Data Networking, and Protocol Architecture	Tutorials start from Week 2
2	LN2: Data Transmission: Signals and their characteristics	Hands-On (HO) exercise HO-1 start
3	LN3: Transmission Media	
4	LN4: Signal Encoding Techniques	
5	LN4: Signal Encoding Techniques (End) LN5: Digital Data Communications Techniques	Assignment 1 due Friday 29 August 2014, 4:00 PM
6	LN6: Data Link Control Protocols	
7	LN7: Multiplexing	Hands-on Lab Practical Assessment during the tutorial/lab in Week 7
8	LN8: LAN Overview	Unit Test during lecture in Week 8
9	LN9: High Speed LANs	
10	LN10: Application: EMAIL, HTTP & DNS	
11	LN11: Internetworking-I	
12	LN12: Internetworking-II (continued)	Assignment 2 due Friday 24 October 2014, 4:00 PM
	SWOT VAC	No formal assessment is undertaken in SWOT VAC
	Examination period	LINK to Assessment Policy: http://policy.monash.edu.au/policy-bank/academic/education/assessment/assessment-in-coursework-policy.html

*Unit Schedule details will be maintained and communicated to you via your learning system.

Teaching Approach

Lecture and tutorials or problem classes

This teaching and learning approach provides facilitated learning, practical exploration and peer learning.

Assessment Summary

Examination (2 hours): 50%; In-semester assessment: 50%

Assessment Task	Value	Due Date
Assignment 1	15%	Friday 29 August 2014, 4:00 PM
Assignment 2	20%	Friday 24 October 2014, 4:00 PM
Hands-on Lab Practical	5%	During the tutorial/lab in Week 7 (between 8 - 12 September 2014)

Unit Schedule

Unit Test	10%	During the lecture in Week 8 (Week starting 15 September 2014)
Examination 1	50%	To be advised

Assessment Requirements

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

(<http://intranet.monash.edu.au/infotech/resources/staff/edgov/policies/assessment-examinations/assessment-hurdles>)

Academic Integrity - Please see resources and tutorials at

<http://www.monash.edu/library/skills/resources/tutorials/academic-integrity/>

Assessment Tasks

Participation

• Assessment task 1

Title:

Assignment 1

Description:

This assignment tests your theoretical understanding of the introductory data communications concepts through a series of short answer questions.

Weighting:

15%

Criteria for assessment:

1. Completeness - that you have answered all parts of each question.
2. Presentation - that you have presented your answers in a suitably formatted report style.
3. Use of evidence and argument - you are able to explain your position by using logical argument drawing on the theory presented in the unit.

Due date:

Friday 29 August 2014, 4:00 PM

• Assessment task 2

Title:

Assignment 2

Description:

This is a group assignment. It provides an opportunity for you to apply data communications concepts to a practical networking example. You will be required to analyse a case study and make networking recommendations based on the user requirements. This assignment will also allow you to present your solutions in a formal report format.

Contributions from individual members of a group will be described in the formal report. Such data will be used to individualise student marks in cases of substantially inequitable work put in by members of a given group.

Weighting:

20%

Criteria for assessment:

Assessment Requirements

1. Correctness and understanding - there may be more than one "right" answer in many cases. We will look for answers that reflect understanding of the underlying principles and theories.
2. Completeness - that you have answered all parts of each question.
3. Presentation - that you have presented your answers in a suitably formatted report style.
4. Use of evidence and argument - you are able to explain your position by using logical argument drawing on the theory presented in the unit.

A marking guide will be provided on the unit website detailing the over all marks distribution and for allocating marks in a way that recognises different contributions of group members for this assessment.

Due date:

Friday 24 October 2014, 4:00 PM

• **Assessment task 3**

Title:

Hands-on Lab Practical

Description:

Students will be asked to perform a set of networking tasks in the lab and note their results. The results will be assessed.

Weighting:

5%

Criteria for assessment:

1. Completeness - that you have answered all parts of each question.
2. Presentation - that you have presented your answers in a suitably formatted report style.

Due date:

During the tutorial/lab in Week 7 (between 8 - 12 September 2014)

• **Assessment task 4**

Title:

Unit Test

Description:

A one-hour unit test will be conducted during the lecture of Week 8. It will be closed book, and no electronic devices will be permitted except for non-programmable calculators.

Weighting:

10%

Criteria for assessment:

Due date:

During the lecture in Week 8 (Week starting 15 September 2014)

Remarks:

Only non-programmable calculators will be allowed in the test.

Examinations

Assessment Requirements

• Examination 1

Weighting:

50%

Length:

2 hours

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

Only non-programmable calculators will be allowed in the exam.

Learning resources

Reading list

- Behrouz A. Forouzan, *Data Communications and Networking*, 4th Edition, 2007, or 5th Edition 2013 McGraw-Hill.
- David Stamper et al, *Business Data Communications*, 6th Edition, 2003, Prentice Hall.
- Fred Halsall, *Data Communications, Computer Networks, and Open Systems*, 4th Edition, 1998, Addison-Wesley
- Kurose and Ross, *Computer Networking – A top-down approach*, 6th Edition, 2012.

Monash Library Unit Reading List (if applicable to the unit)

<http://readinglists.lib.monash.edu/index.html>

Faculty of Information Technology [Style Guide](#)

Feedback to you

Examination/other end-of-semester assessment feedback may take the form of feedback classes, provision of sample answers or other group feedback after official results have been published. Please check with your lecturer on the feedback provided and take advantage of this prior to requesting individual consultations with staff. If your unit has an examination, you may request to view your examination script booklet, see

<http://intranet.monash.edu.au/infotech/resources/students/procedures/request-to-view-exam-scripts.html>

Types of feedback you can expect to receive in this unit are:

- Informal feedback on progress in labs/tutes
- Graded assignments with comments
- Test results and feedback
- Solutions to tutes, labs and assignments
- Other: Graded hands-on exercise

Extensions and penalties

Submission must be made by the due date otherwise penalties will be enforced.

You must negotiate any extensions formally with your campus unit leader via the in-semester special consideration process: <http://www.monash.edu.au/exams/special-consideration.html>

Returning assignments

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assignment submission

It is a University requirement

(<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-managing-pla>) for students to submit an assignment coversheet for each assessment item. Faculty Assignment coversheets can be found at <http://www.infotech.monash.edu.au/resources/student/forms/>. Please check with your Lecturer on the submission method for your assignment coversheet (e.g. attach a file to the online assignment submission, hand-in a hard copy, or use an online quiz). Please note that it is your responsibility to retain copies of your assessments.

Online submission

If Electronic Submission has been approved for your unit, please submit your work via the learning system for this unit, which you can access via links in the my.monash portal.

Prescribed text(s)

Limited copies of prescribed texts are available for you to borrow in the library.

William Stallings. (2007 or 2012 or 2013 (latest)). *Data and Computer Communications*. (8th or 9th or 10th (latest) Edition) Prentice Hall (ISBN: ISBN-13: 978-0133506488).

Other Information

Policies

Monash has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University's academic standards, and to provide advice on how they might uphold them. You can find Monash's Education Policies at:

www.policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Student Academic Integrity Policy and Student Academic Integrity: Managing Plagiarism and Collusion Procedures ;
<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-academic-integrity-policy.h>
- Assessment in Coursework Programs;
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/assessment-in-coursework-po>
- Special Consideration;
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.ht>
- Grading Scale;
<http://www.policy.monash.edu/policy-bank/academic/education/assessment/grading-scale-policy.html>
- Discipline: Student Policy;
<http://www.policy.monash.edu/policy-bank/academic/education/conduct/student-discipline-policy.html>
- Academic Calendar and Semesters; <http://www.monash.edu.au/students/dates/>
- Orientation and Transition; <http://intranet.monash.edu.au/infotech/resources/students/orientation/>
- Academic and Administrative Complaints and Grievances Policy;
<http://www.policy.monash.edu/policy-bank/academic/education/management/complaints-grievance-policy.h>

Faculty resources and policies

Important student resources including Faculty policies are located at

<http://intranet.monash.edu.au/infotech/resources/students/>

Graduate Attributes Policy

<http://www.policy.monash.edu/policy-bank/academic/education/management/monash-graduate-attributes-policy.h>

Student Charter

www.opq.monash.edu.au/ep/student-charter/monash-university-student-charter.html

Student services

The University provides many different kinds of support services for you. Contact your tutor if you need advice and see the range of services available at <http://www.monash.edu.au/students>. For Malaysia see <http://www.monash.edu.my/Student-services>, and for South Africa see <http://www.monash.ac.za/current/>.

Monash University Library

The Monash University Library provides a range of services, resources and programs that enable you to save time and be more effective in your learning and research. Go to www.lib.monash.edu.au or the library tab in my.monash portal for more information. At Malaysia, visit the Library and Learning Commons at <http://www.lib.monash.edu.my/>. At South Africa visit <http://www.lib.monash.ac.za/>.

Disability Liaison Unit

Students who have a disability or medical condition are welcome to contact the Disability Liaison Unit to discuss academic support services. Disability Liaison Officers (DLOs) visit all Victorian campuses on a regular basis.

- Website: <http://www.monash.edu/equity-diversity/disability/index.html>
- Telephone: 03 9905 5704 to book an appointment with a DLO; or contact the Student Advisor, Student Community Services at 03 55146018 at Malaysia
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1, Building 55, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Malaysia Campus