FIT9005
Computer architecture and networks

Unit Guide

Summer semester, 2013

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.

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# Table of Contents

**FIT9005 Computer architecture and networks - Summer semester, 2013** .............................................1  
Contact Hours .................................................................................................................................1  
Workload ...........................................................................................................................................1  
Unit Relationships .............................................................................................................................1  
  - Prohibitions ...............................................................................................................................1  
  - Co-requisites ............................................................................................................................1  
  - Prerequisites .............................................................................................................................1  
Chief Examiner ....................................................................................................................................1  
Campus Lecturer ...............................................................................................................................1  
  - Caulfield .....................................................................................................................................1  
Tutors ..................................................................................................................................................2  
  - Caulfield .....................................................................................................................................2  

**Academic Overview** ..........................................................................................................................3  
  - Outcomes ...................................................................................................................................3  
  - Graduate Attributes ....................................................................................................................3  
  - Assessment Summary ................................................................................................................3  
  - Teaching Approach ....................................................................................................................3  
  - Feedback ......................................................................................................................................3  
  - Our feedback to You ....................................................................................................................3  
  - Your feedback to Us ....................................................................................................................3  
Previous Student Evaluations of this unit ...........................................................................................4  
Required Resources ............................................................................................................................4  
Recommended Resources ................................................................................................................4  
Recommended text(s) ........................................................................................................................4  

**Unit Schedule** ....................................................................................................................................5  

**Assessment Requirements** ..............................................................................................................6  
  - Assessment Policy.......................................................................................................................6  
  - Assessment Tasks........................................................................................................................6  
  - Participation ..................................................................................................................................6  
Examinations ..........................................................................................................................................6  
  - Examination 1 ..............................................................................................................................6  
Assignment submission .......................................................................................................................7  
Online submission ...............................................................................................................................7  
Extensions and penalties ......................................................................................................................7  
Returning assignments ........................................................................................................................7  

**Other Information** ..........................................................................................................................8  
  - Policies .........................................................................................................................................8  
  - Student services ...........................................................................................................................8  
  - Reading list ...................................................................................................................................9
FIT9005 Computer architecture and networks - Summer semester, 2013

This unit introduces students to fundamentals of computer hardware and software, and networking. The unit provides knowledge of computer structure and operation, including Arithmetic-Logic Unit, computer registers, internal bus, memory; system software, including compilers and operating systems; and computer networking and data communication.

Contact Hours

2 hrs lectures/wk, 2 hrs tutorials/wk

Workload

Students will be expected to spend a total of 24 hours per week during semester on this unit as follows:

- Lectures: In summer 2 Lectures per week of 2 hours each.
- Practical classes/Tutorials : In summer 2 Tutorials per week of 2 hours each
- Private study (revision, homework and practical class preparation): 16 hours per week

Unit Relationships

Prohibitions

FIT1005, FIT1031, FIT9018, FIT9020, BUS4150, BUS5112, CPE4002, CSE4884, CSE9801

Co-requisites

FIT9004 or FIT9017

Prerequisites

Proficiency in basic mathematics.

Chief Examiner

Dr Jefferson Tan

Campus Lecturer

Caulfield

Dr. Abdul Malik Khan

Consultation hours: TBA
Tutors

Caulfield

Dr. Abdul Malik Khan
Academic Overview

Outcomes

At the completion of this unit students will have -

Graduate Attributes

Monash prepares its graduates to be:

1. responsible and effective global citizens who:
   
a. engage in an internationalised world
b. exhibit cross-cultural competence
c. demonstrate ethical values

critical and creative scholars who:

a. produce innovative solutions to problems
b. apply research skills to a range of challenges
c. communicate perceptively and effectively

Assessment Summary

Examination (3 hours): 60%; In-semester assessment: 40%

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-semester test</td>
<td>12%</td>
<td>Friday 01 February 2013</td>
</tr>
<tr>
<td>Tutorial tests 1, 2, 3, 4</td>
<td>28% total (7% each)</td>
<td>Weeks 3, 4, 6 and 7</td>
</tr>
<tr>
<td>Examination 1</td>
<td>60%</td>
<td>To be advised</td>
</tr>
</tbody>
</table>

Teaching Approach

Lecture and tutorials or problem classes

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

Feedback

Our feedback to You

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

- Informal feedback on progress in labs/tutes
- Test results and feedback
- Quiz results
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 SETU, Student Evaluation of Teacher and Unit. 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, and on student evaluations, see:
http://www.policy.monash.edu/policy-bank/academic/education/quality/student-evaluation-policy.html

Previous Student Evaluations of this unit

Previous evaluations of this unit have been very positive. After feedback from Semester 1, 2011, a more detailed coverage of computer architecture was introduced.

If you wish to view how previous students rated this unit, please go to

Required Resources

Please check with your lecturer before purchasing any Required Resources. Limited copies of prescribed texts are available for you to borrow in the library, and prescribed software is available in student labs.


Recommended Resources


Recommended text(s)


**Unit Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Activities</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No formal assessment or activities are undertaken in week 0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>LN1: Fri Jan 04 - Overview of the unit; history of computing; overview of computer organisation; why we learn this unit.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>LN3: Wed Jan 16 - Boolean algebra and digital logic. LN4: Fri Jan 18 - Computer architecture (I).</td>
<td>Tutorial Test 1 (TT1: LN1-LN2) will be held during this week’s tutorials</td>
</tr>
<tr>
<td>4</td>
<td>LN4: Wed Jan 23 - Computer architecture (II) (continued). LN5: Fri Jan 25 - System software.</td>
<td>Tutorial Test 2 (TT2: LN3-LN4) will be held during this week’s tutorials</td>
</tr>
<tr>
<td>5</td>
<td>LN6: Wed Jan 30 - Operating systems (I). LN6: Fri Feb 01 - Operating Systems (II). Mid Semester Test (during the lecture).</td>
<td>Mid Semester Test (MST: LN1-LN5) will be held on Friday 01 February 2013 during the lecture</td>
</tr>
<tr>
<td>6</td>
<td>LN7: Wed Feb 6 - Introduction to computer networks. LN8: Fri Feb 8 - Application layer.</td>
<td>Tutorial Test 3 (TT3: LN5-LN6) will be held during this week’s tutorials</td>
</tr>
<tr>
<td>7</td>
<td>LN9: Wed Feb 13 - Transport layer and Network Layer.</td>
<td>Tutorial Test 4 (TT4: LN7-LN8) will be held during this week’s tutorials</td>
</tr>
<tr>
<td>8</td>
<td>Final Examination (3 hours)</td>
<td>Wednesday 20 February 2013, Week 8</td>
</tr>
<tr>
<td>9</td>
<td></td>
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<td>10</td>
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<td>12</td>
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</tbody>
</table>

**Examination period**


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

Assessment Policy

Faculty Policy - Unit Assessment Hurdles

Academic Integrity - Please see the Demystifying Citing and Referencing tutorial at http://lib.monash.edu/tutorials/citing/.

Assessment Tasks

Participation

• **Assessment task 1**
  
  **Title:** Mid-semester test
  
  **Description:** Test includes material taught in lecture modules LN1-LN5.
  
  **Weighting:** 12%
  
  **Criteria for assessment:** How well principles and procedures are demonstrated in the student's answers.
  
  **Due date:** Friday 01 February 2013

• **Assessment task 2**
  
  **Title:** Tutorial tests 1, 2, 3, 4
  
  **Description:**
  
  ♦ Test 1: modules LN1-LN2
  ♦ Test 2: modules LN3-LN4
  ♦ Test 3: modules LN5-LN6
  ♦ Test 4: modules LN7-LN8
  
  **Weighting:** 28% total (7% each)
  
  **Criteria for assessment:** How well principles and procedures are demonstrated in the student's answers.
  
  **Due date:** Weeks 3, 4, 6 and 7

Examinations
Assessment Requirements

- **Examination 1**
  - **Weighting:** 60%
  - **Length:** 3 hours
  - **Type (open/closed book):** Closed book
  - **Electronic devices allowed in the exam:** None

**Assignment submission**

It is a University requirement ([http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html](http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-procedures.html)) 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/](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).

**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.

**Extensions and penalties**

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


**Returning assignments**

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.
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: http://policy.monash.edu.au/policy-bank/academic/education/index.html

Key educational policies include:

- Plagiarism (http://www.policy.monash.edu/policy-bank/academic/education/conduct/plagiarism-policy.html)
- Special Consideration (http://www.policy.monash.edu/policy-bank/academic/education/assessment/special-consideration-policy.html)
- 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/key-dates/)
- Orientation and Transition (http://www.infotech.monash.edu.au/resources/student/orientation/); and
- Codes of Practice for Teaching and Learning (http://www.policy.monash.edu/policy-bank/academic/education/conduct/suppdocs/code-of-practice-teaching-and-learning.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 www.monash.edu.au/students. For Sunway see http://www.monash.edu.my/Student-services, and for South Africa see http://www.monash.ac.za/current/.

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

Academic support services may be available for students who have a disability or medical condition. Registration with the Disability Liaison Unit is required. Further information is available as follows:

- Website: http://monash.edu/equity-diversity/disability/index.html
- Email: dlu@monash.edu
- Drop In: Equity and Diversity Centre, Level 1 Gallery Building (Building 55), Monash University, Clayton Campus, or Student Community Services Department, Level 2, Building 2, Monash University, Sunway Campus
- Telephone: 03 9905 5704, or contact the Student Advisor, Student Community Services at 03 55146018 at Sunway
Reading list