



ISYS100

IT & Society

S1 Evening 2013

Computing

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	8
<u>Unit Schedule</u>	10
<u>Policies and Procedures</u>	10
<u>Graduate Capabilities</u>	11
<u>Standards and Grading</u>	16

Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

General Information

Unit convenor and teaching staff

Unit Convenor

Matthew Mansour

matthew.mansour@mq.edu.au

Contact via matthew.mansour@mq.edu.au

Credit points

3

Prerequisites

Corequisites

Co-badged status

Unit description

This unit introduces students to the role of technology, particularly information technology, for the individual, organisations, society and the wider environment. The unit provides literacy of key terms, ideas and issues related to technology and technological advancement. Issues to be explored in relation to technology include: environment and sustainability; privacy and information access; ethics and politics; digital divide; globalisation; the information society; and the knowledge economy. Students consider the relevance and ramifications of current applications and research in a range of diverse fields including: artificial intelligence; games technology; human-to-computer speech and interaction; social software; and mobile computing. Students gain basic computer literacy and competence through practical activities and exploration of applications relevant to each topic.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

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

An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.

A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.

The ability to orally communicate clearly and effectively about information technology applications.

Assessment Tasks

Name	Weighting	Due
<u>Tutorial Exercises</u>	3%	Varies: Wk 3 & 6 & 7
<u>Group Presentation</u>	5%	Varies: Wk 9 or 10 or 11 or 12;
<u>Quizzes</u>	21%	Varies: Wk 5 & 8 & 11
<u>Practical Exam</u>	25%	Wk 13
<u>Assignments</u>	14%	Varies: Wk 5 & 9 & 12
<u>Research paper</u>	32%	Fri 7th June 2013

Tutorial Exercises

Due: **Varies: Wk 3 & 6 & 7**

Weighting: **3%**

Submission of Tutorial Questions:

Each week you will be discussing different concepts within your tutorial time. In most weeks you will be given a tutorial sheet, available via iLearn. In most cases the tutorial discussion is offset from the previous weeks lecture. At the start of a tutorial your tutor will conduct a mini class discussing the lecture material from the previous week. In several weeks you will have an in-class submission. These submissions will be in weeks 3, 6 & 7. You will receive a maximum of one mark per submission, to a maximum of 3 (three) marks overall. In the week following submission answers your tutor will address particular issues with this material experienced by your class and give back your marked submission.

NB. This is an in-class exercise. No submissions will be accepted via email.

Marking of Submitted Questions:

The sets of questions submitted in weeks 3, 6 & 7 will be marked according to the following guidelines:

- 1 mark The student has made a genuine attempt to answer almost all the questions.

- 1/2 mark The student has made a genuine attempt to answer most all the questions.
- 0 mark The submission does not meet either of the above two requirements.

Part marks will not be awarded - each tutorial submission will receive 1, 1/2 or 0 - nothing else.

On successful completion you will be able to:

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.

Group Presentation

Due: **Varies: Wk 9 or 10 or 11 or 12;**

Weighting: **5%**

Group Presentations

Each group will be assigned a topic by their tutor; the job of the group is to explore the topic and deliver a professional and polished presentation. Each member must contribute to the research and presentation of the material. The presentation will be approximately 5-7 minutes in length (including question time).

On successful completion you will be able to:

- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.
- The ability to orally communicate clearly and effectively about information technology applications.

Quizzes

Due: **Varies: Wk 5 & 8 & 11**

Weighting: **21%**

Quizzes

In weeks 5, 8 and 11 there will be a short test in the tutorials. Each quiz is worth 7% towards your final grade (i.e 21% in total) These quizzes will cover important parts of the unit material and, as well as assessing your current level of mastery of it, give you and your tutor an opportunity to address any problem areas before the final research paper. The quizzes will normally not take the whole class and will be followed by in-class problems. Please be on time to these classes, as the quiz will be the first thing in the class.

On successful completion you will be able to:

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.

Practical Exam

Due: **Wk 13**

Weighting: **25%**

In week 13 a practical examination will be held, covering the material from the assignments. It will be closed book and require students to work at a computer. It will last 40 minutes. Further detail will be given in lectures as we near closer to the end of the semester.

On successful completion you will be able to:

- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.

Assignments

Due: **Varies: Wk 5 & 9 & 12**

Weighting: **14%**

There will be three assignments. Students will be expected to attend the classes in which the assignments are due, as the assignments will be marked in class.

Assignment 1: Individual HTML/JS/CSS (6%) - due Week 5

Assignment 2: Group Blog (5%) - due Week 9

Assignment 3: Group Video (3%) - due Week 12

NB. All details of each assignment will be available via iLearn.

You are encouraged to:

- set your personal deadline earlier than the actual one;
- keep backups of all your important files;
- ensure that no-one else picks up your printouts.

Late work for the tutorials, quizzes and assignment will not be accepted. If you cannot submit on time because of illness or other circumstances, please contact the lecturer **as soon as possible**

so that appropriate measures (such as arriving at an indicative mark from other work in the same category) can be taken.

NB: You will notice that each student will need to create a Twitter account; this will be an essential part of how assignments will be marked and also commented on. Please talk to your teachers about how to create an account. It will also be a useful way for you to communicate within your groups for tutorials and practicals. Your lecturer will also send updates via Twitter.

On successful completion you will be able to:

- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.
- The ability to orally communicate clearly and effectively about information technology applications.

Research paper

Due: **Fri 7th June 2013**

Weighting: **32%**

Research Paper

You will be provided in week 11 with several candidate questions that you can use for your Research Paper. The paper will be approximately 2400 words. You will need to create the paper in an essay format. The paper will be due on the last day of the semester. (This being Fri 7th June 2013) It is sometimes also known as a take-home examination. With any original work you will need to demonstrate an understanding of how to reference all materials that you have used. Your tutor and/or practical teacher can also give you guidance on this.

NB. Specific time cutoffs etc will be confirmed when released in week 11

Policies

Macquarie is developing a number of policies in the area of learning and teaching. Approved policies and associated guidelines and procedures can be found at [Policy Central](#). There you will find the University's policy and associated procedures on:

- Assessment
- Special Consideration
- Plagiarism
- Grade Appeal

Assessment

The procedure implementing the new assessment policy can be found [here](#).

Special Consideration

Special Consideration is intended for a student who is prevented by serious and unavoidable disruption from completing any unit requirements in accordance with their ability.

In this case, you should follow the procedure implementing the policy available [here](#).

Details on special consideration are available [here](#).

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period. For details of the Special Consideration policy specific to the Department of Computing, see the Department's [policy page](#).

Plagiarism

Plagiarism involves using the work of another person and presenting it as one's own. The Department, in line with University policy, treats all cases seriously. In particular, the Department, and the University, keeps a record of all plagiarism cases. This record is referred to so that an appropriate penalty can be applied to each case.

More details are available [here](#).

Grade Appeal

In case of problems arising from the final unit grade provided by academic staff members, the first step is to request a review of your grade. The Department recommends that you submit a request in writing to the convenor of the unit in order to arrange a review session. If this review does not resolve the problem, a formal Grade Appeal can be lodged via www.ask.mq.edu.au

On successful completion you will be able to:

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.

Delivery and Resources

Teaching and Learning Strategy

Mode of delivery is face-to-face. ISYS100 is taught via lectures, tutorials and practical sessions in the laboratory. Lectures are used to introduce new material and discuss the use of information technology within society. While lectures are largely one-to-many presentations, you are encouraged to ask questions of the lecturer to clarify anything you might not be sure of. Tutorials are small group classes, which give you the opportunity to interact with your peers and with a tutor who has a sound knowledge of the subject.

You will be given problems to solve most weeks prior to the tutorial; preparing solutions is important because it will allow you to discuss the problems effectively with your tutor and maximise the feedback you get on your work. When you have practical sessions you have an opportunity to practice your technical skills under the supervision of a practical demonstrator. Each week you will be working on the current assignment material; it is important that you keep up with this work in order to successfully complete the assignments.

Each week you should:

- Attend lectures, take notes, ask questions.
- Be available for your group via Twitter.
- Attend your tutorial, seek feedback from your tutor on your work. See them in consultation times!
- Attend the practical session, and seek feedback from the practical demonstrator on your work.
- Read appropriate sections of the text, add to your notes and prepare questions for your lecturer or tutor.
- Prepare answers to the following week's tutorial questions.

Lecture notes will be made available each week but these notes are intended as an outline of the lecture only and are not a substitute for your own notes or the textbook.

Classes

Each week you should attend two hours of lectures, a two-hour tutorial and a one-hour practical class. **Please note** that tutorials are scheduled for 2 hours but in most weeks they will run for one hour and have consultation time in the second hour. (For details of days, times and rooms consult the [timetables webpage](#).)

Note that both tutorials and practicals commence in week 1.

Please note that you are **required** to submit a certain number of tutorials and assignments. Failure to do so may result in you failing the unit (see the precise Standard and Grading section) or being excluded from the exam/research paper.

What has changed from previous semesters?

As with every semester we try to use the experiences from previous semesters to enhance the unit. The key change(s) has been the tutorial submissions content, quizzes and practical exam. This all have been tried and tested within the summer period of 2012

Textbook

The textbook for ISYS100 used this semester is:

ISBN: 9781442563131

Title: ISYS100 Information Technology and Society CB 3e

- Author: Turban, Beekman et al.
- RRP - \$126.95 (before bookshop discount)

Technology used and required

iLecture/echo

Digital recordings of lectures are available.

ISYS100 makes use of the following software:

- Microsoft Windows 8
- Microsoft Office 2010 / 2013
- Internet Explorer and Mozilla Firefox
- Windows Movie Maker

Website

The web page for this unit can be found at: <http://ilearn.mq.edu.au>.

Discussion Boards

The discussion board for this unit can be accessed through <http://ilearn.mq.edu.au>.

Staff-Student Liaison Committee

The Department has established a Staff-Student Liaison Committee at each level (100, 200, 300) to provide all students studying a Computing unit the opportunity to discuss related issues or problems with both students and staff. The committee meets three times during the semester. For each meeting, an agenda is issued and minutes are taken. The minutes reflect the issues raised and the proposed outcomes. Copies of the minutes are posted on the web at <http://www.comp.mq.edu.au/units/100-liaison>.

If your issue is unable to be addressed through the Staff-Student Liaison Committee, then you should consult the Director of Teaching (Dr. Rolf Schwitter) or the Head of Department (Prof. Bernard Mans). You are entitled to have your concerns raised, discussed and resolved.

Student Support Services

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at <http://www.student.mq.edu.au>.

Assumed knowledge

Basic computer use skills.

Unit Schedule

Week	Topic	Reading
1	Introduction to information technology and society WEB 1.0 vs. 2.0 vs. 3.0?	Readings provided by your lecturer
2	Social networks - will they help me move house?	Chapter 7 Turban Readings provided by your lecturer
3	Blogs, internet journalism, the internet and democracy Pornography, gambling and censorship	Chapter 1 Evans & Coyle
4	The weird, the wired and wireless - how the internet is accessed.	Chapter 8 Beekman
5	Graphics, digital media, and multimedia Music, photos and videos	Chapter 6 Beekman
6	Hackers spam and phishing - Just how much viagra do I need?	Chapters 11 Valacich
7	The digital divide - Just whose internet is it? (gender, race, socio-economic factors affecting internet use, business vs personal use)	Chapter 9 Quinn
8	Googlemania (Google applications, Wikipedia and beyond) Computers at work, school and home	Chapter 9 & 10 Conti Readings provided by your lecturer
9	How do I know what computer to buy? Productivity applications	Chapter 2 & 4 Evans
10	Green IT – Making IT eco friendly (Ethics and the Internet)	Readings provided by your lecturer
11	Evolving internet, evolving software	Chapter 13 Beekman
12	Robotics and artificial intelligence – Can computers really think? Start unit revision for research paper and practical exam	Chapter 15 Beekman
13	Revision / referencing / ethics when writing a research paper	N/A

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://www.mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://www.mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://www.mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://www.mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Special Consideration Policy http://www.mq.edu.au/policy/docs/special_consideration/policy.html

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

Student Support

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at: <http://students.mq.edu.au/support/>

UniWISE provides:

- Online learning resources and academic skills workshops http://www.students.mq.edu.au/support/learning_skills/
- Personal assistance with your learning & study related questions.
- The Learning Help Desk is located in the Library foyer (level 2).
- Online and on-campus orientation events run by Mentors@Macquarie.

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

Details of these services can be accessed at <http://www.student.mq.edu.au/ses/>.

IT Help

If you wish to receive IT help, we would be glad to assist you at <http://informatics.mq.edu.au/help/>.

When using the university's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students and it outlines what can be done.

Graduate Capabilities

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.

Assessment tasks

- Assignments
- Research paper

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.

Assessment tasks

- Assignments
- Research paper

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.
- The ability to orally communicate clearly and effectively about information technology applications.

Assessment tasks

- Group Presentation
- Quizzes
- Practical Exam
- Assignments

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcome

- An introductory understanding of a range of important and/or current IT & IS issues, such

as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.

Assessment tasks

- Tutorial Exercises
- Quizzes

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- A competence with basic information technology applications, including basic computer management, e-mail, web browsers, web-page creators and productivity software and an understanding of how such applications work, to a level where students can learn new material without requiring formal training.

Assessment tasks

- Tutorial Exercises
- Practical Exam
- Research paper

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- The ability to orally communicate clearly and effectively about information technology applications.

Assessment tasks

- Group Presentation
- Assignments

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- The ability to orally communicate clearly and effectively about information technology applications.

Assessment task

- Group Presentation

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social

justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- The ability to orally communicate clearly and effectively about information technology applications.

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcomes

- An introductory understanding of a range of important and/or current IT & IS issues, such as: - Hardware (including basic principles and which platform is right for me) - The importance of Social Networks SNA Analysis - Networks and Telecommunication Systems - Multimedia - Privacy - Security - Ethics - Electronic Commerce - Productivity Applications - Social Aspects of Information Technology - Green IT.
- The ability to orally communicate clearly and effectively about information technology applications.

Standards and Grading

Unlike many units, ISYS100 covers a wide range of areas, but at limited depth. Therefore it is not appropriate to identify core knowledge and assess each student's mastery of that at increasing levels of complexity. Instead, the assessment of Learning Outcome #1 is based in large part on the amount of knowledge the student gains across the range of the unit, as assessed by performance in the tutorials, quizzes and final research paper.

Your final grade will depend on your performance in each part of the assessment of the unit. In particular, you will obtain a grade of Pass (P) or higher in this unit if you satisfy the following:

- obtain a mark of at least 7/14 overall for the three assignments;
- obtain a mark of at least 45% in the practical examination;

- obtain a mark of at least 45% in the final research paper; and
- obtain an overall mark of at least 50% (calculated according to the weightings given above).

Obtaining a higher grade than a Pass (P) in this unit will require a student to obtain (in addition to the above):

- the required total number of marks (Credit - 65, Distinction - 75, High Distinction - 85);
- a total mark of at least 13 for the tutorials; and
- the following minimal results in both the practical exam and final research paper for grades higher than a pass:
 - 65% in the practical exam;
 - 65% in the final research paper.

For the assignments, which are much more narrowly focussed, assessment is based on a progression of attainment, as indicated below.

L.O 1	Pass	Credit	Distinction	High Distinction
Knowledge development	Reproduce definitions and ideas, show some breadth of understanding	Show breadth of understanding across most of the unit material	Apply terminology and ideas in some new contexts, show breadth of understanding across most of the unit material	Apply terminology and ideas in new contexts, show breadth of understanding
L.O. 2	Pass	Credit	Distinction	High Distinction
Application Literacy	Able to use most of the application functionality specified in the assignments	Able to use almost all of the application functionality specified in the assignments for one of the applications covered, and most of the functionality for the remainder.	Able to use almost all of the application functionality specified in the assignments for half of the applications covered, and most of the functionality for the other half.	Able to use almost all of the application functionality specified in the assignments
L.O. 3	Pass	Credit	Distinction	High Distinction

Ability to communicate with and explain to others	Able to describe and explain almost all of the functionality of some applications covered and most of the functionality of the others	Able to clearly communicate about, describe and explain almost all of the functionality of the applications covered	Able to clearly communicate about, describe and explain almost all of the functionality of the applications covered and, for some of the applications, material within the general area of the assignment, but outside that explicitly in the assignment description	Able to fluently communicate about, describe and explain the applications covered, within the general area of the assignment, but including material outside that explicitly in the assignment description
---------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------