
B345

Internet Science and Technology

Unit Outline

Semester 2 2003

Unit Coordinator
H.L. Hiew
h.hiew@murdoch.edu.au

Unit Web-Site
<http://www.it.murdoch.edu.au/units/b345>

Very Important !

All students enrolled in this unit are required to have Internet access to obtain material such as lecture notes from the unit web site. Students are also required to refer regularly to the Announcements group in the discussion forum on the web site for important announcements such as changes to assignment requirements.

School of Information Technology

CONTENTS

ONE	Introduction	i
TWO	Resources for the Unit	v
THREE	Lectures and Laboratories	vii
FOUR	Assessments	ix

Introduction

Unit Overview

This unit deals with the conceptual framework behind Internet technologies. The unit makes use of concepts in Computer Science, Information Systems and Information Technology in the study of the Internet. Topics covered in this unit will provide a understanding of how the Internet works and how to make decisions from different perspectives and in different situations.

Learning Objectives

At the end of this unit, you should:

1. Understand and be able to describe the technical components of Internet technologies.
2. Understand the architectures by which the Internet components relate to each other.
3. Be able to view Internet technologies from a multitude of perspectives, from that of a user, manager, hardware or software architect, analyst, software designer, programmer, support personnel, and content developer.
4. Understand the practicalities of Internet software development and be able to decide on appropriate methodologies to adopt for individual projects.
5. Understand the fundamental issues relating to data and traffic on the Internet, and how to manage them.
6. Have a basic understanding of how the economy and society impact on Internet developments, and how the Internet impacts on the economy and society.
7. Have skills and attitudes appropriate for further in-depth self study in Internet sciences and technologies.

Prerequisites

Students are expected to have completed

- B102 Introduction to Computer Science, and one of
- B227 Data Communications or C205 Telecommunications for Business

Unit Coordinator

Your coordinator for this unit is **H.L. Hiew**, in the School of Information Technology.

Contact Details:

Unit Coordinator	H.L. Hiew
	Email: h.hiew@murdoch.edu.au
	Phone: (08) 9360 6058
	Room: BITL 3.05
Administration (South St campus)	Secretary, School of Information Technology
	Phone: (08) 9360 6120
	Fax: (08) 9360 2941
	Room: BITL 1.02
	Ms. Mirella Parlatoni, Division Office
	Phone: (08) 9360 6093
	Email: m.parlatoni@murdoch.edu.au
	Room: EH 2.002C
Administration (Rockingham campus)	Ms Merrylyn Braden
	Phone: (08) 9360 7017
	Room: Arts and Commerce 2.017
Computer Technical Support	Arts Helpdesk
	Phone: (08) 9360 6700
	Room: ECL 1.015

Withdrawal Dates

Students who enrol in this unit and subsequently withdraw will have different status appearing on your academic records depending on the withdrawal date. The following are withdrawal dates and their corresponding academic statuses.

Before the end of Week 5:	Does not appear on academic record
Week 5 - end of Week 10:	Appears as “Withdrawn” on academic record
After Week 10: 31 st August 2003	Appears as “Fail” on academic record HECS census date. Withdrawals after this date will incur HECS liability.

Unit Timetable

The following timetable will help you to plan your study over the semester.

This schedule for the lecture and tutorial topics **are subject to change** during the semester. Up-to-date information can be found on the unit web-site:

<http://www.it.murdoch.edu.au/units/b345/lectures>

<http://www.it.murdoch.edu.au/units/b345/tutorials>

Week	Lecture Topics and Subjects	Assessed Tutorials	Other Assessments Due
One	Unit Introduction CS, IS, IT and the Internet		
Two	Architecture: Network Architectures Architecture: The Internet Architecture		
Three	Architecture: Software Architectures Architecture: Architecture Frameworks	The Internet Architecture	
Four	Architecture: The World-Wide-Web	UML and the 4+1 View Model	
One-week Semester Break			
Five	Development: Software Development Methodologies Development: Internet Software Development	HTTP 1.1	
Six	Development: Agile Software Development	Practical Issues in Internet Software Development	
Seven	Development: Case Studies in Agile Software Development Development: eXtreme Programming	Adaptation and Agility in Software Development	
Eight	Architecture: Microsoft .NET	eXtreme Programming	
Nine	Architecture: Java and Wireless Java	Microsoft .NET	
Two-week Semester Break			
Ten	Data: Internet Data, MetaData and Control Data: Web Database Connectivity	Wireless Java Development	Assignment due 12noon Weds 15 th October 2003
Eleven	Measurement: Web Traffic Monitoring Measurement: Workload Characterisation	Data vs Control	
Twelve	Context: The Knowledge-Based Economy Context: The Social Implication of the Internet	The mathematics of measurements	
Thirteen	Revision	Revision	External students submit tutorial exercises by Fri 7 th November 2003
One-week Study Break			
Examinations Period			

TWO

Resources for the Unit

Unit Materials

*Essential
Textbooks* None



Unit Web-Site



The unit web-site is at:
<http://www.it.murdoch.edu.au/units/b345>

All students enrolled in this unit are required to have Internet access and refer to this web site regularly, especially to the section containing unit announcements: The announcements will be made in the online discussion forum under the topic “Announcements”:

<http://www.it.murdoch.edu.au/units/b345/discus>

Students are required to refer to the announcements **at least once a week**.

Computing Facilities

Internal Students

The laboratory used for this unit will be announced in lectures during the first week of the semester, and is available during normal opening hours of 9am to 5pm. Arrangements to use laboratories outside these hours can be made by seeing the Secretary, ECL Building, room BITL1.02. You will need your Student identity card and a special pass to use the laboratory.

External Students

External students must arrange their own access to a computer. The computer must have Internet access to obtain the on-line materials on the unit web site.

There are various ways of getting Internet access. Refer to the following page for advice on how to gain Internet access:

<http://www.murdoch.edu.au/cns/internet/internet.html>

THREE

Lectures and Tutorials

Lectures

There will be 3 hours of lectures every week, for the duration of the 13 weeks of the semester. Attendance in the lectures is not compulsory, but is highly recommended for internal students. Instructions relevant for internal students may be given in the lectures. The timetable for the lectures can be found at:

http://www.murdoch.edu.au/oss/legacy_pages/timetable_enquiry.html

The notes for the lectures will be put up on the unit web-site after the relevant lectures. These notes only contain points used in the lecture presentation. They are not substitutes for lecture attendance and the prescribed reading. The lecture notes will be available at:

<http://www.it.murdoch.edu.au/units/b336/lectures>

The online lecture notes are password protected. The username and password required to access the overheads will be made available in the first lecture. External students should consult your tutors to get the username and password.

The audio recording of the lectures is available by streaming through the iLecture system. The link to this system is available from the same pages as where the lecture notes are found.

Tutorials

Tutorials will be run from week 3 to week 13 of the semester. The tutorials will involve discussion and exercises related to material given in the lectures. The discussions and exercises are critical to your understanding of the Internet.

You will be allocated a tutor responsible for:

1. assisting you in the tutorials every week,
2. helping you with your assignment work, and
3. answering any queries related to the unit materials.

Every internal student at the South St campus will be required to sign up for a one-hour tutorial session every week. The online sign-up form for the lab sessions is at:

<http://www.it.murdoch.edu.au/teaching/otss/>

Links to the tutorial exercises and discussion questions every week will be put in the following page as the semester progresses:

<http://www.it.murdoch.edu.au/units/b345/tutorials>

The online tutorial sheets are password protected. The username and password required to access the sheets will be made available in the first lecture. External students should consult your tutors to get the username and password.

FOUR

Assessments

Assessment components

You will be assessed on the basis of your assignment, your weekly tutorial work, and the examination.

Assessments	Value	Due Date
Assignment	40%	Wednesday of week 10
Tutorial exercises and discussions	10%	Internal students: at the end of every tutorial External students: submit by Friday of week 13
Examination	50%	Examination period

Assignment

The questions and descriptions of the assignments may be found on the unit web site.

<http://www.it.murdoch.edu.au/units/b345/assignments>

Important Note

Please read the section regarding *Dishonesty in Assessments* and *Plagiarism and Collusion* below. The unit coordinator and the University views issues of plagiarism very seriously. You may from time to time come across material on the web that may be appropriate as solutions for the assignments. There are standard referencing methods for using such material. If you do not use such standard referencing, you are in great risk of facing disciplinary action for plagiarism.

Do not test the unit coordinator's ability to detect plagiarised work when you do not include appropriate acknowledgements. It takes quite considerable effort to modify someone else's work to pass off as your own. All unacknowledged plagiarised work will be passed on to the Executive Dean for disciplinary action.

Late submissions

Late assignments will have **10% of the student's final mark** deducted per day.

Assignment submission

For internal students, assignments should be placed in the B345 assignment box outside the School of IT corridor in level 2, north wing of ECL building, by 12noon on the due date. The cover sheet with the declaration completed must be attached. Cover sheets for each assignment will be available from the page:

<http://www.it.murdoch.edu.au/units/b345/assignments>

External students should mail assignments to the External Studies Office, ECL Building, Murdoch University, Murdoch WA 6150 using the address labels that have been supplied. The cover sheet with the declaration completed must be attached. Other methods of submitting assignments can be found on the page:

<http://www.tlc1.murdoch.edu.au/teach/disted/support/assignments.html>

Assignments are occasionally lost in the system, so **all students are required to keep copies of their assignments** until the end of the appeals period after the semester.

Extensions for assignments will be granted only in exceptional circumstances. If something exceptional arises that requires an extension you should contact the unit coordinator *before* the deadline expires. Only the unit coordinator can grant extensions.

Important Note

Reasons which are **not** sufficient to warrant an extension include computer failures; car failures or other transportation difficulties; work conflicts, other study commitments, and dog eating your assignments. 'Losing' work through "computer failure" is not accepted as a reason for late submission of an assignment; students using a computer should know to frequently save and backup your work. Also, you should identify conflicts with other work and study commitments at the beginning of semester and schedule your time accordingly. If you are unable to do so, contact the unit coordinator for advice and special arrangements.

Assignment submissions cannot be accepted after the examination has commenced unless deferred assessment on the unit as a whole has been approved. Deferred assessment may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Applications for deferred assessment must be submitted by the end of week 13 of the semester or, in the event of circumstances arising after that date, before the examination. Refer to the current University Handbook for details or

<http://www.murdoch.edu.au/admin/legsln/regs/bachelor.html#deferred>

Tutorials Exercises and Discussions

All tutorials from week 3 to week 12 will be assessed.

Internal students will be required to complete the required exercises before the tutorial and discuss their answers during their tutorials. To achieve grades of Distinction and High Distinction, students must achieve 60% and 70% respectively in their tutorial mark.

Examination

The final examination will be of 3 hours duration and held during the examination period at the end of the semester. It will be closed book exam. The questions in the exam will assess your understanding of the materials in the unit.

Further guidelines to the examinations, as well as sample examinations will be available on the unit web-site reaching the end of the semester.

The University Examinations Officer will contact external students about the time and venue for the final examination. Metropolitan external students are expected to take the examination on campus, while arrangements will be made for non-metropolitan external students to take the final examination locally.

The University requires that all students sitting end-of-semester examinations (including those held off-campus) must show their 2003 Murdoch University Student Card to facilitate photographic identification. **No other form of identification will be accepted.**

Students may inspect their marked examination scripts and discuss the marking with the unit coordinator within 14 days of the posting of results (Degree Regulation 43).

Determination of the final grade

Your final grade for the unit will be based on your performance in your assessment components. Your final grade will be reported by a letter grade according to the following criteria.

Notation	Grade	Criteria
HD	High Distinction	Above 80% in total aggregate mark, and Above 70% in Final Exam, and Above 70% in the Assignment, and Above 70% in Tutorials.
D	Distinction	Above 70% in total aggregate mark, and Above 60% in Final Exam, and Above 60% in the Assignment, and Above 60% in Tutorials.
C	Credit	Above 60% in total aggregate mark, and Above 50% in Final Exam, and Above 50% in the Assignment.
P	Pass	Above 50% in total aggregate mark, and Above 50% in Final Exam, and Above 50% in Assignment.
S	Supplementary Assessment	Above 45% in Final Exam, and Above 45% in Assignment.
N	Fail	Otherwise

The cut-off points of marks denoting the grades (HD, D, C, P, N, S) vary between units, and, from year to year, within a unit. cut-off points are determined by the unit coordinators after marking, and are based on the standard of work, which, in their opinion, is reflected by a particular range of marks. Coordinators use their professional judgement in the allotment of grades at the margin between successive grades, based on students' overall performance in relation to the objectives of the unit.

The Unit coordinator may re-scale marks across assessment tasks, some of which may prove to be easier than others, or across tutors, some of whom mark more or less highly than others. Also, because we have the right to scale overall marks, the grade cut-offs given above are notional and may be changed if we consider the overall results for the unit too far from the standard norms of the University.

University policy on assessment

Assessment for the unit as a whole is in accordance with the provisions of Degree Regulations 40-48. Check these in the current Murdoch University Handbook and Calendar and at

<http://www.murdoch.edu.au/vco/secretariat/admin/codes/assessapp2.html>

Your attention is particularly drawn to the **University policy regarding assessment roles and responsibilities** which lists your responsibilities as a student (as well of those of unit coordinators and others).

Plagiarism and collusion

Plagiarism constitutes using the work of another without indicating by referencing that the ideas expressed are not your own. Collusion (or unauthorised collaboration) constitutes joint effort between students or others, in preparing material submitted for assessment, except where this has been approved by the unit coordinator. The University regards most seriously any acts of dishonesty in assessment such as plagiarism, collusion, re-submission of previously marked work in different units, examination misconduct and theft of other students' work. These acts could result in penalties including failure in the unit and possible exclusion from the University. For further details please refer to the section on 'Dishonesty in Assessment' in the current Murdoch Handbook Section 1, Assessment and Academic Progress and

<http://www.murdoch.edu.au/vco/secretariat/admin/codes/assessapp2.html#dishonesty>

Non-discriminatory language

Murdoch University is committed to the use of non-discriminatory language in all forms of communication. Students and staff should avoid the use of discriminatory language in units and in all other activities within the University. This applies to both oral and written communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however the language used in such debate should be non-discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are therefore requested to check your work for this, and to ensure it is non-discriminatory in all respects.

Conscientious objection

Any student with a conscientious belief which is in conflict with teaching and/or assessment practices in this unit, is advised to contact the unit coordinator prior to the start of the unit or in the first three weeks of semester. Early notice increases the chances that alternative arrangements can be made. Further details about what constitutes a conscientious belief and how these claims are assessed can be found in the University's Guidelines on Conscientious Objection in Teaching and Assessment, at:

<http://www.murdoch.edu.au/vco/secretariat/admin/gdelines/consciobj.html>

Deferred assessment and special consideration

Deferred assessment may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Special consideration in the awarding of grades is also possible in some circumstances. Refer to the current University Handbook for details or

<http://www.murdoch.edu.au/vco/secretariat/admin/codes/assessapp2.html#deferred>

Explanation of grades and appeals

Students have the right to appeal their assessment in this unit. First, you should approach your tutor for a review of an assignment. If you are not satisfied with this process, then take your case to the unit co-ordinator. Students who feel they have grounds for appealing against their final grade in this unit should consult the procedures outlined in the Handbook under Degree Regulation 49. See also

<http://www.murdoch.edu.au/admin/legsln/regs/bachelor.html#appeals>

or the Office of Student Services Appeals Procedure

http://www.murdoch.edu.au/oss/legacy_pages/appeals.html

Dishonesty In Assessment

The University regards most seriously any acts of dishonesty relating to assessment. Cheating includes plagiarism, unauthorised collaboration, examination misconduct and theft of other students' work. Plagiarism and collusion are defined as including any of the following five types of behaviour, and apply to work in any medium (for example, written or audio text, film production, computer programs):

- Inappropriate/ inadequate acknowledgement - material copied word for word which is acknowledged as paraphrased but should have been in quotation marks, or material paraphrased without appropriate acknowledgement of its source.
- Collusion - material copied from another student's assignment with her or his knowledge.
- Verbatim copying - material copied word for word or exactly duplicated without any acknowledgement of the source.
- Ghost writing - assignment written by third party and represented by student as her or his own work.
- Purloining - material copied from another student's assignment or work without that person's knowledge.

Acting dishonestly in assessment is defined as misconduct under the Student Discipline Statute. Depending on the seriousness of the case, it can lead to a requirement to undertake additional work, failure in a unit or in a part of it, suspension from the University or even permanent

expulsion from the University. The University regards any form of cheating as a serious matter of academic dishonesty which threatens the integrity of the assessment processes and awards of the University, to the detriment of all other students and graduates of the University. If you are unsure as to what constitutes plagiarism or collusion, please check with your tutor.

Guidance about how to avoid plagiarism and collusion, plus further information about University policies on dishonesty in assessment, are available at the following URL:

<http://www.murdoch.edu.au/admin/discipline/>