INFO1003: FOUNDATIONS OF INFORMATION TECHNOLOGY

Semester 1, 2016 | 6 Credit Points | Mode: Normal-Day
Coordinator(s): Josiah Poon

WARNING: This unit is an archived version! See Overview tab for delivered versions.

1. INTRODUCTION

Information technologies (IT) and systems have emerged as the primary platform to support communication, collaboration, research, decision making, and problem solving in contemporary organisations. The essential necessity for all university students to acquire the fundamental knowledge and skills for applying IT effectively for a wide range of tasks is widely recognised. It is an introductory unit of study which prepares students from any academic discipline to develop the necessary knowledge, skills and abilities to be competent in the use of information technology for solving a variety of problems. The main focus of this unit is on modelling and problem solving through the effective use of using IT. Students will learn how to navigate independently to solve their problems on their own, and to be capable of fully applying the power of IT tools in the service of their goals in their own domains while not losing sight of the fundamental concepts of computing.

Students are taught core skills related to general purpose computing involving a range of software tools such as spreadsheets, database management systems, internet search engine, HTML, and JavaScript. Students will undertake practical tasks including authoring an interactive website using HTML, JavaScript and AJAX and building a small scale application for managing information. In addition, the course will address the many social, ethical, and intellectual property issues arising from the wide-spread use of information technology in our society.

2. LEARNING OUTCOMES

Learning outcomes are the key abilities and knowledge that will be assessed in this unit. See assessment summary table below for details of which outcomes are assessed where. Outcomes are listed according to the course goals that they support.

Engineering/IT Specialisation (Level 1)

1. Understanding of modern concepts, principles and practical approaches to using information technology based on substantial realistic context.
2. Ability to analyse and solve problems through designing and developing application by effective use of standard software packages graphical user interfaces, internet search tools, word processor, spreadsheet, databases and HTML editor)
3. Ability to develop on-line application using HTML, JavaScript and AJAX
4. Ability to develop simple conceptual data models and manage data using appropriate DBMS software
5. Ability to develop models and implement models using tools such as Microsoft Excel.
6. Experience of document and content management systems.

Professional Conduct (Level 1)

7. Understanding of the ethical and social impact of information and information technology
8. Experience in teamwork, planning, communication and co-ordination

For further details of course goals related to these learning outcomes, see online unit outline at http://cusp.eng.usyd.edu.au/students/view-unit-page/alpha/INFO1003 .

3. ASSESSMENT TASKS

ASSESSMENT SUMMARY

Assessment name	Team-based?	Weight	Due	Outcomes Assessed
Quiz 1	No	10%	Week 7	1, 2, 5
Quiz 2	No	10%	Week 13	4
Project - Milestone 1	Yes	5%	Week 5 (During your timetabled class)	3, 6, 7, 8
Project - Milestone 2	Yes	8%	Week 8 (During your timetabled class)	3, 6, 7, 8
Project - Milestone 3	Yes	12%	Week 12 (During your timetabled class)	3, 6, 7, 8
Online Quiz 1	No	1%	Week 4 (Sunday, 12 am)	1, 2, 3, 4, 5
Online Quiz 2	No	1%	Week 6 (Sunday, 12 am)	1, 2, 3, 4, 5
Online Quiz 3	No	1%	Week 8 (Sunday, 12 am)	1, 2, 3, 4, 5
Online Quiz 4	No	1%	Week 10 (Sunday, 12 am)	1, 2, 3, 4, 5
Online Quiz 5	No	1%	Week 12 (Sunday, 12 am)	1, 2, 3, 4, 5
Final Exam	No	50%	Exam Period	1, 2, 3, 4, 5, 7

ASSESSMENT DESCRIPTION

Online Quizzes: Students have an online quiz in w4, 6, 8, 10, 12 (it can be done at home or anywhere).

Quiz 1 is about basic computing concepts, HTML, CSS and Javascript.

Quiz 2 has more focus on forecasting, optimization using Spreadsheets, and database concepts, including SQL.

Assignment: It is an Internet Assignment - Group Project with three milestones in Week 5 (Conceptual Design), Week 8 (Interim Design) and Week 12 (Final Presentation)

Final Exam: Written examination (two hours)

It is the policy of the School of Information Technologies that in order to pass this unit, a student must achieve at least 40% in the written examination as well as the overall continuous assessment. A student must also achieve an overall final mark of 50 or more. Any student not meeting these requirements can achieve a maximum mark of no more than 45.

50% of the raw final mark calculation comes from the assessments during the semester, whereas the other half comes from the examination (exMark), however, the final mark is capped at exMark+10. Here are some scenarios to help your understanding:

Late work: In the interests of fairness to all students, the School of Information Technologies policy states that late work cannot be accepted. In exceptional cases late work may be allowed upon the approval of Special Consideration.

ASSESSMENT GRADING

Final grades in this unit are awarded at levels of HD for High Distinction, DI (previously D) for Distinction, CR for Credit, PS (previously P) for Pass and FA (previously F) for Fail as defined by University of Sydney Assessment Policy. Details of the Assessment Policy are available on the Policies website at http://sydney.edu.au/policies . Standards for grades in individual assessment tasks and the summative method for obtaining a final mark in the unit will be set out in a marking guide supplied by the unit coordinator.
It is a policy of the School of Information Technologies that in order to pass this unit, a student must achieve at least 40% in the written examination. For subjects without a final exam, the 40% minimum requirement applies to the corresponding major assessment component specified by the lecturer. A student must also achieve an overall final mark of 50 or more. Any student not meeting these requirements may be given a maximum final mark of no more than 45 regardless of their average.
INFO1003 requires a minimum attendance of 80% at the labs. Attendance will be kept. Failure to meet the minimum attendance requirements will result in an immediate failure. Late attendance will not be counted.

IMPORTANT: POLICY RELATING TO ACADEMIC DISHONESTY AND PLAGIARISM.

All students must submit a cover sheet for all assessment work that declares that the work is original and not plagiarised from the work of others.

In assessing a piece of submitted work, the School of IT may reproduce it entirely, may provide a copy to another member of faculty, and/or to an external plagiarism checking service or in-house computer program and may also maintain a copy of the assignment for future checking purposes and/or allow an external service to do so.

See Policies section below for other policies relating to assessment and progression.

4. ATTRIBUTES DEVELOPED

Attributes listed here represent the course goals designated for this unit. The list below describes how these attributes are developed through practice in the unit. See Learning Outcomes and Assessment sections above for details of how these attributes are assessed.

Attribute	Method
Design (Level 1)	Analysing and solving problems in an application development framework.
Engineering/IT Specialisation (Level 1)	Familiarisation with general principles and practices of the IT discipline and develops basic skills in program design and conceptual modelling.
Information Seeking (Level 1)	Computer based information analysis and visualisation, using Excel and standard DBMS software.
Communication (Level 1)	Basic proficiency in writing and presentation of web content.
Professional Conduct (Level 1)	Understanding ethical and social aspects of information technology use. Completion of group project.

For further details of course goals and professional attribute standards, see the online version of this outline at http://cusp.eng.usyd.edu.au/students/view-unit-page/alpha/INFO1003 .

5. STUDY COMMITMENT

Activity	Hours per Week	Sessions per Week	Weeks per Semester
Lecture	3.00	2	13
Laboratory	2.00	1	13
Workshop (Week 3-12)	1.00	1	10
Independent Study	6.00		13

Standard unit of study workload at this university should be from 1.5 to 2 hours per credit point which means 9-12 hours for a normal 6 credit

point unit of study. For units that are based on research or practical experience, hours may vary. For lecture and tutorial timetable, see University timetable site at: web.timetable.usyd.edu.au/calendar.jsp

6. TEACHING STAFF AND CONTACT DETAILS

COORDINATOR(S)

Name	Room	Phone	Email	Contact note
Dr Poon, Josiah			josiah.poon@sydney.edu.au	

TUTORS

Henry Petersen, Dr Wai Ho Wong, Christopher Natoli, Crystal Yoo, Pauline Hor

7. RESOURCES

PRESCRIBED TEXTBOOK(S)

INFO1003 Foundations of Information Technology Reference Book. Copy Centre,

COURSE WEBSITE(S)

eLearning - University Learning Management System (LMS)

8. ENROLMENT REQUIREMENTS

ASSUMED KNOWLEDGE

None.

PREREQUISITES

None.

PROHIBITIONS

INFO1000 OR INFO1903 OR ISYS1003 OR INFS1000.

9. POLICIES

IMPORTANT: School policy relating to Academic Dishonesty and Plagiarism.

In assessing a piece of submitted work, the School of IT may reproduce it entirely, may provide a copy to another member of faculty, and/or to an external plagiarism checking service or in-house computer program and may also maintain a copy of the assignment for future checking purposes and/or allow an external service to do so.

Other policies

See the policies page of the faculty website at http://sydney.edu.au/engineering/student-policies/ for information regarding university policies and local provisions and procedures within the Faculty of Engineering and Information Technologies.

10. WEEKLY SCHEDULE

Note that the "Weeks" referred to in this Schedule are those of the official university semester calendar https://web.timetable.usyd.edu.au/calendar.jsp

Week	Topics/Activities
Week 1	IT Security
	Unit Introduction
Week 2	Hypermedia Technologies
	Introduction to HTML
Week 3	User Interface
	User/Task Driven Design
	WORKSHOP: HTML5 revision (Beginner)
Week 4	CSS Positioning and Layout
	CSS (Cascading Style Sheets) Concepts
	WORKSHOP: CCS revision (Beginner)
	Assessment Due: Online Quiz 1
Week 5	Introduction to Javascript
	Javascript: Control Statements
	WORKSHOP: Javascript (Beginner)
	Assessment Due: Project - Milestone 1
Week 6	Javascript: Functions
	Javascript: Functions (Cont'd)
	WORKSHOP: Javascript (Beginner)
	Assessment Due: Online Quiz 2
Week 7	Javascript: AJAX /DOM
	JavaScript: Web Storage
	WORKSHOP: Javascript (Beginner)
	Assessment Due: Quiz 1
Week 8	ANZAC DAY: NO LECTURE on MONDAY
	WORKSHOP: JQuery (Advanced)
	Assessment Due: Project - Milestone 2
	Assessment Due: Online Quiz 3
Week 9	Database: Data Modelling
	Database: Conceptual Model
	WORKSHOP: Connecting Database 1 (Advanced)
Week 10	Database: Physical Model
	Database: SQL
	WORKSHOP: Connecting Database 2 (Advanced)
	Assessment Due: Online Quiz 4
Week 11	Spreadsheet: Forecasting
	Spreadsheet: Scenarios
	WORKSHOP: Database revision (Beginner)
Week 12	Spreadsheet: Optimisation 1
	Spreadsheet: Optimisation 2
	WORKSHOP: Optimisation revision
	Assessment Due: Project - Milestone 3
	Assessment Due: Online Quiz 5
Week 13	IT Ethics
	Revision
	Assessment Due: Quiz 2
Exam Period	Assessment Due: Final Exam