



MONASH University
Information Technology

FIT4063
Human-computer interaction

Unit Guide

Semester 1, 2014

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FIT4063 Human-computer interaction - Semester 1, 2014

This unit provides a detailed understanding of the underpinning theories, principles and practices of interface design for computer-based systems. It examines issues in the design of system interfaces from a number of perspectives: user, programmer, designer. It explores the application of the relevant theories in practice. The unit will cover topics such as methods and tools for developing effective user interfaces, evaluation methods such as the conduct of usability and heuristic evaluations, design of appropriate interface elements including the design of menus and other interaction styles. The unit will also focus on designing for a diverse range of users and environments.

Mode of Delivery

Clayton (Day)

Workload Requirements

Minimum total expected workload equals 12 hours per week comprising:

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

- Two hours of lectures
- One 2-hour tutorial

(b.) Additional requirements (all students):

- A minimum of 2-3 hours of personal study per one hour of contact time in order to satisfy the reading and assignment expectations.

Unit Relationships

Prohibitions

FIT3063, FIT5152

Prerequisites

(FIT9003 or FIT5132) or (FIT9030 or FIT5130)

Chief Examiner

Associate Professor Judy Sheard

Campus Lecturer

Clayton

Dr Marc Cheong

Consultation hours: 12 noon on Tuesday before lecture

Tutors

Clayton

Ms Pamela Spink

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

Student feedback informed improvements to this unit including:

- reverting to the 'design assignment' model from prior semesters
- using more up-to-date software for prototyping (i.e. the Pencil open-source project), to slowly phase out the older MockupScreens system.
- tutorial activities and online forum discussions contribute to part of the assessment
- assesment is more differentiated from co-taught FIT3063

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 will have -A knowledge and understanding of:

- the underpinning theories relevant to HCI;
- the principles and practices of HCI in designing user interfaces;
- the importance and role of usability and evaluation in systems design;
- the issues relating to user diversity, different types of systems, interaction styles, devices and environments.

Developed attitudes that enable them to:

- appreciate the development of systems from a user perspective;
- differentiate between good HCI practice in systems development from other development practices;
- formulate attitudes which enable them to interact effectively with users;
- empathise with all users particularly those with specific needs.

Gained practical skills to:

- recognise the principles of HCI design required in systems development;
- gather user requirements effectively;
- design an effective user interface;
- conduct appropriate evaluation of systems from a HCI perspective and interpret the outcome.

Demonstrated the communication skills necessary to:

- work in teams to complete assessment tasks;
- empathise with users particularly those with some form of disability.

Unit Schedule

Week	Activities	Assessment
0		No formal assessment or activities are undertaken in week 0
1	Unit overview. Introduction to HCI, interfaces, usability and user-centred design. Human factors.	Note: Tutorials commence in Week 1. Assessment Task 1: Discussion Forums: five forums each approx 2 weeks duration, throughout semester (deadlines will be announced at least two weeks in advance).
2	Evolution of the interface, understanding the design space, conceptual models, mental models, metaphors, icons.	
3	Theoretical foundations of HCI: theories, models, frameworks and principles.	
4	Interface design principles, guidelines, standards and style guides.	
5	Interface design processes and methods, user-centred design, prototyping.	
6	Interface design elements, graphical components, sound, sequencing, labels, messages.	
7	Interaction styles, command language, natural language, menus, forms, direct manipulation, virtual and augmented reality.	Assessment Task 2: Submission of Stage I of the assignment
8	Usability: usability principles, usability evaluation methods.	
9	Accessibility: accessibility guidelines, assistive technologies.	Assessment Task 2: Submission of Stage II of the assignment.
10	Interaction devices: input and output devices, performance evaluation.	
11	Designing for the Web and Web 2.0.	
12	Future of HCI.	Assessment Task 3: Submission of Research Paper
	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 through a variety of activities.

Assessment Summary

Examination (3 hours): 50%; In-semester assessment: 50%

Assessment Task	Value	Due Date
Discussion Forums (Online and Tutorial-based)	15%	Five forums throughout the semester (online and group-based conducted within a tutorial setting).
Design Assignment (two stages)	20%	Stage I due in Week 7; Stage II due in Week 10.
Research Paper	15%	Week 12
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:

Discussion Forums (Online and Tutorial-based)

Description:

Students are required to participate throughout the semester in a total of **five** discussion forums, that will consist of:

- ◆ online forums available through the unit's Moodle site, and
- ◆ panel-style discussion during tutorials.

Weighting:

15%

Criteria for assessment:

Criteria for assessment will be based on:

- ◆ relevance of contributions and
- ◆ evidence of wider reading and
- ◆ level of critical thinking and quality of contribution
- ◆ (and in group-based fora) contribution to discussions

Further details will be made available in the task specification.

Due date:

Five forums throughout the semester (online and group-based conducted within a tutorial setting).

Remarks:

Each forum's submission deadline and/or participation details will be announced at least two weeks in advance.

• Assessment task 2

Title:

Design Assignment (two stages)

Description:

Students will be required to form groups to design and develop a low-level of an application (stage I); and a high-level prototype of this application (stage II).

- ◆ 5% for the design of a low-level prototype (Stage I).
- ◆ 15% for the design of a high-level prototype and report on the process (Stage II)

Assessment Requirements

Weighting:

20%

Criteria for assessment:

In this assignment students will demonstrate their knowledge, skills and understanding of the principles and theories covered through the semester.

Contributions by individual group members to the overall group submission will be recorded by each group member and will be assessed by the markers in determining the grade awarded to each member of a group. Assessment criteria will be made available in the specifications sheet.

Due date:

Stage I due in Week 7; Stage II due in Week 10.

Remarks:

Groups will be finalised by Week 5 of semester and all group members must belong to the same tutorial. Forming groups across tutorials will NOT be allowed due to logistical constraints.

• Assessment task 3

Title:

Research Paper

Description:

Students will research on a particular aspect of HCI (topic as decided with the lecturer) and present their findings in a research paper.

More details on this task and its requirements will be made available in the task specification.

Weighting:

15%

Criteria for assessment:

The assessment criteria will be based on:

- ◆ Originality of argument
- ◆ Completeness of the research (adequate coverage of the topic and findings).
- ◆ Quality of the research - including literature (references) used, critically and appropriately applied.
- ◆ Written expression, style and appropriate overall structure (there should be a sound and logical flow and use of sub-headings where applicable).
- ◆ Layout, structure, spelling, grammar, etc. and adherence to style guides.
- ◆ Adherence to citation and reference standards.

Further detailed information will be available in the task specification

Due date:

Week 12

Examinations

• Examination 1

Weighting:

50%

Length:

3 hours

Assessment Requirements

Type (open/closed book):

Closed book

Electronic devices allowed in the exam:

None

Learning resources

Reading list

Shneiderman, B. (2010) Designing the User Interface. 5th Edition. Addison-Wesley.

Norman, Donald (1998) The Design of Everyday Things, MIT Press.

Cooper, A., Reimann, R. & Cronin, D. (2007) About Face #: The Essentials of Interaction design, John Wiley & Sons

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
- Other: Informal feedback including sample answers from peers in tutes.

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 **Moodle 2** learning system for this unit, which you can access via links in the my.monash portal.

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.

For the design of GUI mockups: a choice between:

- Pencil Project (open-source, more features, **recommended**), or
- MockupScreens (a license is provided strictly for your personal course-related use)

Prescribed text(s)

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

Rogers, Y. Sharp, H. and Preece, J. (2011). *Interaction Design: beyond human-computer interaction*. (3rd Edition) Wiley.

Technological Requirements

Students must regularly check Moodle 2.0 for announcements.

Moodle is also used to disseminate courseware for this subject and for assessment submission.

It is strongly recommended that students bring a laptop, and/or tablet to lectures and tutorials in order to take part in interactive discussions/activities.

(Please refer to the *Required Resources* section for a list of software needed for this course.)

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](http://my.monash.edu) 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