

FIT2016
Human computer interaction for multimedia

Unit Guide

Semester 2, 2009

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FIT2016 Human computer interaction for multimedia - Semester 2, 2009

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Lecturer(s) / Leader(s):

Berwick

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Contact hours: Tuesdays 10am-1pm & 2pm-5pm

Introduction

Welcome to FIT2016 Human Computer Interaction for Multimedia for semester 2, 2009. This 6 point unit is part of the Multimedia Applications major of the Bachelor of Information Technology and Systems degree. The unit has been designed to provide you with an understanding of the principles of human computer interaction and interface design. It will also allow you to research current issues in these fields. It explores many aspects of HCI with emphasis on the relationship between theoretical knowledge and its practical application.

Unit synopsis

This unit will provide a detailed understanding of the principles and practices involved in the creation and implementation of user-centred interaction with multimedia products and systems in a range of environments. Focus will be on the development of multimedia that enhances the efficiency, safety, functionality, usability and the aesthetic appeal of the user experience with multimedia at the interface between the user and the technology. Topics include: cognitive psychology, health and safety issues relating to interaction, interface design and implementation, evaluation and testing, affective aspects of technology, social implications of Human-Multimedia (Computer) interaction.

Learning outcomes

At the completion of this unit, students will:

1. have a theoretical and conceptual understanding of the concepts of cognitive science and the physiology of human perception and the importance of these disciplines to interface design for multimedia systems and products;
2. understand the importance of psychological characteristics and capabilities of the user in the design and implementation of multimedia interfaces and the principles of user-centred interface design and the ways in which they might be implemented.

At the completion of this unit students will have developed attitudes that enable them to:

1. appreciate importance of the role of the interface designer/developer as the mediator between the multimedia product and the user;
2. appreciate the importance of ergonomic, health and safety issues in the development of user-centric multimedia interfaces.

At the completion of this unit, students will have the skills to:

1. integrate existing technological skills acquired from [FIT1012](#) and [FIT2012](#) to construct multimedia products and systems using principles of user-centred interface design;
2. design, create and implement interfaces appropriate to both content and context;
3. identify and evaluate the cognitive, physical and social contexts in which the user will interact with a multimedia product or system;
4. evaluate existing interfaces in relation to user-centric principles.

At the completion of this unit students will have developed the teamwork skills needed to:

1. design with an understanding of the effects of their own cultural/social background and preconceptions;
2. evaluate their own and others' interface design and implementation in relation to user-centric principles;

3. enable them to design, create and implement interface systems appropriate for use by individuals from diverse educational, social and cultural backgrounds and diverse cognitive styles.

Contact hours

4 contact hrs/week (comprising 2 hrs lecture, 2 hrs tutorial) plus 8 hrs/week of self-directed study, project/assignment work.

Workload

Students will attend a 2 hour lecture and a 2 hour tutorial each week. In addition students be required to complete approximately 8 hours of self-directed learning, such as working on research assignments, completing practical assignments and revision or the exam.

Unit relationships

Prerequisites

FIT2012, Reasonable skill in digital media manipulation software (eg Photoshop or Illustrator) and digital media authoring software (eg Director or Flash).

Prohibitions

MMS9008, MMS2403

Relationships

FIT2016 is a core unit in the multimedia of the major of the Bachelor of Information Technology and Systems degree.

Before attempting this unit you must have satisfactorily completed FIT2012 Digital Media Authoring or equivalent.

You may not study this unit and MMS9008, MMS2403 in your degree.

Teaching and learning method

Students will attend a 2 hour lecture and a 2 hour tutorial each week.

In weeks 5 to 11 lectures will consist of student group delivered seminars.

A 30 minute lecturer-delivered presentation will also be included in weeks 5 to 11.

In addition students be required to complete approximately 8 hours of self-directed learning, such as working on research assignments, completing practical assignments and revision or the exam.

Timetable information

For information on timetabling for on-campus classes please refer to MUTTS, <http://mutts.monash.edu.au/MUTTS/>

Tutorial allocation

On-campus students should register for tutorials/laboratories using the Allocate+ system:
<http://allocate.cc.monash.edu.au/>

Unit Schedule

Week	Topic	Key dates
1	Introduction, Assessment, HCI Research and Seminar Topics	Seminar Topic Selection
2	HCI Themes, Visual Perception and Human Cognition	
3	Interface Design, Information Design, Feedback and Navigation	Seminar Topics Finalised.
4	Example Seminars: 1 Multi-touch Interfaces 2 Seadragon and Photosynth	
5	Lecture Content and Seminar Topic 1 Topic 2	Assessment 1: Group Seminar, Slides (30%) Friday 3pm Peer Evaluation Worksheet
6	Lecture Content and Seminar Topic 3 Topic 4	Peer Evaluation Worksheet
7	Lecture Content and Seminar Topic 5 Topic 6	Peer Evaluation Worksheet
8	Lecture Content and Seminar Topic 7 Topic 8	Peer Evaluation Worksheet
9	Lecture Content and Seminar Topic 9 Topic 10	Peer Evaluation Worksheet
10	Lecture Content and Seminar Topic 11 Topic 12	Peer Evaluation Worksheet
Mid semester break		
11	Lecture Content and Seminar Topic 13 Topic 14	Peer Evaluation Worksheet
12	Interface Elements, Task and User Centred Design, Equity and Evaluation	

		Assessment 2: Practical Interface Design Portfolio (45%) Friday 3pm.
13	Review of Seminar Topics	

Unit Resources

Prescribed text(s) and readings

No textbook set for this semester.

Recommended text(s) and readings

Highly Recommended

Benyon, D., Turner, P., Turner, S. *Designing Interactive Systems: People, Activities, Contexts, Technologies* Harlow, England: Addison-Wesley 2005 ISBN: 0 321 11629 1 available from the [Monash University Book Shops](#).

Dix, A., Finlay, J., Abowd, G.B., Beale, R. (2004) *Human-Computer Interaction* (3rd Edition) Harlow, England: Prentice Hall ISBN: 0130-461091 Lauesen, S. (2005) *User Interface Design A Software Engineering Perspective* Harlow, England: Addison Wesley ISBN: 0 321 18143 3

The following recommended texts are available from the Berwick library.

Christine Faulkner (1998) *The Essence of Human-Computer Interaction* ISBN: 0-13-751975-3 Donald Norman (1998), *The Design of Everyday Things* ISBN: 0262640376 Steven Johnson (1997) *Interface Culture* ISBN 3608919805 Jeff Raskin (2000) *The Humane Interface* ISBN: 0201379376

Supplementary Library Resources

Carroll, J.M. (ed) (2002) *Human-Computer Interaction in the New Millennium* Call No: 004.019 C319H 2002 Cooper, A. (2004) *The Inmates are Running the Asylum*. Indianapolis, IN: Sams
Dix, Finlay, Abowd, Beale (2004) *Human-Computer Interaction* 3rd Edition Call No: 004.019 D619H 2004 Head, A.J. (1999) *Design Wise: a Guide for Evaluating the Interface Design of Information Resources* Call No: 004.019 H432D 1999 Kristof, R.

Required software and/or hardware

Graphic Development: Photoshop CS4 and Illustrator CS4

Portfolio Development in Director MX 2004, Flash or Dreamweaver.

Students can access these packages during the tutorials in the computer labs or studios.

Equipment and consumables required or provided

Students studying off-campus are required to have the minimum system configuration specified by the Faculty as a condition of accepting admission, and regular Internet access. On-campus students, and those studying at supported study locations may use the facilities available in the computing labs. Information about computer use for students is available from the ITS Student Resource Guide in the Monash University Handbook. You will need to allocate time each week for use of a computer, including time for newsgroups/discussion groups.

Study resources

Study resources we will provide for your study are:

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The FIT2016 web site on Moodle, where lecture slides, weekly tutorial requirements, assignment specifications and supplementary material will be posted.

Discussion groups will be developed for each seminar topic and linked to from the Unit Homepage.

Seminar topics, student delivered seminar slides and vodcasts will also be posted on the Moodle site.

Assessment

Overview

Practical Assignments: 75%

Examination: 25%

Faculty assessment policy

To pass a unit which includes an examination as part of the assessment a student must obtain:

- 40% or more in the unit's examination, and
- 40% or more in the unit's total non-examination assessment, and
- an overall unit mark of 50% or more.

If a student does not achieve 40% or more in the unit examination or the unit non-examination total assessment, and the total mark for the unit is greater than 44% then a mark of no greater than 44-N will be recorded for the unit.

In addition to the Faculty policy, to pass this unit you will need to achieve a total mark of 50% or better over all assignments.

Note that:

Raw scores may be scaled

Submission of group seminar slides for posting to the Moodle site for the unit is a barrier condition to receiving marks for assignment 1

Completing a minimum of 4 Peer Evaluations/Worksheets is also a barrier condition to receiving marks for assignment 1

Assignment tasks

Assignment coversheets

Assignment coversheets are available via "Student Forms" on the Faculty website:

<http://www.infotech.monash.edu.au/resources/student/forms/>

You MUST submit a completed coversheet with all assignments, ensuring that the plagiarism declaration section is signed.

Assignment submission and return procedures, and assessment criteria will be specified with each assignment.

• Assignment task 1

Title:

Assignment 1: Group Seminar, Seminar Slides and Peer Evaluations/Worksheet. 30%.

Description:

This assessment task will require a group seminar presentation of 30 minutes in the lecture for the unit, plus a 10-minute question time. Each member in the group should contribute both to the research of the topic and the presentation of the seminar to the class. In order to present well in your seminar you will need to prepare a set of slides to guide your presentation. You will be

marked on both the quality of the content presented and the manner in which the presentation is delivered. All Seminar Slides (20 max) on the seminar topics must be submitted for posting to the FIT2016 Moodle site by Friday 3 pm week 5 as a study resource for the exam. This includes those presentations that will be delivered after week 5. Submitting the powerpoint file for posting the slides is a barrier condition for receiving marks for this assignment.

In your seminar you will be expected to:

- ◆ To define the nature of the seminar topic,
- ◆ Explain any terminology used,
- ◆ Discuss any historic development in this area of HCI research,
- ◆ Identify where the latest research into the area is being conducted,
- ◆ Discuss specific issues in HCI that need to be resolved or applications of this research,
- ◆ Discuss one or more examples or prototypes that are being developed,
- ◆ Discuss new and interesting solutions to the problems in HCI that have been identified,
- ◆ Outline further areas of related research that are emerging.

All students are expected to attend and contribute to the question time of the seminars. Weighting of 15 marks.

Assessment of seminar presentations will be based partly on lecturer assessment and partly on Peer Evaluation/Worksheets feedback sheets completed by all students.

Each week in the seminars you will be given a Seminar Peer Evaluation/Worksheet form for the seminar presentations, which must be completed and handed back at the end of the seminar. These will be used to help determine the grades for the group that is presenting the seminar. You will need to complete feedback on at least 4 of the seminars to be awarded any marks for the peer review/worksheet. This is a barrier condition and will be enforced strictly. You will receive two extra marks per seminar feedback correctly completed, up to the maximum of 15 marks.

If you have completed all feedback sheets appropriately you will be given full marks. You will only be able to fill in and hand back your own response each week in the seminar, no handing back multiple sheets and no handing back sheets from previous weeks.

Inadequate feedback on Seminar Peer Evaluation/Worksheet form will be assessed as being not completed. To fully complete the form you will need to complete all sections with thoughtful and considered comments on the quality of the research content and the presentation skills. Weighting of 15 marks.

Seminar topics to be selected from the list provided.

Weighting:

30%

Due date:

Friday 3pm week 5

Remarks:

For detailed descriptions of assessment tasks see the Detailed Descriptions of Assessment Tasks page.

• **Assignment task 2**

Title:

Assignment 2: Practical Interface Design Portfolio, 45%.

Description:

Construct an interface for your HCI design portfolio and include 4 examples of your interface

design skills based on the tutorial exercises provided:

Portfolio interface - 9 marks

Mobile Device interface - 9 marks

Task Wizard interface design - 9 marks

Game interface design - 9 marks

Metaphor-based interface design task - 9 marks

Each design task will be conducted over two weeks in the tutorials. For each example your portfolio will include the design brief information, and your design solution for the task (two screens with rollovers that provide a description of the features of the interface).

Weighting:

45%

Due date:

Friday 3 pm week 12.

Remarks:

For detailed descriptions of assessment tasks see the Detailed Descriptions of Assessment Tasks page.

Examination

- **Weighting:** 25%

Length: 2 hours

Type (open/closed book): closed book

Remarks:

Exam will be based on the content covered in weeks 1 to 4 and 12, and on the lecture and seminar topics in weeks 5 to 11.

5 questions for a total of 40% of the marks for content in weeks 1 to 4 and 12,

5 questions for a total of 60% of the marks based on seminar topics presented by students and lecture content in weeks 5 to 11 selected at random.

See Appendix for End of semester special consideration / deferred exams process.

Due dates and extensions

Please make every effort to submit work by the due dates. It is your responsibility to structure your study program around assignment deadlines, family, work and other commitments. Factors such as normal work pressures, vacations, etc. are not regarded as appropriate reasons for granting extensions. Students are advised to NOT assume that granting of an extension is a matter of course.

Students requesting an extension for any assessment during semester (eg. Assignments, tests or presentations) are required to submit a Special Consideration application form (in-semester exam/assessment task), along with original copies of supporting documentation, directly to their lecturer within two working days before the assessment submission deadline. Lecturers will provide specific outcomes directly to students via email within 2 working days. The lecturer reserves the right to refuse late applications.

A copy of the email or other written communication of an extension must be attached to the assignment submission.

Refer to the Faculty Special consideration webpage or further details and to access application forms:
<http://www.infotech.monash.edu.au/resources/student/equity/special-consideration.html>

Late assignment

Assignments received after the due date will be subject to a penalty of a 10% reduction in grade for each day (including weekends) the assignment is late. Late submissions **MUST** be time stamped and initialled when submitted. Assignments received later than one week after the due date will not normally be accepted.

This policy is strict because comments or guidance will be given on assignments as they are returned, and sample solutions may also be published and distributed, after assignment marking or with the returned assignment.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Appendix

Please visit the following URL: <http://www.infotech.monash.edu.au/units/appendix.html> for further information about:

- Continuous improvement
- Unit evaluations
- Communication, participation and feedback
- Library access
- Monash University Studies Online (MUSO)
- Plagiarism, cheating and collusion
- Register of counselling about plagiarism
- Non-discriminatory language
- Students with disability
- End of semester special consideration / deferred exams