School of Information and Physical Sciences

SENG2260: Human-Computer Interaction
Singapore PSB
Trimester 1 - 2024 (Singapore)

COURSE OUTLINE

OVERVIEW

Course Description	This course introduces human-computer interaction and, specifically, interaction design. The aim is to consider modern trends in the development of user interfaces from designing for usability to designing to enable user experiences. Design, testing and evaluation methods will be discussed and analysis of interfaces by experimentation on humans is described. The course includes a large practical project in which the students engineer a user interface.
Academic Progress Requirements	Nil
Assumed Knowledge	SENG1050 Web Technologies, SENG1110 Object Oriented Programming OR INFT1004 Introduction to Programming

Contact Hours

Singapore PSB

Lecture
Face to Face On Campus
2 hour(s) per week(s) for 13 week(s) starting Week 1

Workshop
Face to Face On Campus
2 hour(s) per week(s) for 12 week(s) starting Week 1

Unit Weighting	10
Workload	Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

CONTACTS

Course Coordinator	**Singapore PSB** Dr Adrian Tan Adrian.Tan10@newcastle.edu.au +61 2 4055 0700 Consultation: By Email
Teaching Staff	Other teaching staff will be advised on the course Canvas site.
School Office	**School of Information and Physical Sciences** SR233 Social Sciences Building Callaghan CESE-SIPS-Admin@newcastle.edu.au +61 2 4921 5513

SYLLABUS

Course Content

1. Foundations of HCI and Interaction Design
2. Understanding and conceptualising interaction
3. Designing for interaction
4. Affective aspects of interfaces
5. Accessibility and internationalisation
6. User-centred design and testing
7. Data gathering, analysis and interpretation
8. Empirical evaluation for HCI
9. Human factors and security issues
10. Social and ethical concerns

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Define interaction design and human-computer interaction

2. Critically explain interaction and user experience issues

3. Be familiar with conceptual models for designers and users

4. Have knowledge of design and prototyping methods for user interfaces

5. Design a user interface that employs best practice principles

6. Understand techniques of data collection, analysis and interpretation

7. Position their knowledge and skills against current social and ethical concerns

Course Materials

Recommended Reading:
- *Interaction Design: Beyond Human-Computer Interaction*, 5th Edition. Sharp, Rogers and Preece, 2019. The 3rd and 4th editions are also suitable for this course.

COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL of the following compulsory requirements:

Course Assessment Requirements:
- Assessment 5 - Formal Examination: Pass requirement 40% - Must obtain 40% in this assessment item to pass the course.

  Students whose overall mark in the course is 50% or more, but who score less than 40% in the compulsory item and thus fail to demonstrate the required proficiency, will be awarded a Criterion Fail grade, which will show as FF on their formal transcript. However, students in this position who have scored at least 25% in the compulsory item will be allowed to undertake a supplementary 'capped' assessment in which they can score at most 50% of the possible mark for that item.

ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Assignment 1 - Low fidelity prototype	Week 7	Group	20%	2, 3, 4, 5, 6, 7
2	Assignment 2 - High fidelity prototype	Week 13	Group	20%	2, 4, 5, 7
3	Assignment 3 - Interface Presentation	Week 12	Group	10%	1, 2, 4, 7
4	Assignment 4 - Research awareness	Weeks 3-13	Individual	10%	4, 6, 7
5	Formal Examination*	Formal examination period	Individual	40%	1, 2, 3, 4, 6, 7

* This assessment has a compulsory requirement.

Late Submissions	The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Assignment 1 - Low fidelity prototype

Assessment Type	Written Assignment
Purpose	At an intermediate stage in a major project, a report must outline what are the objectives, how they are being achieved, progress made towards attaining objectives and metrics used to measure whether objectives are being met. This will be reporting 'hands on' design.
Description	Report on low fidelity prototype development and testing.
Weighting	20%
Due Date	Week 7
Submission Method	Online
Assessment Criteria	See assessment specification and marking form on Canvas.
Return Method	Not Returned
Feedback Provided	Online

Assessment 2 - Assignment 2 - High fidelity prototype

Assessment Type	Written Assignment
Purpose	At the end of a project a professional final report should be presented outlining how objectives were met, changes made during project life, decisions made and justified and a conclusion about the development and life of the interface.
Description	Final product and report.
Weighting	20%
Due Date	Week 13
Submission Method	Online

Assessment Criteria	See assessment specification and marking form on Canvas.
Return Method	Not Returned
Feedback Provided	Online

Assessment 3 - Assignment 3 - Interface Presentation

Assessment Type	Presentation
Purpose	The purpose of presentation is to develop oral communication skills and the ability to record data, synthesize an opinion and convey this clearly in a well presented and articulate manner.
Description	Group presentation of final system and user interface.
Weighting	10%
Due Date	Week 12
Submission Method	In Class
Assessment Criteria	See assessment specification and marking form on Canvas.
Return Method	Not Returned
Feedback Provided	Online

Assessment 4 - Assignment 4 - Research awareness

Assessment Type	Written Assignment
Purpose	As part of your studies in SENG2260/SENG6260 Human-Computer Interaction you are expected to undertake a series of research awareness exercises. These exercises are designed to increase your awareness of the diversity of theory and research methodology in usability and HCI.
Description	Online or live research participation and/or research reading reviews.
Weighting	10%
Due Date	Weeks 3-13
Submission Method	Ongoing Assessment
Assessment Criteria	See assessment specification and marking form on Canvas.
Return Method	Not Returned
Feedback Provided	Online

Assessment 5 - Formal Examination

Assessment Type	Formal Examination
Purpose	The final formal examination is designed to test the individual student's knowledge of the course material and their ability to describe, analyse and synthesis problem solutions from this material.
Description	Formal exam
Weighting	40%
Compulsory Requirements	Pass requirement 40% - Must obtain 40% in this assessment item to pass the course.
Length	2 hours
Due Date	Formal examination period
Submission Method	Formal Exam
Assessment Criteria	To be provided on Canvas.
Return Method	Not Returned
Feedback Provided	No Feedback
Opportunity to Reattempt	Students WILL be given the opportunity to reattempt this assessment.

ADDITIONAL INFORMATION

Grading Scheme   This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction	Excellent standard indicating a very high level of knowledge

	(D)	and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Communication Methods

Communication methods used in this course include:
- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision.

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the Student Conduct Rule.

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.

Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:
1.   the assessment item is a major assessment item; or
2.   the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3.   you are requesting a change of placement; or
4.   the course has a compulsory attendance requirement.
Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:
https://policies.newcastle.edu.au/document/view-current.php?id=236.

Important Policy Information

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at
https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures that support a safe and respectful environment at the University.

GRADUATE PROFILE STATEMENTS

The following table illustrates how this course contributes towards building the skills students will need to work in their profession.

Level of capability
- Level 1 indicates an introduction to a topic at a university level
- Levels 2 and 3 indicate progressive reinforcement of that topic
- Level 4 indicates skills commensurate with a graduate – entry to professional practice
- Level 5 indicates highly specialist or professional ability

Bachelor of Information Technology

	University of Newcastle Bachelor of Information Technology Graduate Profile Statements	Taught	Practised	Assessed	Level of capability
1	Demonstrate a comprehensive understanding of the discipline of information technologies with an emphasis on net-centric applications, information management, and user requirements for ethical professional practice.	X	X	X	2
2	Apply critical reasoning and systems thinking to understand and support the operation and constraints of contemporary enterprises and their dynamic environment.	X	X	X	2
3	Work independently and collaboratively to locate, manage and organise information and resources and apply evidence-based methodologies to create, modify and maintain designs and design solutions.	X	X	X	2
4	Use creativity, problem solving skills, project management skills and technical expertise to analyse, interpret, evaluate and generate solutions to complex technical and organisational problems.	X	X	X	2
5	Demonstrate professional judgement and responsibility by communicating information technology principles, practices, standards to specialist and non-specialist audience clearly and persuasively.	X	X	X	2