

SINF90002 Interaction Design and Usability

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2014.
Time Commitment:	Contact Hours: 3 hours per week Total Time Commitment: 200 hours
Prerequisites:	Students must have completed 50 points of graduate level study in any degree OR obtained entry to the 100pt or 150pt Master of Information Systems.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry.</p> <p>It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability</p></p>
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Subject Overview:	<p>AIMS</p> <p>"Interaction Design and Usability" explores the design of useful, usable and satisfying information and communication technologies. Usability is now a vital part of the IT industry for both work and leisure. We can see usability (or the lack of it) in the design of tablets, aircraft cockpits, business software, car navigation devices, and many other technologies. In this subject students will learn concepts and techniques integral to engineering usable systems. These include: contextual analysis of human activities; principles for designing usable human computer interactions; styles of user interfaces; and methods to evaluate the usability of new designs. Students will also learn relevant theories underpinning these techniques including aspects of human cognition and the theory of natural design.</p> <p>INDICATIVE CONTENT</p> <p>Aspects of the following topics will be considered:</p> <ul style="list-style-type: none"> # Theoretical foundations of Human-Computer Interaction (e.g. conceptual theories, user characteristics, user models) # User-Interface technologies (human-computer dialogues and input technology) # Usability engineering principles and practices (e.g. user-centred design; user needs analysis; participatory design and usability evaluation) # Emerging analytical and design perspectives (e.g. Social Computing, Computer-Supported Cooperative Work, User-Experience)
Learning Outcomes:	<p>On completion of this subject the student is expected to:</p> <ol style="list-style-type: none"> 1 Define and distinguish between the different types of user interface, Understand and be able to apply user-centred design techniques 2 Understand the cognitive and social factors that make interactive software usable and effective 3 Apply design principles and guidelines that assist user interface designers, and understand the limitations of such guidelines 4 Apply techniques of Usability Engineering across the development lifecycle

	5 Develop a sound usability test and evaluation plan for a particular design project
Assessment:	<p>CRITICAL REVIEW - Individual students write one critical review (500 words) of a prescribed academic paper and give a 10-minute presentation (excluding question time) based on the critical review. Approximately 13 – 15 hours of work required. Due between week 3 and week 11 (10%).</p> <p>ASSIGNMENT 1 COGNITIVE WALKTHROUGH – Group project (3-4 students) on user needs analysis of a particular situation of use, design of a paper prototype and a cognitive walkthrough. The assignment consists of a written report (2000-3000 words) and a presentation (10 minutes). Requires approximately 25-30 hours of work per student. Due week 6 (20%)</p> <p>ASSIGNMENT 2 DESIGN AND EVALUATION – Group project (3-4 students) to create a digital prototype (based on the findings of assignment 1) and to conduct a usability evaluation of the prototype. Groups must report on the evaluation via a written report (3000-4000 words) and a presentation (10 minutes). Requires approximately 35-40 hours of work per student. ILOs 4 and 5 are addressed in this assignment. Assignment 2 is a hurdle and must be passed in order to pass the subject. Due week 12 (30%).</p> <p>EXAM - One open book, written, individual, take-home, end-of-semester examination. ILOs 1, 2 and 3 are addressed in the exam. The examination is a hurdle and must be passed in order to pass the subject. Taken during the examination period (40%).</p>
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	<p>On completion of this subject, students should have the following skills:</p> <ul style="list-style-type: none"> # Analytical and interpretative skills, from the theorising of usability to the conduct of user centred design # High-level design skills, through proposing new uses of technology to support users # Team-work, through working on a group project # Report-writing skills # Presentation skills
Notes:	<p>LEARNING AND TEACHING METHODS</p> <p>The subject is delivered in 3-hour classes, with each class containing: lectures on theoretical concepts and tutorial work and an interactive debrief on the outcomes of the tutorial work. Outside class students will study theory and cases through reading and continuing their group activities.</p> <p>INDICATIVE KEY LEARNING RESOURCES</p> <p>A list of key articles will be provided on the LMS. Materials from real-world cases are provided in class.</p> <p>CAREERS / INDUSTRY LINKS</p> <p>This subject is relevant to careers as a usability engineer, interaction designer, information architect etc. Students will work on real-world user interface design cases. There will be one or two lectures from invited practitioners from industry.</p>
Related Course(s):	<p>Master of Information Systems Master of Information Systems Master of Information Systems Master of Information Technology Master of Philosophy - Engineering Master of Science (Information Systems) Ph.D.- Engineering</p>