

INFO30004 Usability Engineering

Credit Points:	12.5								
Level:	3 (Undergraduate)								
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.								
Time Commitment:	Contact Hours: 36 hours, comprising of two 1-hour lectures and one 1-hour tutorial per week Total Time Commitment: 170 hours								
Prerequisites:	50 points of 2nd level subjects								
Corequisites:	None								
Recommended Background Knowledge:	None								
Non Allowed Subjects:	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>SINF30004 Human Computer Interaction</td> <td>Not offered 2015</td> <td>12.50</td> </tr> </tbody> </table> <p>615-348 Human Computer Interaction</p>			Subject	Study Period Commencement:	Credit Points:	SINF30004 Human Computer Interaction	Not offered 2015	12.50
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SINF30004 Human Computer Interaction	Not offered 2015	12.50							
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>								
Coordinator:	Dr Bernd Ploderer								
Contact:	email: ploderer@unimelb.edu.au (mailto:ploderer@unimelb.edu.au)								
Subject Overview:	<p>Aims</p> <p>How do you design information and communication technologies that are useful, usable and satisfying? Usability Engineering addresses this question. 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.</p> <p>In this subject students will learn concepts and techniques integral to creating 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> <ul style="list-style-type: none"> # Theoretical foundations of Usability Engineering # Understanding User Requirements # Expert based evaluations (e.g. Cognitive Walkthroughs and Heuristic Evaluation) # User based evaluations # Prototyping (high fidelity and low fidelity) 								

	<ul style="list-style-type: none"> # Analysis of Usability data # Visual Design # Social Computing.
Learning Outcomes:	<p>Intended Learning Outcomes (ILOs)</p> <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, 2 Exploit cognitive and social factors that make interactive software usable 3 Apply key 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>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 - 18%) and a presentation (10 minutes - 2%) due in week 6, requiring 20 to 25 hours of work per group member. ILOs 3 and 4 are addressed in this assignment. 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 - 25%) and a presentation (10 minutes-5%) due in week 12, requiring approximately 30 hours of work per group member. ILOs 4 and 5 are addressed in this assignment. Assignment 2 is a hurdle and must be passed to pass the subject. One written 2-hour closed book end-of-semester examination (50%). ILOs 1 to 4 are addressed in the exam. Hurdle requirement: The examination is a hurdle and must be passed to pass the subject.</p>
Prescribed Texts:	None
Breadth Options:	<p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2015/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2015/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2015/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2015/B-MUS) <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
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 developed the following generic skills:</p> <ul style="list-style-type: none"> # Acquire design oriented problem-solving skills # Review and research skills # Team work skills # Written and oral presentation skills
Notes:	<p>Learning and Teaching Methods</p> <p>The subject is delivered through a combination of two 1-hour lectures and one 1-hour tutorial each week, over twelve weeks. The lectures will address relevant theoretical and conceptual ideas and will include guest speakers from industry where appropriate. The tutorials will focus on the application of the theories and concepts through practical exercises and assignment work. Outside class students will study theory and cases through reading, they will work on their group assignment and participant in a lab-based usability study.</p> <p>Indicative Key Learning Resources</p>

	<p>All relevant resources will be available on the Learning Management System (LMS). These include lecture slides, tutorial notes, recommended reading, extension material, and links to industry material.</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 projects that will be applicable to real world cases. Speakers from Industry will be invited to give guest lectures. A collection of industry-based resources will be posted on the LMS.</p>
<p>Related Majors/Minors/ Specialisations:</p>	<p>Computer Science Computer Science Computer Science Computer Science Health Informatics Informatics Master of Engineering (Software with Business) Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED</p>
<p>Related Breadth Track(s):</p>	<p>Working with Information</p>