

SINF20006 Information Visualisation

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus. Lectures and workshops.
Time Commitment:	Contact Hours: 2 one-hour lectures per week; 1 two-hour workshop per week. Total Time Commitment: Estimated total time commitment of 120 hours
Prerequisites:	75 points of first year studies.
Corequisites:	None
Recommended Background Knowledge:	Experience in using Web-based applications is assumed together with competency in using generic software tools.
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Coordinator:	Dr Jon Pearce
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Subject Overview:	<p>Creating engaging and interactive representations of large sets of data (numeric, text, relationships) is crucial in areas of science, business and governance. But how can you present those data in ways that engage and excite your audience? What role can interactivity play to help people explore your data?</p> <p>The visualisation of data and concepts is of great importance in science, serving both as a means of investigation and also a means of communicating to other scientists, business, government and the public. Students should learn the principles of visualisation design, and gain an understanding of the following topics: categories and concepts of data and their mapping to visual displays; the nature and purpose of different types of data plots, diagrams and other visual representations; the psychology of decision-making in relation to visualisation, including systematic distortions and manipulations of perception; and historic and contemporary uses of visualisation and its role in the creation and dissemination of new knowledge. Students should learn how to apply this knowledge to the design of effective visualisations for various audiences.</p>
Objectives:	<p>On completion of this subject students should:</p> <ul style="list-style-type: none"> # understand and be able to apply principles of effective visualisation, including: data plots; theoretical models; and interactive displays; # appreciate the role of visualisations in the development and dissemination of arguments and knowledge, including the psychology of decision-making relevant to visualisation, and the role of visualisation in historic and contemporary science, business and governance.
Assessment:	Weekly participation during lectures and workshops throughout the semester (10%). Presentations to class. Students will each make three oral and visual presentations to the class. One will be based on an issue they have previously researched and be presented by a group of

	<p>three students for 50 minutes (15%). The other two will be based on developing skills in using a software tool and will be presented by a group of two students for 15 minutes (7.5% each). These will be spread throughout the semester. Total 30% Project. A group visualisation project expected to take about 22 hours due near the end of the semester. It will include a 10 minute oral and visual presentation (5%) towards the end of the semester. Total 25%. Discussion fora. Weekly contributions to discussion fora reflecting on students' class presentation topics. Total 10%. Exam. 2-hour end-of-semester written examination. A pass in the examination is a hurdle requirement for this subject. Total 25%.</p>
Prescribed Texts:	Spence, R. Information Visualization: A Design for Interaction Pearson/Prentice Hall. 2nd Edition 2007
Recommended 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/2012/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2012/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2012/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2012/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"> # the ability to analyse and solve real-world problems with computers; # the ability to synthesise information and communicate results effectively; # the ability to work effectively as a member of a project team; # the capacity for critical and independent thought and reflection; # the ability to make an oral presentation.
Notes:	<p>This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BASc or a combined BSc course.</p> <p>Students undertaking this subject will be expected to regularly access an internet-enabled computer.</p>
Related Majors/Minors/Specialisations:	<p>Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.</p>
Related Breadth Track(s):	Human Centred Computing