SCIE90007 E-Science

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 1 x three-hour seminar per week Total Time Commitment: Estimated total time commitment of 120 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	Students studying this subject are expected to be competent in the general use of computers, including file management, productivity software such as word processors and spreadsheets, and the use of the internet for research. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
Coordinator:	Dr Martin Gibbs
Contact:	email: **martin.gibbs@unimelb.edu.au (mailto:martin.gibbs@unimelb.edu.au)**
Subject Overview:	This subject focuses on approaches to the management and manipulation of scientific data. Topics may include: the nature of data; data lifecycle and management; data access; data analysis and manipulation; data visualisation, security, storage and curation. Students will learn how to manage research data, communicate research results to a wide audience, and oversee the efficient extraction and integration of information from diverse data sources, and how data might be preserved sustainably.
Objectives:	On completion of this subject students should be able to: # understand the scientific data lifecycle; # understand and be able to apply principles for managing scientific data collections; # access and contribute to distributed data collections; # manipulate structured and unstructured data; and # appreciate the role of scientific data management in the creation, communication and preservation of scientific knowledge.
Assessment:	A 25-minute group class presentation and short written report (500 words), due date to be determined by a schedule that will be distributed early in the semester (15%); a 1500 word individual assignment to develop a scientific data management plan that demonstrates principles for managing scientific data due during the first half of semester (20%); a data manipulation and visualisation group project expected to take approximately 30 hours (35%) due near the end of the semester; a 2-hour end-of-semester written examination (30%). A pass in the exam is a hurdle requirement for this subject.
Prescribed Texts:	None
Recommended Texts:	TBA

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:	On completion of this subject students should have developed the following generic skills: # analyse and solve real-world scientific problems with computers; # discern quality with respect to the goals of the subject; # synthesise information and communicate results effectively; # work effectively as a member of a project team
Related Course(s):	Master of Science (Biotechnology) Master of Science (Botany) Master of Science (Chemistry) Master of Science (Earth Sciences) Master of Science (Environmental Science) Master of Science (Epidemiology) Master of Science (Geography) Master of Science (Information Systems) Master of Science (Mathematics and Statistics) Master of Science (Physics) Master of Science (Zoology)