SCIE90007 E-Science

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	This subject is not offered in 2016.
Time Commitment:	Contact Hours: 1 x two-hour seminar per week and 1 x 1-hour practical class 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:	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 Overview, Objectives, Assessment and Generic Skills sections of this entry. 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 the Disability Liaison Unit: http://www.services.unimelb.edu.au/disability/
Contact:	Dr Martin Gibbs email: **martin.gibbs@unimelb.edu.au (mailto:martin.gibbs@unimelb.edu.au)**
Subject Overview:	This subject focuses on approaches and tools for 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.
Learning Outcomes:	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 visualization 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%)
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: # 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
Related Course(s):	Master of Biomedical Science Master of Science (Information Systems)
Related Majors/Minors/ Specialisations:	Environmental Science Environmental Science