

GEOM90044 Geoscience Information Systems

Credit Points:	6.25
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: April, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 14 hours of lectures and 22 hours of practicals Total Time Commitment: 85 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	Knowledge of third-year geology strongly recommended; a knowledge of basic statistics would be an advantage
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:	This course will introduce the concept of a GIS as a problem solving technology within the geosciences, and through hands-on practical classes and lectures will provide the basic hands-on skills needed to design and implement a GIS project. Specific topics will include map projections and georeferencing, distortions in image data, raster and vector data models, incorporating digital terrain models and geophysical data, introduction to boolean logic and functions, data accuracy and access issues and limitations of GIS. The course will include examination of case histories of GIS projects and students will also build a GIS project of their own to solve a simulated exploration problem using MapInfo and other open-source software and a real world data set.
Learning Outcomes:	<ul style="list-style-type: none"> # An ability to identify the kind of digital information and software most appropriate to solving different geological problems # An opportunity to demonstrate their ability to work with state-of-the-art geological data sets in digital form; # Confidence and competence to interrogate geological problems employing modern digital techniques.
Assessment:	2 x practical assignments, due during the teaching week (50% each assignment)
Prescribed Texts:	Reading expected to be completed in the pre-teaching period.
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:	<ul style="list-style-type: none"># Handle large datasets in digital format; exercise critical judgement;# Undertake rigorous and independent thinking;# Adopt a problem-solving approach to new and unfamiliar tasks;# Develop high-level written report and/or oral presentation skills;# Interrogate, synthesise and interpret the published literature;# Work as part of a team.
Related Course(s):	Master of Geoscience Master of Science (Earth Sciences)
Related Majors/Minors/ Specialisations:	Earth Sciences Honours Program - Earth Sciences