451-312 GIS & Remote Sensing for Enviro Science

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Total Time Commitment: Not available
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 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. 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
Coordinator:	Dr J Leach & Assoc Prof G Hunter
Subject Overview:	The objective of this subject is to develop basic skills in digital data processing and interpretation, and geographic information systems. Remote sensing component content includes principles of remote sensing; electromagnetic radiation; human vision; spaceborne and airborne sensors; and introduction to digital image processing including stretching, digital filters, arithmetic manipulations, image classification, rectification and geocoding. Geographic information systems component content includes introduction to the information society and information management; definition of GIS; the range of GIS applications; the use of GIS for decision making; integration of GIS with other technologies; geographic referencing methods; geographic data structures and models; relationships between geographic features; database definition and modelling; and introduction to the technology associated with GIS.
Assessment:	One 3-hour written examination at the end of semester (60%). Remote Sensing component - four 500-word practical assignments, each worth 5% GIS component - five 500-word practical assignments, each worth 4%.
Prescribed Texts:	None
Recommended Texts:	Information Not Available
Breadth Options:	This subject is a level 2 or level 3 subject and is not available to new generation degree students as a breadth option in 2008. This subject or an equivalent will be available as breadth in the future. Breadth subjects are currently being developed and these existing subject details can be used as guide to the type of options that might be available. 2009 subjects to be offered as breadth will be finalised before re-enrolment for 2009 starts in early October.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	# ability to apply knowledge of basic science and engineering fundamentals # ability to communicate effectively, not only with engineers but also with the community at large # ability to undertake problem identification, formulation and solution # understanding of the social, cultural, global and environmental responsibilities of the professional engineer, and the need for sustainable development # understanding of the principles of sustainable design and development # capacity for independent critical thought, rational inquiry and self-directed learning
Notes:	Students enrolled in the BSc (pre-2008 degree), BASc or a combined BSc course will receive science credit for the completion of this subject
Related Course(s):	Bachelor of Arts and Bachelor of Science Bachelor of Arts and Sciences Bachelor of Geomatic Engineering and Bachelor of Arts Bachelor of Science