451-341 Applications of GIS and Remote Sensing

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: 2 hour lecture, 2 hour practical per week. Total Time Commitment: Not available
Prerequisites:	451-105 Introduction to GIS and Remote Sensing, 451-235 Spatial Databases, 451-236 Spatial Visualisation, 451-331 Spatial Analysis, 451-332 Imaging in the Geosciences, or equivalent subjects
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 Joseph Henry John Leach
Subject Overview:	Topics include: • an overview of application areas in mapping; GIS application design and implementation; economical, managerial and institutional issues of GIS applications; GIS and its relation to Spatial Data Infrastructures (SDIs); GIS project feasibility studies, and GIS project realization; spatially enabled platforms to facilitate data sharing; • applications of remote sensing in resource mapping and monitoring, in the geosciences and in engineering as well as military and social planning applications. This will include a consideration of the image processing techniques used in each application, the capabilities of current sensor systems, the difficulties of operational implementation and the future potential in each application area.
Assessment:	One 3-hour written examination at the end of semester (50%). Written assignments and reports on practical work over the semester: a 'major project' over the first six weeks and two written reports on practical exercises due in the last six weeks (In total 50%).
Prescribed Texts:	None
Recommended Texts:	Information Not Available
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:	• 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 • in-depth technical competence in at least one engineering discipline • ability to undertake problem identification, formulation and solution

	• ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a leader or manager as well as an effective team member
Notes:	This subject is available for science credit to students enrolled in the BSc (new degree only).
Related Course(s):	Bachelor of Geomatic Engineering Bachelor of Geomatic Engineering & Bach of Planning & Design(Prop&Const) Bachelor of Geomatic Engineering and Bachelor of Arts Bachelor of Geomatic Engineering and Bachelor of Information Systems Bachelor of Geomatic Engineering and Bachelor of Science