ERTH90032 Interpretation of Satellite Images

Credit Points:	6.25
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus. This subject is taught through the Victorian Institute of Earth and Planetary Sciences: https://vieps.earthsci.unimelb.edu.au/.
Time Commitment:	Contact Hours: Contact Hours: Total 40 contact hours: 8 hours lectures, 32 hours practicals. Total Time Commitment: 85 hours.
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	A knowledge of third-year geology is strongly recommended.
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:	Assoc Prof Kevin Walsh
Contact:	kevin.walsh@unimelb.edu.au
Subject Overview:	This subject will show how to use two computer programs (Global Mapper and ENVI) to process satellite images in order to obtain geological and environmental data. The subject is almost entirely practical, and involves processing a variety of images from a particular area, including digital elevation models, Landsat, radiometric and aeromagnetic data, to construct a geological map and geomorphic history. In addition, the use of hyperspectral imagery will be covered.
Learning Outcomes:	# 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:	Seven equally weighted practical exercises collectively equivalent to 1000 words, due two weeks after the last lecture (40%) Assignment equivalent to 1500 words, due two weeks after the last lecture (60%)
Prescribed Texts:	Reading to be completed during the pre-teaching period: Remote sensing and image interpretation 6th Edition Lillesand, T.M. and Keifer, R.W. John Wiley & Sons, 2008.
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:	# 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