

625-304 Geophysics

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus. Lectures and practical classes.
Time Commitment:	Contact Hours: 12 lectures (one per week) and 36 hours of practical work (three hours per week) Total Time Commitment: 120 hours total time commitment.
Prerequisites:	<i>The Earth, Atmosphere and Oceans</i> or 625-102 (prior to 2008) 50 points of geology subjects selected from 625-201, 625-202, 625-211, 625-222, 625-224, 625-203 or 625-223 are strongly recommended.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
Coordinator:	Prof Janet Margaret Hergt
Subject Overview:	<p>The teaching of this subject follows these principles:</p> <ul style="list-style-type: none"> # The users of geophysical data (geologists, engineers, lawyers, accountants) need to know how geophysics should be done and what can be expected of the results. Geophysicists, in turn, need to know what the users will expect of them. # The basis for a common understanding between geophysicists and the users of geophysical data lies in the formalisation of the exploration process, based on the scientific method, rather than a detailed understanding of the underlying mathematics. # Modern computing technologies make it possible to use realistic modelling and simulation of the exploration process to teach by doing. <p>The subject is broken into modules, each dealing with one exploration method (gravity, magnetics, resistivity and seismic) while avoiding all but the most elementary mathematics. Students learn the relevant physics at an intuitive level with the aid of a series of forward-modelling exercises presented in the context of responding to client-specific problems in the form of 'requests for bid'. Students learn by designing, conducting and interpreting geophysical surveys that yield the greatest benefit-to-cost ratio. While completing these tasks, students learn how geophysicists think, what they do, and how much to trust their conclusions.</p>
Objectives:	.
Assessment:	Practical work/problem sheets totalling not more than 3500 words due during the semester (50%); a 2-hour written examination in the examination period (50%).
Prescribed Texts:	None
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # <u>Bachelor of Arts</u> (https://handbook.unimelb.edu.au/view/2009/D09)

	<p># <u>Bachelor of Commerce</u> (https://handbook.unimelb.edu.au/view/2009/F04)</p> <p># <u>Bachelor of Environments</u> (https://handbook.unimelb.edu.au/view/2009/A04)</p> <p># <u>Bachelor of Music</u> (https://handbook.unimelb.edu.au/view/2009/M05)</p> <p>You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p>
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Notes:	<p>Students enrolled in the BSc (pre-2008 BSc), BASc or a combined BSc course will receive science credit for the completion of this subject.</p> <p><i>Geophysics</i> was 625-304 Applied Geophysics (prior to 2009).</p>
Related Majors/Minors/Specialisations:	Geology