625-303 Geochemistry & Petrogenesis

Credit Points:	12.500
Level:	Undergraduate
Dates & Locations:	2008, This subject commences in the following study period/s: Semester 1, - Taught on campus.
Time Commitment:	Contact Hours: 24 lectures (two per week) and 24 hours of practical work (two hours per week) Total Time Commitment: 120 hours
Prerequisites:	625-202 (or prior to 2004: 625-224). An additional 37.5 points selected from 625-201, 625-211, 625-222, 625-203 or 625-223 is 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:	Associate Professor J Hergt
Subject Overview:	Solving geological problems requires unravelling what happened and when. Petrogenesis is literally 'the origin of rocks' and in this subject several essential tools geologists employ to unravel the complexity of earth processes using chemical information preserved in rocks and minerals will be presented. These include mineral equilibria, phase diagrams, and major, trace element and isotope geochemistry. Most of this subject relates to igneous and metamorphic processes, however many of the tools can be applied to a broad range of geological problems (eg. dating the formation of sedimentary rocks and ore deposits). In addition to learning the principles that underpin these techniques, emphasis is placed on how or when they are best applied. It is expected that by the end of the semester you will be able to explain how specific tools work and demonstrate both when it is appropriate, and how to apply them, to resolve petrogenetic problems. In this subject, students should recognise the importance of integrating the knowledge and skills obtained through years of study to tackle new and unfamiliar problems. This will require critical thinking and the organisation of materials delivered in lectures, together with the development of problem-solving skills via the laboratory exercises.
Assessment:	A 2-hour practical examination during the semester (25%); a written assignment up to 2000 words due at the end of semester (20%); a 2-hour written examination in the examination period (55%).
Prescribed Texts:	None
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

Notes:	Students enrolled in the BSc (pre-2008 BSc), 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 Science