GEOL90018 Mineralogy and Mineral Identification

Credit Points:	12.5
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus. On Campus - Parkville & Melbourne Museum Off Campus - Work experience in Industry.
Time Commitment:	Contact Hours: 60 Total Time Commitment: 80 hours.
Prerequisites:	Undergraduate introductory mineralogy subject(s).
Corequisites:	None
Recommended Background Knowledge:	Basic knowledge of mineral systems and use of a petrological microscope.
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:	Email: **kevin.walsh@unimelb.edu.au (mailto:kevin.walsh@unimelb.edu.au)**
Subject Overview:	This subject comprises two short-course intensive modules designed to provide an introduction to mineralogy, mineral chemistry and modern mineral identification techniques. The subject will include a series of concept lectures and practical exercises on systematic mineralogy, mineral chemistry and mineral identification techniques (e.g. SEM, EMP, XRD, TEM, Synchrotron). In each module, students will be assigned one or more minerals to describe and identify, using available instrumentation and methods.
Learning Outcomes:	This subject aims to: # equip students with discipline-based specific knowledge and expertise appropriate for post-graduate research in the filed of mineralogy; # equip students with discipline-specific knowledge and expertise to enable them to take their place as professional geologists in industry and government organizations; This subject will provide students with the confidence and competence to: # employ modern mineralogical identification methods to identify a wide variety of minerals from a broad range of geological settings (magmatic, metamorphic, sedimentary, ore systems); # hone their petrological microscope mineral identification techniques; # recognise common mineral species; # determine and interpret the mineral chemistry of common rock-forming minerals and calculate mineral formulae and end-members of mineral solid solution series; and # determine and interpret the structures of common rock-forming minerals.

Assessment:	The assessment for this subject consists of practicals (20%), essays (40%), a Mineral Identification Report (40%) and an Oral Presentation (10%).
Prescribed Texts:	None
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:	The two modules available to this subject seek to assist students in developing their ability to: # exercise critical judgement; # undertake rigorous and independent thinking; # adopt a problem-solving approach to new and unfamiliar tasks. Students will also have the opportunity to: # develop high-level written report and/or oral presentation skills; # interrogate, synthesise and interpret the published literature; # work as part of a team.
Links to further information:	http://graduate.science.unimelb.edu.au/
Related Course(s):	Master of Science (Earth Sciences)
Related Majors/Minors/ Specialisations:	Earth Sciences Earth Sciences Honours Program - Earth Sciences