

ERTH90029 Environmental Geochemistry

Credit Points:	6.25
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: June, 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: 20 hours of lectures and 20 hours of practicals Total Time Commitment: 85 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	Third year hydrogeology or geochemistry recommended
Non Allowed Subjects:	None
Core Participation Requirements:	<p><p>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.</p> <p>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</p></p>
Coordinator:	Assoc Prof Kevin Walsh
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Subject Overview:	This course will cover a variety of aspects of environmental geochemistry, including equilibrium processes (thermodynamics, solubility, mineral precipitation, redox reactions), kinetics and rates of reactions, application of geochemical and isotopic tracers to understanding environmental processes, and environmental mineralogy. Applications will include hydrology and hydrogeology, contaminants, weathering and CO ₂ sequestration, and acid-mine drainage. The course will develop the geochemical tools required to understand processes in these environments.
Learning Outcomes:	<ul style="list-style-type: none"> # This subject aims to equip students with discipline-specific knowledge and expertise appropriate for post-graduate research in the field; # equip students with discipline-specific knowledge and expertise enabling them to take their place as professional geologists in industry or government organisations; # to understand the links between chemical and environmental processes in aqueous geochemistry; # identify processes operating in natural aqueous systems using natural chemical tracers; # describe ways in which contamination can occur and be detected.
Assessment:	Three 30-minute quizzes (50%), a 20-minute oral presentation (35%) and a two-page summary of the oral presentation (15%) all due during the teaching period.
Prescribed Texts:	Reading expected to be completed in the pre-teaching period.
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:	<ul style="list-style-type: none"># 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