

# GEOL90017 Structural Geology and Geodynamics

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	This subject is not offered in 2014. Some parts of this subject may be taught off-campus.
<b>Time Commitment:</b>	Contact Hours: 60 hours. Specific activities will depend upon selected modules, but will be either class-room based workshop and/or field-based short course intensive-style, delivered over a single full-time week of study. Total Time Commitment: Not available
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	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. This subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit.
<b>Contact:</b>	Email: <a href="mailto:kevin.walsh@unimelb.edu.au">kevin.walsh@unimelb.edu.au</a> ( <a href="mailto:kevin.walsh@unimelb.edu.au">mailto:kevin.walsh@unimelb.edu.au</a> )
<b>Subject Overview:</b>	Understanding large-scale Earth processes and how these manifest in the structural features observed in rocks and minerals is fundamental to geology. Students will select two modules from topics including igneous geodynamics associated with magmatic ore deposits, applied structural geology in mining and exploration, 3D modelling and visualisation.
<b>Learning Outcomes:</b>	<p>The objective of this subject is to:</p> <ul style="list-style-type: none"> <li># provide students with training in the use of state-of-the-art data and techniques to develop an interpretation of the structural or broader tectonic history of a region;</li> <li># provide students with an understanding of how geodynamic processes operate;</li> <li># equip students with discipline-specific knowledge and expertise appropriate for post-graduate research in the field;</li> <li># equip students with discipline-specific knowledge and expertise enabling them to take their place as professional geologists in industry or government organisations.</li> </ul> <p>Depending upon the specific modules selected, this subject will provide students with the confidence and competence to:</p> <ul style="list-style-type: none"> <li># recognise the importance and role of structure in the formation and modification of ore deposits;</li> <li># hone their field mapping techniques;</li> <li># develop strategies to interpret geology from regional aeromagnetic and gravity data.</li> </ul>
<b>Assessment:</b>	This subject comprises two short-course intensive modules, each equally weighted towards the final grade. The specific assessment details will depend upon the modules selected and students are directed to the outlines for each short-course for further details. Assessment tasks will be completed within the duration of the module, or within two weeks of its conclusion. Tasks required are broadly based upon 4,000 words equivalent for the entire subject, with a one-hour examination or 15 minute oral examination or presentation equivalent to approximately 1,000 words. Thus, a short course module may require a two-hour examination, a one-hour examination and a 15 minute presentation or 1,000 word assignment, or field reports, maps and cross sections equivalent of 2,000 words. For example, in the case of one short course that may be selected for this subject, the assessment can be described as "Assessment is based on field maps, core logs and cross-sections and a short written report (four page maximum; 90%) to be handed in at the completion of the camp. 10 % is based on performance and aptitude in the field including demonstration of field skills (e.g. structural measurements, rock and mineral identification, representation of data on maps), level of independence and approach to problem solving".

<b>Prescribed Texts:</b>	None
<b>Recommended Texts:</b>	Texts will vary depending upon choice of modules.
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	<p>All modules available to this subject seek to assist students in developing their ability to:</p> <ul style="list-style-type: none"> <li># exercise critical judgement;</li> <li># undertake rigorous and independent thinking;</li> <li># adopt a problem-solving approach to new and unfamiliar tasks.</li> </ul> <p>Depending upon which modules are selected, students will have the opportunity to:</p> <ul style="list-style-type: none"> <li># develop high-level written report and/or oral presentation skills;</li> <li># interrogate, synthesise and interpret the published literature;</li> <li># work as part of a team.</li> </ul>
<b>Related Course(s):</b>	Master of Science (Earth Sciences)
<b>Related Majors/Minors/Specialisations:</b>	Earth Sciences Honours Program - Earth Sciences