

# GEOL30006 Economic Geology

| <b>Credit Points:</b>                            | 12.50  |                |                            |                |  |            |       |  |            |       |   |            |       |
|--|--|----------------|----------------------------|----------------|--|------------|-------|--|------------|-------|---|------------|-------|
| <b>Level:</b>                                    | 3 (Undergraduate)  |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Dates &amp; Locations:</b>                    | This subject is not offered in 2014. Lectures and practical classes.   |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Time Commitment:</b>                          | Contact Hours: 2 x one hour lectures per week; 1 x three hour practical class per week<br>Total Time Commitment: Estimated total time commitment of 120 hours  |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Prerequisites:</b>                            | All of <table border="1" data-bbox="387 488 1485 750"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GEOL20002 Structural and Metamorphic Geology</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GEOL20003 Earth Composition, Minerals and Magmas</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GEOL20004 Field Mapping and Sedimentary Geology</td> <td>June</td> <td>12.50</td> </tr> </tbody> </table>   | Subject        | Study Period Commencement: | Credit Points: | GEOL20002 Structural and Metamorphic Geology | Semester 1 | 12.50 | GEOL20003 Earth Composition, Minerals and Magmas | Semester 1 | 12.50 | GEOL20004 Field Mapping and Sedimentary Geology | June       | 12.50 |
| Subject  | Study Period Commencement:   | Credit Points: |                            |                |  |            |       |  |            |       |   |            |       |
| GEOL20002 Structural and Metamorphic Geology     | Semester 1   | 12.50          |                            |                |  |            |       |  |            |       |   |            |       |
| GEOL20003 Earth Composition, Minerals and Magmas | Semester 1   | 12.50          |                            |                |  |            |       |  |            |       |   |            |       |
| GEOL20004 Field Mapping and Sedimentary Geology  | June   | 12.50          |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Corequisites:</b>                             | None   |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Recommended Background Knowledge:</b>         | Subjects selected from <table border="1" data-bbox="387 913 1485 1176"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GEOL30002 Tectonics &amp; Geodynamics</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GEOL30004 Geochemistry &amp; Petrogenesis</td> <td>Semester 1</td> <td>12.50</td> </tr> <tr> <td>GEOL30003 Sedimentary Geology</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>  | Subject        | Study Period Commencement: | Credit Points: | GEOL30002 Tectonics & Geodynamics            | Semester 1 | 12.50 | GEOL30004 Geochemistry & Petrogenesis            | Semester 1 | 12.50 | GEOL30003 Sedimentary Geology                   | Semester 2 | 12.50 |
| Subject  | Study Period Commencement:   | Credit Points: |                            |                |  |            |       |  |            |       |   |            |       |
| GEOL30002 Tectonics & Geodynamics                | Semester 1   | 12.50          |                            |                |  |            |       |  |            |       |   |            |       |
| GEOL30004 Geochemistry & Petrogenesis            | Semester 1   | 12.50          |                            |                |  |            |       |  |            |       |   |            |       |
| GEOL30003 Sedimentary Geology                    | Semester 2   | 12.50          |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Non Allowed Subjects:</b>                     | None   |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Core Participation Requirements:</b>          | For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: <a href="http://www.services.unimelb.edu.au/disability/">http://www.services.unimelb.edu.au/disability/</a> |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Contact:</b>                                  | <b>Email: <a href="mailto:dphillip@unimelb.edu.au">dphillip@unimelb.edu.au</a> (mailto:dphillip@unimelb.edu.au)</b>  |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Subject Overview:</b>                         | Topics covered include the geological setting and genesis of major metalliferous deposits; magmatic, magmatic hydrothermal, submarine hydrothermal and surficial deposits of major metalliferous and non-metallic resources will be integrated with fluid inclusions, stable isotope, petrographic and field studies.  |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Learning Outcomes:</b>                        | On completion of this subject, students should comprehend the wide variety of metalliferous-ore-forming processes. Students should have developed skills in interpreting ore deposits, skills in exploration techniques based on ore-forming processes, and skills in communication.   |                |                            |                |  |            |       |  |            |       |   |            |       |
| <b>Assessment:</b>                               | The presentation of this subject and the on-going assessment is designed to encourage continuous and collaborative learning, maximise feedback and interaction, and reduce the weighting of the final theory exam. Worksheets from the practical sessions are to be submitted after each practical session. Two assignments on a variety of subjects are to be submitted during the semester. Results from the practical exam (week 12) will be posted prior to the theory   |                |                            |                |  |            |       |  |            |       |   |            |       |

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|   | <p>exam. Theory Exam: 40% Two-hour theory exam, including all topics covered in the lectures; Prac. Exam: 25% One-hour exam, including hand-specimen, thin section and polished block identification of ore and gangue minerals plus associated rocks; held in the practical time-slot for week 12; Assignments: 20% Two assignments of up to 1000 words each to be submitted during the semester. (i.e., each worth 10%); F/T report: 10% Field trip attendance and worksheet, to be submitted after the field trip; Practicals: 5% Submission of &gt;80% of practical worksheets.</p>  |
| <b>Prescribed Texts:</b>                      | None   |
| <b>Breadth Options:</b>                       | <p>This subject potentially can be taken as a breadth subject component for the following courses:</p> <ul style="list-style-type: none"> <li># <b><u>Bachelor of Arts</u></b> (<a href="https://handbook.unimelb.edu.au/view/2014/B-ARTS">https://handbook.unimelb.edu.au/view/2014/B-ARTS</a>)</li> <li># <b><u>Bachelor of Commerce</u></b> (<a href="https://handbook.unimelb.edu.au/view/2014/B-COM">https://handbook.unimelb.edu.au/view/2014/B-COM</a>)</li> <li># <b><u>Bachelor of Environments</u></b> (<a href="https://handbook.unimelb.edu.au/view/2014/B-ENVS">https://handbook.unimelb.edu.au/view/2014/B-ENVS</a>)</li> <li># <b><u>Bachelor of Music</u></b> (<a href="https://handbook.unimelb.edu.au/view/2014/B-MUS">https://handbook.unimelb.edu.au/view/2014/B-MUS</a>)</li> </ul> <p>You should visit <b>learn more about breadth subjects</b> (<a href="http://breadth.unimelb.edu.au/breadth/info/index.html">http://breadth.unimelb.edu.au/breadth/info/index.html</a>) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.</p> |
| <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>Notes:</b>                                 | This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BAsC or a combined BSc course.   |
| <b>Related Majors/Minors/Specialisations:</b> | <p>Geology<br/>                     Geology<br/>                     Geology<br/>                     Science credit subjects* for pre-2008 BSc, BAsC and combined degree science courses<br/>                     Science-credited subjects - new generation B-SCI and B-ENG.</p>   |