

## Categorizing student performance levels

### GEOL0023 Metamorphism and metamorphic processes

Excellent is the performance expected of students gaining a First class honours (MSci) or Distinction (MSc). Typical is the performance currently expected of students at the Lower/Upper Second class boundary (MSci) or 60% (MSc). Threshold is the minimum performance currently required to gain an honours degree (MSci) or masters degree (MSc).

Definitions	Excellent performance	Typical performance	Threshold performance
<b>Intellectual skills -knowledge and understanding</b>	Thorough understanding of metamorphic facies, the various minerals formed from different protoliths and the processes and tectonic environments which produce these rocks. An ability to apply the principles learnt during the course to new rock assemblages and to synthesise several lines of evidence into a coherent model. Clear understanding of modern analytical techniques used for geothermobarometry. Good research skills: critical thought and originality. The student goes beyond just coming up with the right answer and applies the results to real-world examples.	Good understanding of metamorphic facies, the various minerals formed from different protoliths and the processes and tectonic environments which produce these rocks. Understanding of modern analytical techniques used for geothermobarometry. Understanding of the principles of using partition coefficients for geothermobarometry. Reasonable research skills: Critical thought. The student can progress the project to conclusion given reasonable support.	Basic understanding of metamorphic facies, the various minerals formed from different protoliths and the processes and tectonic environments which produce these rocks. Basic understanding of modern analytical techniques used for geothermobarometry. Passable research skills: The student needs strong guidance but can come up with the right answer.
<b>Practical skills</b>	Excellent petrological microscope work (for example identification of feldspar composition). Good research skills: planning and time management.	Good petrological microscope work (for example identification of metamorphic accessory minerals; identification of metamorphic textures and awareness of their causes). Reasonable research skills: planning and time management.	Reasonable petrological microscope work (for example identification of main metamorphic minerals and some metamorphic textures). Passable research skills: planning and time management.
<b>Communication skills</b>	Excellent, clear, concise and effective writing. Clear development of a	Good, clear and concise writing. Good presentation of reports	Passable, writing which clearly communicates the main concepts.

	logical argument in written work. Good presentation of reports including modifying figures from the literature with appropriate attribution in addition to developing new figures. Attractive and clear graphical presentation of numerical data	including original figures and figures from the literature with appropriate attribution. Clear graphical presentation of numerical data	Reasonable presentation of reports including figures from the literature with appropriate attribution. Adequate graphical presentation of numerical data
<b>Numeracy and C &amp; IT skills</b>	Excellent spreadsheet skills (for example developing weighted least-squares minimisations in Excel). Excellent ability with geothermobarometry calculations and phase diagram construction from standard state thermodynamic values. Excellent ability to apply Schreinemacher's analyses to construct ternary phase diagrams and ternary plots.	Good spreadsheet skills, including efficient use of Excel and debugging. Good ability with phase diagram construction from standard state thermodynamic values. Good ability to apply Schreinemacher's analyses to construct ternary phase diagrams and ternary plots.	Reasonable spreadsheet skills. Basic ability with phase diagram construction from standard state thermodynamic values. Basic ability to apply Schreinemacher's analyses to construct ternary phase diagrams and ternary plots in instances where some of the reactions have already been labelled.