



# University of Pretoria Yearbook 2021

## Fundamental and applied mineralogy 255 (GLY 255)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	12.00
<b>NQF Level</b>	06
<b>Programmes</b>	<a href="#">BSc Chemistry</a> <a href="#">BSc Engineering and Environmental Geology</a> <a href="#">BSc Geology</a> <a href="#">BSc Physics</a>
<b>Prerequisites</b>	CMY 117, CMY 127, GLY 155, GLY 163, WTW 158 and PHY 114
<b>Contact time</b>	2 practicals per week, 4 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Geology
<b>Period of presentation</b>	Quarter 1

### Module content

Fundamental concepts in mineralogy, and practical applications of mineralogy, including: the basics of crystal structure; the crystallographic groups; the rules of atomic substitution; phase transitions and phase diagrams; the structure and uses of olivine, pyroxene, feldspar, amphibole, mica, aluminosilicates, garnet, cordierite, and more uncommon mineral groups such as oxides, sulphides and carbonates; the calculation of mineral formulae from chemical analyses using various methods. Practical sessions: the basics of optical mineralogy and the use of transmitted light microscopy for thin section examination of minerals and rocks; the practicals will develop mineral identification skills for the minerals covered in the lectures, and cover basic textural identification.

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