



University of Pretoria Yearbook 2020

Fundamental and applied mineralogy 255 (GLY 255)

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| Qualification | Undergraduate |
| Faculty | Faculty of Natural and Agricultural Sciences |
| Module credits | 12.00 |
| Programmes | BSc Chemistry BSc Engineering and Environmental Geology BSc Geology BSc Physics |
| Prerequisites | CMY 117, CMY 127, GLY 155, GLY 163, WTW 158 and PHY 114 |
| Contact time | 2 practicals per week, 4 lectures per week |
| Language of tuition | Module is presented in English |
| Department | Geology |
| Period of presentation | 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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