

University of Pretoria Yearbook 2022

Igneous and metamorphic petrology 263 (GLY 263)

Qualification Undergraduate

Faculty [Faculty of Natural and Agricultural Sciences](#)

Module credits 24.00

NQF Level 06

Programmes [BSc \(Chemistry\)](#)

[BSc \(Engineering and Environmental Geology\)](#)

[BSc \(Geology\)](#)

Prerequisites GLY 255

Contact time 2 practicals per week, 4 lectures per week

Language of tuition Module is presented in English

Department Geology

Period of presentation Semester 2

Module content

Classification and nomenclature of igneous rocks. The nature of silicate melts; physical and chemical factors influencing crystallisation and textures of igneous rocks. Phase diagrams, fractional crystallisation and partial melting. Trace elements and isotopes, and their use in petrogenetic studies. Global distribution of magmatism and its origin. Mid-oceanic ridges, active continental margins, intraplate magmatism. Classification of metamorphic rocks. Anatexis, migmatite and granite; eclogite. Metamorphic textures. PT-time loops. Metamorphism in various plate tectonic environments.

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