

# University of Pretoria Yearbook 2016

## Mineralogy 210 (GMI 210)

**Qualification** Undergraduate

**Faculty** [Faculty of Engineering, Built Environment and Information Technology](#)

**Module credits** 16.00

**Programmes** [BEng Metallurgical Engineering](#)  
[BEng Metallurgical Engineering Engage](#)

**Service modules** Faculty of Engineering, Built Environment and Information Technology

**Prerequisites** No prerequisites.

**Contact time** 2 tutorials per week, 4 lectures per week

**Language of tuition** English

**Academic organisation** Materials Science and Metallur

**Period of presentation** Semester 1

### Module content

Crystallography and internal order in minerals (space groups, unit cells, X-ray diffraction data). Bonding, mineral chemistry and solid solution (types of solid solution, calculation of mineral formulae and cation valency). Subsolidus reactions and defects in minerals (thermodynamic basis, defects, importance of subsolidus reactions). Classification and crystal structures of minerals. Mineralogical instrumentation and analysis. Major rock types and their classification. Mineralogical aspects of minerals processing.

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