

University of Pretoria Yearbook 2022

Metallurgical calculations 210 (NTC 210)

Qualification Undergraduate

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

Module credits 8.00

NQF Level 06

Programmes [BEng \(Metallurgical Engineering\)](#)

[BEng \(Metallurgical Engineering\) ENGAGE](#)

Prerequisites (CHM 171) or (CHM 172).

Contact time 2 lectures per week, 3 discussion classes per week

Language of tuition Module is presented in English

Department Materials Science and Metallurgical Engineering

Period of presentation Semester 1

Module content

The content relates to metallurgical calculations: dimensions, units and their conversion. The mol unit, density, concentration. Specific volume, bulk density, the density of ideal mixtures. Empirical formulae, chemical reaction and stoichiometry, excess reactant, conversion yield, selectivity. Gas laws. Material balances where gases are involved. Fuels and combustion. Introduction to material balances: a strategy for solving problems. Material balances. Basic electrochemistry.

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