



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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