



University of Pretoria Yearbook 2022

Refractory materials 321 (NVM 321)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	8.00
NQF Level	07
Programmes	BEng (Metallurgical Engineering) BEng (Metallurgical Engineering) ENGAGE
Prerequisites	(NPT 220) and NPM 321 #
Contact time	2 lectures per week, 2 tutorials per week
Language of tuition	Module is presented in English
Department	Materials Science and Metallurgical Engineering
Period of presentation	Semester 2

Module content

Classification, requirements and properties of refractory materials. Manufacturing principles. Specification and testing of refractory materials. The main refractory systems, i.e silica, aluminosilicates, alumina, magnesia, magnesia-chrome, magnesia-carbon, dolomite, zircon, zirconia, silicon carbide and graphite, and their applications. Principles of ternary phase diagrams and their application in refractory systems, and interactions between slag, metal and refractory materials.

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