

University of Pretoria Yearbook 2018

Refractory materials 321 (NVM 321)

Undergraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 8.00

Programmes BEng Metallurgical Engineering

BEng Metallurgical Engineering ENGAGE

Prerequisites (NPT 220) and NPM 321 #

Contact time 1 tutorial per week, 2 lectures per week

Language of tuition Module is presented in English

Department Materials Science and Metallurgical Engineering

Period of presentation Semester 2

Module content

Qualification

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, doloma, 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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