



University of Pretoria Yearbook 2019

Refractory materials 321 (NVM 321)

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| Qualification | 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

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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