

# University of Pretoria Yearbook 2019

## Refractory materials 321 (NVM 321)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	8.00
<b>Programmes</b>	<a href="#">BEng Metallurgical Engineering</a> <a href="#">BEng Metallurgical Engineering Engage</a>
<b>Prerequisites</b>	(NPT 220) and NPM 321 #
<b>Contact time</b>	1 tutorial per week, 2 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Materials Science and Metallurgical Engineering
<b>Period of presentation</b>	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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