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# University of Pretoria Yearbook 2019

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## Froth flotation 700 (NSF 700)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	30.00
<b>Programmes</b>	<a href="#">BEngHons Metallurgical Engineering</a> <a href="#">BSchHons Applied Science Metallurgy</a>
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	48 contact hours per semester
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Materials Science and Metallurgical Engineering
<b>Period of presentation</b>	Semester 1 or Semester 2

### Module content

Fundamentals of sulphide and coal flotation are covered, including the chemistry of sulphide mineral flotation; natural and induced hydrophobicity; physical and chemical interactions in coal flotation; review of sulphydryl and oxydryl collectors and their absorption mechanisms; the role of activators/depressants and pH regulators as well as an investigation of frothers and froth stability, with reference to recent industrial developments. Aspects of flotation practice are addressed: Experimental methods for laboratory and plant trials; basic and complex flotation circuits with examples from recent developments; control in flotation plants: reagents/conditioning. Finally, relevant interfacial surface chemistry is covered: the role of water in flotation; mechanisms and thermodynamics of collector activity.

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