

University of Pretoria Yearbook 2022

Electrometallurgy 700 (NEL 700)

Qualification Postgraduate

Faculty [Faculty of Engineering, Built Environment and Information Technology](#)

Module credits 30.00

NQF Level 08

Programmes [BEngHons Metallurgical Engineering](#)

[BScHons \(Applied Science\) Metallurgy](#)

Prerequisites Geen voorvereistes.

Contact time 48 contact hours per semester

Language of tuition Module is presented in English

Department Materials Science and Metallurgical Engineering

Period of presentation Year

Module content

At the end of the module, students should be able to conceptualise and design new electrometallurgical processes and improve the operation of existing processes through an understanding of the basic principles of the thermodynamics and kinetics of electrochemistry, measurement techniques used in electrochemistry, and considering the principles of electrochemical reactor design, different electrode and cell configurations, role of additives to electrolytes, role of impurities in the electrowinning process, the steps involved in electrocrystallization processes and present practices used for the electrowinning of metals such as copper, nickel, cobalt, zinc, manganese and gold.

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