

# University of Pretoria Yearbook 2021

## 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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