

## University of Pretoria Yearbook 2018

## Electrochemistry 310 (NEC 310)

| Qualification          | Undergraduate  |
|------------------------|--|
| Faculty                | Faculty of Engineering, Built Environment and Information Technology |
| Module credits         | 16.00  |
| Programmes             | BEng Metallurgical Engineering                                       |
|                        | BEng Metallurgical Engineering ENGAGE                                |
| Prerequisites          | No prerequisites.  |
| Contact time           | 3 lectures per week, 3 practicals per week                           |
| Language of tuition    | Module is presented in English                                       |
| Department             | Materials Science and Metallurgical Engineering                      |
| Period of presentation | Semester 1   |

## Module content

Kinetics and thermodynamics of electrochemical reactions of metallurgical importance. Use of equilibrium diagrams to identify possible reactions products. Use of polarisation diagrams to describe reaction kinetics. Application of these principles to metallurgical examples, including corrosion, leaching and electrometallurgy. Influence of substrate composition, electrolyte composition, impurities, reaction products and agitation on kinetics.

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