

University of Pretoria Yearbook 2016

Welding processes 700 (NWP 700)

Qualification Postgraduate

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

Module credits 32.00

Programmes [BEngHons Metallurgical Engineering](#)

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

Prerequisites No prerequisites.

Contact time 48 contact hours per semester

Language of tuition English

Academic organisation Materials Science and Metallur

Period of presentation Year

Module content

This module examines arc physics, electrotechnics as applied to weld power sources, and power source design. The fundamental principles, applications, consumables and process variables of various arc welding processes, oxy-gas welding techniques, resistance welding processes, power beam processes and solid-state welding techniques are considered. Brazing and soldering, cutting, surfacing and metal spraying techniques are discussed. The module also looks at the welding of plastics, ceramics and composites, and at the mechanisation and use of robotics in the welding and joining industries. Practical training is included in this module.

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