



University of Pretoria Yearbook 2017

Welding metallurgy 700 (NSW 700)

Qualification Postgraduate

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

Module credits 30.00

Programmes [BEngHons Metallurgical Engineering](#)

[BEngHons Welding Engineering](#)

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

[BScHons Applied Science Metallurgy](#)

Prerequisites No prerequisites.

Contact time 48 contact hours per semester

Language of tuition Module is presented in English

Academic organisation Materials Science and Metallur

Period of presentation Year

Module content

This module examines the basic physical metallurgy and heat treatment of various metals and alloys, and the application of various mechanical testing techniques, microstructural analysis and corrosion testing to characterise metals and alloys. The structure and properties of welds in carbon steels, stainless steels, cast irons, copper and copper alloys, nickel and nickel alloys, aluminium and aluminium alloys and other materials (Ti, Mg, Ta and Zr) are discussed. Defects are discussed and various techniques to avoid the formation of these defects in welds are considered.

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