

# University of Pretoria Yearbook 2019

## Metals processing and welding 410 (NPW 410)

**Qualification** Undergraduate

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

**Module credits** 16.00

**Prerequisites** (NMC 312) and (NMM 320)

**Contact time** 4 lectures per week, 2 practicals per week

**Language of tuition** Module is presented in English

**Department** Materials Science and Metallurgical Engineering

**Period of presentation** Semester 1

### Module content

Liquid metal processing. Sheet metal processing. Welding processes. Surface processing and hard facing. Processing for fatigue resistance; fatigue of welded structures. Soldering and brazing. Metallurgy of welding and the heat-affected zone. Welding of carbon steels, cast irons and non-ferrous alloys. Metallurgy and welding of stainless steels. Welding codes, specifications, quality assurance.

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