

University of Pretoria Yearbook 2020

Metallurgical fluid mechanics 310 (NTV 310)

Qualification Undergraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 8.00

Programmes BEng Metallurgical Engineering

BEng Metallurgical Engineering ENGAGE

Prerequisites No prerequisites.

Contact time 1 practical per week, 3 lectures per week

Language of tuition Module is presented in English

Department Mechanical and Aeronautical Engineering

Period of presentation Quarter 1

Module content

Introduction: Liquids and gases, pressure, viscosity, temperature. Fluid statics and pressure measurement. Introduction to control volume method for mass, momentum and energy conservation. Bernoulli equation. Flow in pipes and channels: friction coefficients and Reynolds number, pressure drop; laminar, turbulent and transitional flow.

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