

University of Pretoria Yearbook 2018

Continuum mechanics 787 (WTW 787)

Qualification Postgraduate

Faculty [Faculty of Natural and Agricultural Sciences](#)

Module credits 15.00

Programmes [BScHons Applied Mathematics](#)

[BScHons Mathematics and Mathematics Education Algebra and Analysis](#)

[BScHons Mathematics and Mathematics Education Applied Analysis](#)

[BScHons Mathematics and Mathematics Education Differential Equations and Modelling](#)

Prerequisites No prerequisites.

Contact time 2 lectures per week

Language of tuition Module is presented in English

Department Mathematics and Applied Mathematics

Period of presentation Semester 2

Module content

Analysis of spatial versus material description of motion. Conservation laws. Derivation of stress tensors. Analysis of finite strain and rate of deformation tensors. Stress and strain invariants. Energy. Linear and nonlinear constitutive equations. Applications to boundary value problems in elasticity and fluid mechanics.

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