

University of Pretoria Yearbook 2022

Solid mechanics 321 (MKM 321)

Qualification	Undergraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
NQF Level	07
Programmes	BEng (Mechanical Engineering) BEng (Mechanical Engineering) ENGAGE
Prerequisites	MOW 227
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	Semester 2

Module content

Computational solid mechanics using a high-level programming language, macroscopic equilibrium equations, continuum mechanics, infinitesimal equilibrium equations, strong and weak form of the solid mechanics Boundary Value Problem (BVP), linear elastic FEM, FEM modelling principles. Data-driven modelling and inverse problems, structural sensing. Verification and validation.

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