



University of Pretoria Yearbook 2020

Structural design 227 (MOW 227)

Qualification Undergraduate

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

Module content Analyse statically determinate structures to obtain section forces and moments and stress distributions. Axial loading, pure shear, torsion and bending. Stress and strain transformations. Derivation of stress transformation equations. Mohr's circle. Failure criteria. Fatigue strength design. Introduction to code design, safety factors. All analysis techniques are applied to the open-ended design of hoisting systems and ropes, symmetric beams, shafts, springs, bolts and welds.

Module credits 16.00

Programmes [BEng Mechanical Engineering](#)

[BEng Mechanical Engineering ENGAGE](#)

Prerequisites SWK 122

Contact time 3 lectures per week, 4 tutorials per week

Language of tuition Module is presented in English

Department Mechanical and Aeronautical Engineering

Period of presentation Semester 2

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