

University of Pretoria Yearbook 2021

Machine design 312 (MOW 312)

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 217, (MOW 227)
Contact time	3 lectures per week, 3 tutorials per week
Language of tuition	Module is presented in English
Department	Mechanical and Aeronautical Engineering
Period of presentation	Semester 1

Module content

Within the framework of system engineering the following themes are introduced: Ergonomics, pressure vessels (introduction to code design), structural design, welding and bonding, heat treatment, non-destructive testing, couplings, clutches, brakes, gears, contact stresses and lubrication. Safety factors are considered through all themes. Open-ended subsystem design using the following elements: welds, gears and gear systems.

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