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# University of Pretoria Yearbook 2021

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## Machine design 312 (MOW 312)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Engineering, Built Environment and Information Technology</a>
<b>Module credits</b>	16.00
<b>NQF Level</b>	07
<b>Programmes</b>	<a href="#">BEng Mechanical Engineering</a> <a href="#">BEng Mechanical Engineering ENGAGE</a>
<b>Prerequisites</b>	MOW 217, (MOW 227)
<b>Contact time</b>	3 lectures per week, 3 tutorials per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Mechanical and Aeronautical Engineering
<b>Period of presentation</b>	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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