# University of Pretoria Yearbook 2020

# Dynamics 210 (MSD 210)

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| **Qualification** | Undergraduate |
| **Faculty** | Faculty of Engineering, Built Environment and Information Technology |
| **Module credits** | 16.00 |
| **Programmes** | BEng Electrical Engineering |
| | BEng Electrical Engineering ENGAGE |
| | BEng Electronic Engineering |
| | BEng Electronic Engineering ENGAGE |
| | BEng Industrial Engineering |
| | BEng Industrial Engineering ENGAGE |
| | BEng Mechanical Engineering |
| | BEng Mechanical Engineering ENGAGE |
| | BEng Metallurgical Engineering |
| | BEng Metallurgical Engineering ENGAGE |
| | BEng Mining Engineering |
| | BEng Mining Engineering ENGAGE |
| **Prerequisites** | FSK 116 or FSK 176 and SWK 122 and WTW 256 # |
| **Contact time** | 2 tutorials per week, 3 lectures per week |
| **Language of tuition** | Module is presented in English |
| **Department** | Mechanical and Aeronautical Engineering |
| **Period of presentation** | Semester 1 |

**Module content**

Kinetics of systems of particles, Newton’s 2nd law generalised for a system of particles, rate of change of momentum and angular momentum relations, work-energy relations, conservation laws, steady mass flow. Plane kinematics of rigid bodies, rotation, translation, general 2D motion, relative motion analysis. Moments and products of inertia. Plane kinetics of rigid bodies, equations of motion, rotation, translation, general 2D motion, work-energy relations. Vibration and time response.

Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.