

University of Pretoria Yearbook 2017

Flight mechanics 780 (MLV 780)

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| Qualification | Postgraduate |
| Faculty | Faculty of Engineering, Built Environment and Information Technology |
| Module credits | 16.00 |
| Programmes | BEngHons Mechanical Engineering BScHons Applied Science Mechanics |
| Prerequisites | Working knowledge of MATLAB/OCTAVE/Python or similar |
| Contact time | 21 contact hours per semester |
| Language of tuition | Module is presented in English |
| Academic organisation | Mechanical and Aeronautical En |
| Period of presentation | Semester 1 or Semester 2 |

Module content

Drag: friction, pressure, induced, interference, cooling, trim, drag estimation and reduction, piston engines, propellers, gas turbines, turbojet, turboprop and turbofan engines, propfan engines, aircraft performance, take off, climb, level flight, range, flight and manoeuvre envelopes, landing, energy methods, static stability and control: stick fixed, stick free, lateral stability and control, dihedral effect, coupling, dynamic longitudinal stability, short period oscillations, phugoid oscillations, dynamic damping, flight characteristics.

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