

University of Pretoria Yearbook 2016

Flight mechanics 780 (MLV 780)

Qualification Postgraduate

Faculty Faculty of Engineering, Built Environment and Information Technology

Module credits 16.00

Programmes BEngHons Mechanical Engineering

BScHons Applied Science Applied Science: Mechanics

Prerequisites No prerequisites.

Contact time 21 contact hours per semester

Language of tuition 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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