

# University of Pretoria Yearbook 2019

## BScHons Applied Science Mechanics: Physical Asset Management (12243037)

**Minimum duration of study** 1 year

**Total credits** 128

### Programme information

This multidisciplinary programme exposes students to both the management as well as the technical aspects of Physical Asset Management from a theoretical perspective. Students will, however, have to choose whether they would prefer to conduct the research component of the programme in either the technical domain (register with the Department of Mechanical and Aeronautical Engineering) or in the management domain (register with the Graduate School of Technology Management).

### Admission requirements

- Any one of the following:
  - A BEng (or equivalent)
  - a three-year BSc degree (in Natural Sciences) (or equivalent) with a weighted average of at least 60%;
  - a BTech qualification in an engineering discipline awarded by a university of technology in South Africa, with a weighted average of at least 75% and no modules failed in the BTech, excluding the National Diploma;
  - a four-year engineering-based university degree not recognised by ECSA for registration as a professional engineer.
- The departmental Postgraduate Committee reserves the right to make a thorough assessment of the applicant's academic transcript and CV, and to decide if the applicant is suitable for postgraduate studies. This assessment may include an oral or written entrance examination.

### Other programme-specific information

The curriculum comprises four core modules, two elective modules and a compulsory research project. Any specific module is offered on the condition that a minimum number of students are registered for the module, as determined by the relevant head of department and the Dean.

### Examinations and pass requirements

Also consult the Faculty Rules in this regard.

All the examination admission requirements, applicable to the relevant module, must have been met.

## Pass with distinction

The degree is conferred with distinction if students obtain a weighted average of at least 75% in all the required modules for the programme. The degree is not awarded with distinction if any one module is failed (excluding modules which were discontinued timeously).



## Curriculum: Final year

**Minimum credits: 128**

### Core modules

Maintenance practice 780 (MIP 780) - Credits: 16.00  
Reliability engineering 781 (MIR 781) - Credits: 16.00  
Aerodynamics 780 (MLD 780) - Credits: 16.00  
Flight mechanics 780 (MLV 780) - Credits: 16.00  
Numerical thermoflow 780 (MSM 780) - Credits: 16.00  
Fatigue 780 (MSV 780) - Credits: 16.00  
Fluid mechanics 780 (MSX 780) - Credits: 16.00

### Elective modules

Control Systems 780 (MBB 780) - Credits: 16.00  
Non-destructive testing 780 (MCT 780) - Credits: 16.00  
Advanced finite element methods 781 (MEE 781) - Credits: 16.00  
Mechatronics 780 (MEG 780) - Credits: 16.00  
Vibration-based condition monitoring 781 (MEV 781) - Credits: 16.00  
Advanced heat and mass transfer 780 (MHM 780) - Credits: 16.00  
Condition-based maintenance 780 (MIC 780) - Credits: 16.00  
Maintenance logistics 782 (MIP 782) - Credits: 16.00  
Missile aerodynamics and design 781 (MLD 781) - Credits: 16.00  
Experimental methods 782 (MLD 782) - Credits: 16.00  
Unmanned aircraft systems technology 783 (MLD 783) - Credits: 16.00  
Avionics 784 (MLD 784) - Credits: 16.00  
Air conditioning and refrigeration 780 (MLR 780) - Credits: 16.00  
Optimum design 780 (MOO 780) - Credits: 16.00  
Fracture mechanics 780 (MSF 780) - Credits: 16.00  
Numerical thermoflow 781 (MSM 781) - Credits: 16.00  
Research study 732 (MSS 732) - Credits: 32.00  
Advanced fluid mechanics 781 (MSX 781) - Credits: 16.00  
Advanced thermodynamics and energy systems 781 (MTX 781) - Credits: 16.00  
Fossil fuel power stations 781 (MUU 781) - Credits: 16.00  
Vehicle dynamics 780 (MVI 780) - Credits: 16.00  
Numerical methods 780 (MWN 780) - Credits: 16.00

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.