

University of Pretoria Yearbook 2017

Numerical methods 780 (MWN 780)

Qualification	Postgraduate
Faculty	Faculty of Engineering, Built Environment and Information Technology
Module credits	16.00
Programmes	BEngHons Mechanical Engineering BScHons Applied Science Mechanics
Prerequisites	No prerequisites.
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

Solving systems of linear algebraic equations using direct and iterative methods from small to large scale systems. Numerical solutions of nonlinear systems of equations. Solving eigenvalue problems. Numerical approximation strategies. Numerical differentiation. Numerical Integration. Numerical solutions to initial-value problems for ordinary differential equations. Numerical solutions to boundary-value problems for ordinary differential equations. Numerical solutions to partial-differential equations.

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.