

University of Pretoria Yearbook 2016

Numerical analysis 362 (MAT 362)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	15.00
Prerequisites	MAT 251 and MAT 261
Contact time	3 lectures per week, 1 discussion class per week
Language of tuition	English
Academic organisation	Mathematics and Applied Maths
Period of presentation	Semester 2

Module content

Errors and floating point arithmetic. Roots of nonlinear equations: Bisection, Newton's method and the secant method, routines for zero finding, non-linear systems of equations. Systems of linear equations: Gauss elimination with partial pivoting, matrix factorisation, matrices with special structure, numerical differentiation and integration.

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