

# University of Pretoria Yearbook 2018

## Numerical analysis 362 (MAT 362)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	15.00
<b>Prerequisites</b>	MAT 251 and MAT 261
<b>Contact time</b>	1 discussion class per week, 3 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Mathematics and Applied Mathematics
<b>Period of presentation</b>	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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