



# University of Pretoria Yearbook 2017

## Precalculus 133 (WTW 133)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	Faculty of Natural and Agricultural Sciences
<b>Module credits</b>	8.00
<b>Programmes</b>	BCom Extended programme BEd Intermediate Phase Teaching BEd Senior Phase and Further Education and Training Teaching BSc Extended programme - Biological and Agricultural Sciences BSc Extended programme - Mathematical Sciences BSc Extended programme - Physical Sciences
<b>Service modules</b>	Faculty of Engineering, Built Environment and Information Technology Faculty of Education Faculty of Economic and Management Sciences Faculty of Health Sciences
<b>Prerequisites</b>	BSc and BCom students: At least 3 (40-49%) in Mathematics in the Grade 12 examination and must be taken concurrently with WTW133
<b>Contact time</b>	3 lectures per week, Foundation Course, MAMELODI, 1 practical per week
<b>Language of tuition</b>	Module is presented in English
<b>Academic organisation</b>	Mathematics and Applied Maths
<b>Period of presentation</b>	Semester 1

### Module content

Real numbers, elementary set notation, exponents and radicals. Algebraic expressions, fractional expressions, linear and quadratic equations, inequalities. Coordinate geometry: lines, circles. Functions: definition, notation, piecewise defined functions, domain and range, graphs, transformations of functions, symmetry, even and odd functions, combining functions, one-to-one functions and inverses, polynomial functions and zeros. Sequences, summation notation, arithmetic, geometric sequences, infinite geometric series, annuities and instalments. Degrees and radians, unit circle, trigonometric functions, fundamental identities, trigonometric graphs, trigonometric identities, double-angle, half-angle formulae, trigonometric equations, applications.

This module is only offered in English at the Mamelodi Campus for the BSc Extended programme. At the Hatfield and Groenkloof campuses it is offered in English and Afrikaans.



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