



# University of Pretoria Yearbook 2019

## 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
<b>Prerequisites</b>	BSc Extended programme - Mathematical Sciences: 60% for Mathematics in Grade 12 Other BSc Extended programmes: 50% for Mathematics Grade 12 BCom Extended programme: 40% for Mathematics in Grade 12 BEd programmes: 50% for Mathematics Grade 12
<b>Contact time</b>	1 practical per week, Foundation Course, 3 lectures per week, 1 tutorial 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 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 offered at the Mamelodi Campus to students from the BSc and BCom Extended programmes. At the Groenkloof Campus it is offered to BEd students.



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