

# University of Pretoria Yearbook 2019

## Mathematics 144 (WTW 144)

**Qualification** Undergraduate

**Faculty** [Faculty of Natural and Agricultural Sciences](#)

**Module credits** 8.00

**Programmes** [BSc Extended programme - Biological and Agricultural Sciences](#)

**Prerequisites** WTW 133

**Contact time** 1 tutorial per week, Foundation Course, 3 lectures per week

**Language of tuition** Module is presented in English

**Department** Mathematics and Applied Mathematics

**Period of presentation** Semester 2

### Module content

Functions: Rate of change, exponential functions, the natural logarithm, exponential growth and decay, proportionality, power functions, fitting formulas to data. Rates of change and the derivative: Instantaneous rate of change, the derivative function, interpretations of the derivative, the second derivative.

Differentiation: Formulas and rules, applications, extremes of a function. All topics are studied in the context of applications.

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