



# University of Pretoria Yearbook 2019

## Mathematics 164 (WTW 164)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	Faculty of Natural and Agricultural Sciences
<b>Module credits</b>	16.00
<b>Programmes</b>	BEng Chemical Engineering BEng Chemical Engineering Engage BEng Civil Engineering BEng Civil Engineering Engage BEng Computer Engineering BEng Computer Engineering Engage BEng Electrical Engineering BEng Electrical Engineering Engage BEng Electronic Engineering BEng Electronic Engineering Engage BEng Industrial Engineering BEng Industrial Engineering Engage BEng Mechanical Engineering BEng Mechanical Engineering Engage BEng Metallurgical Engineering BEng Metallurgical Engineering Engage BEng Mining Engineering BEng Mining Engineering Engage BSc Engineering and Environmental Geology BSc Extended programme - Physical Sciences BSc Geology
<b>Service modules</b>	Faculty of Engineering, Built Environment and Information Technology
<b>Prerequisites</b>	WTW 114 GS or WTW 158 GS
<b>Contact time</b>	4 lectures per week, 1 tutorial per week
<b>Language of tuition</b>	Module is presented in English



---

**Department** Mathematics and Applied Mathematics

**Period of presentation** Semester 2

**Module content**

\*This module is designed for first-year engineering students. Students will not be credited for more than one of the following modules for their degree: WTW 146, WTW 148 and WTW 124,

Vector algebra with applications to lines and planes in space, matrix algebra, systems of linear equations, determinants, complex numbers, factorisation of polynomials and conic sections. Integration techniques, improper integrals. The definite integral, fundamental theorem of Calculus. Applications of integration. Elementary power series and Taylor's theorem. Vector functions, space curves and arc lengths. Quadratic surfaces and multivariable functions.

---

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.