



# University of Pretoria Yearbook 2022

## Vector analysis 248 (WTW 248)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	Faculty of Natural and Agricultural Sciences
<b>Module credits</b>	12.00
<b>NQF Level</b>	06
<b>Programmes</b>	BCom (Statistics and Data Science) BEd (Senior Phase and Further Education and Training Teaching) BSc (Computer Science) BSc (Meteorology) BSc (Applied Mathematics) BSc (Chemistry) BSc (Engineering and Environmental Geology) BSc (Geography and Environmental Science) BSc (Geology) BSc (Mathematical Statistics) BSc (Mathematics) BSc (Physics)
<b>Service modules</b>	Faculty of Engineering, Built Environment and Information Technology Faculty of Education
<b>Prerequisites</b>	WTW 218
<b>Contact time</b>	1 tutorial per week, 2 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

Vectors and geometry. Calculus of vector functions with applications to differential geometry, kinematics and dynamics. Vector analysis, including vector fields, line integrals of scalar and vector fields, conservative vector fields, surfaces and surface integrals, the Theorems of Green, Gauss and Stokes with applications.



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