University of Pretoria Yearbook 2022

Vector analysis 248 (WTW 248)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	12.00
NQF Level	06
Programmes	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)
Service modules	Faculty of Engineering, Built Environment and Information Technology
	Faculty of Education
Prerequisites	WTW 218
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	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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