

University of Pretoria Yearbook 2021

Mathematical methods and models 772 (WTW 772)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	15.00
NQF Level	08
Programmes	BScHons Applied Mathematics
	BScHons Mathematics
	BScHons Mathematics and Mathematics Education Applied Analysis
	BScHons Mathematics and Mathematics Education Differential Equations and Modelling
	BScHons Mathematics and Mathematics Education Algebra and Analysis
	BScHons Mathematics of Finance
Prerequisites	No prerequisites.
Contact time	2 lectures per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 2

Module content

This module aims at using advanced undergraduate mathematics and rigorously applying mathematical methods to concrete problems in various areas of natural science and engineering. The module will be taught by several lecturers from UP, industry and public sector. The content of the module may vary from year to year and is determined by relevant focus areas within the Department. The list of areas from which topics to be covered will be selected, includes: Systems of differential equations; dynamical systems; discrete structures; Fourier analysis; methods of optimisation; numerical methods; mathematical models in biology, finance, physics, etc.

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