

University of Pretoria Yearbook 2021

Stochastic calculus 764 (WTW 764)

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	WTW 734 or WTW 735
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

Mathematical modelling of Random walk. Conditional expectation and Martingales. Brownian motion and other Lévy processes. Stochastic integration. Ito's Lemma. Stochastic differential equations. Application to finance.

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.