

University of Pretoria Yearbook 2020

Mathematical methods 701 (PHY 701)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	15.00
Prerequisites	No prerequisites.
Contact time	6 lectures per week
Language of tuition	Module is presented in English
Department	Physics
Period of presentation	Semester 1

Module content

The purpose of this course is twofold: (1) To refresh and systematize your knowledge of mathematics (sequences, series, vector calculus, functions of many variables etc.); (2) To give you working knowledge of mathematical methods that were not (or not sufficiently) covered in the undergraduate courses, such as Fourier series and transforms; Ordinary and partial differential equations; Abstract vector spaces; Operators and their eigenvectors; Complex analysis; Calculus of variations; Integral equations; Group theory; Probability and statistics; Numerical methods.

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