

University of Pretoria Yearbook 2022

Special functions and approximation theory 840 (WTW 840)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	1.00
NQF Level	09
Prerequisites	Complex Analysis at 3rd-year level; Advanced Calculus and Ordinary Differential equations (ODEs)
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	Semester 1 or Semester 2

Module content

*Consult with the Head of the Department of Mathematics and Applied Mathematics about the availability of this master's module in a particular year.

The Gamma and Beta functions, the hypergeometric function, orthogonal polynomials and their properties, classical orthogonal polynomials such as Chebychev, Hermite, Laguerre, Ultraspherical and Jacobi polynomials, Padé approximation, applications of zeros of orthogonal polynomials to convergence of Padé approximants.

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