

University of Pretoria Yearbook 2022

Advanced measure theory 884 (WTW 884)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	1.00
NQF Level	09
Prerequisites	Measure Theory and Functional Analysis on honours level
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Mathematics and Applied Mathematics
Period of presentation	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.

Lebesgue integral in a general measure space: Basic properties, convergence theorems, convergence in measure. Lebesgue spaces: Completeness, approximation by continuous functions. Complex measures: Absolute continuity, Random-Nikodym Theorem, representation of bounded linear functionals on Lebesgue spaces, Riesz Representation Theorem for bounded linear functionals on the space of continuous functions on a locally convergent Hausdorff space where X is a locally compact Hausdorff space. Applications to probability.

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