

# University of Pretoria Yearbook 2016

## Advanced measure theory 884 (WTW 884)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	30.00
<b>Programmes</b>	<a href="#">MSc Applied Mathematics</a> <a href="#">MSc Mathematics</a> <a href="#">MSc Mathematics of Finance</a>
<b>Prerequisites</b>	Measure Theory and Functional Analysis on honours level
<b>Contact time</b>	1 lecture per week
<b>Language of tuition</b>	English
<b>Academic organisation</b>	Mathematics and Applied Maths
<b>Period of presentation</b>	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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