

University of Pretoria Yearbook 2021

Distribution-free methods 710 (VMT 710)

Qualification	Postgraduate
Faculty	Faculty of Economic and Management Sciences
Module credits	15.00
NQF Level	08
Programmes	BComHons Mathematical Statistics BScHons Mathematical Statistics
Service modules	Faculty of Natural and Agricultural Sciences
Prerequisites	Admission to either BScHons Mathematical Statistics or BComHons Mathematical Statistics
Contact time	1 lecture per week
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 1 or Semester 2

Module content

A selection of: Nonparametric stochastic processes. Power and asymptotic power of distribution-free procedures. Theory and simulation. Asymptotic relative efficiency. Linear rank tests: Definition, properties and applications. Equal in distribution technique. Counting and ranking statistics. Introduction to one and two sample U-statistics. Permutation and distribution-free rank-like statistics. Multi-sample distribution-free tests, rank correlation and regression. Some nonparametric bootstrap and smoothing methods.

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