

University of Pretoria Yearbook 2017

Mathematical statistics 143 (WST 143)

Qualification	Undergraduate
Faculty	Faculty of Economic and Management Sciences
Module credits	8.00
Programmes	BCom Extended programme BSc Extended programme - Mathematical Sciences BSc Extended programme - Physical Sciences
Service modules	Faculty of Natural and Agricultural Sciences
Prerequisites	BSc and BCom numeric students: WST 133 and WTW 133 and must be taken concurrently with WTW 143.
Contact time	Foundation Course, 1 practical per week, 4 lectures per week, MAMELODI, 2 tutorials per week
Language of tuition	Module is presented in English
Academic organisation	Statistics
Period of presentation	Semester 2

Module content

Probability and inference:

Probability theory and theoretical distributions for continuous random variables (Uniform, Normal and t).

Sampling distributions (means and proportions). Estimation theory and hypothesis testing of sampling averages and proportions (one- and two-sample cases).

Optimisation techniques with economic applications:

Applications of differentiation in statistic and economic related problems. Integration. Applications of integration in statistic and economic related problems. Systems of equations in equilibrium. The area under a curve and applications of definite integrals in Statistics and Economics. Report writing and presentation. Identification, use, evaluation and interpretation of statistical computer packages and statistical techniques.

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