



University of Pretoria Yearbook 2021

Mathematical statistics 143 (WST 143)

Qualification	Undergraduate
Faculty	Faculty of Economic and Management Sciences
Module credits	8.00
NQF Level	05
Programmes	BCom extended programme BSc extended programme - Mathematical Sciences
Service modules	Faculty of Natural and Agricultural Sciences
Prerequisites	BSc students: WST 133 and WTW 135. BCom Extended programme students who wish to transfer to BCom (Econometrics): WST 133 and WTW 135. BCom students who wish to transfer to BCom (Economics): WST 133 and WTW 133.
Contact time	1 practical per week, 2 tutorials per week, 4 lectures per week, Foundation Course
Language of tuition	Module is presented in English
Department	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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