University of Pretoria Yearbook 2022

Statistical foundations of data science 808 (NEP 808)

Qualification	Postgraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	15.00
NQF Level	09
Programmes	MSc (eScience) (Coursework)
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 1 or Semester 2

Module content

An understanding of multivariate statistics, hypothesis testing and confidence intervals. The ability to model data using well-known statistical distributions as well as the ability to handle data that is both continuous and categorical. The ability to perform statistical modelling including multivariate linear regression and adjust for multiple hypotheses. Forecasting, extrapolation, prediction and modelling using statistical methods. Bayesian statistics, an understanding of bootstrapping and Monte Carlo simulation.

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