

# University of Pretoria Yearbook 2020

## Introduction to statistical learning 720 (EKT 720)

**Qualification** Postgraduate

**Faculty** [Faculty of Economic and Management Sciences](#)

**Module credits** 15.00

**Programmes** [BComHons Mathematical Statistics](#)  
[BComHons Statistics and Data Science](#)  
[BScHons Mathematical Statistics](#)  
[BScHons Statistics and Data Science](#)

**Service modules** Faculty of Natural and Agricultural Sciences

**Prerequisites** RAL 780 or WST 311, 312, 321

**Contact time** 1 lecture per week, 1 web-based period per week

**Language of tuition** Module is presented in English

**Department** Statistics

**Period of presentation** Semester 2

### Module content

The emphasis is on the theoretical understanding and practical application of advances in statistical modelling. The following topics are covered: Single equation models: Nonparametric regression. Bootstrap procedures within regression analysis, k-nearest neighbour classification. Modelling categorical dependent variables - Logit/Probit models. Multiple outputs. Linear regression of an indicator matrix. Ridge regression. Non-linear regression modelling. Some new developments in regression and classification. Simultaneous equation models: Specification, identification and estimation of simultaneous equation models.

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