



# Universiteit van Pretoria Jaarboek 2017

## BComHons Statistiek (07240062)

<b>Duur van studie</b>	1 jaar
<b>Totale krediete</b>	120
<b>Kontak</b>	Prof IN Fabris-Rotelli <a href="mailto:inger.fabris-rotelli@up.ac.za">inger.fabris-rotelli@up.ac.za</a> +27 (0)124205420

### Programinligting

Hierdie inligting is slegs in Engels beskikbaar.

### Addisionele vereistes

- Historical performance during prior studies will also be considered in selecting students. Specific attention will be given to modules repeated and duration of study.
- The head of department reserves the right to prescribe additional modules in consultation with the departmental postgraduate selection committee.

The progress of all honours candidates is monitored biannually by the postgraduate coordinator/head of department. A candidate's study may be terminated if the progress is unsatisfactory or if the candidate is unable to finish his/her studies during the prescribed period.

#### 1. Registration for a second field of study

With reference to General Regulation G.6, a student who has already completed a bachelor of honours degree at this or another university, may, with the permission of the Dean, register for another degree, subject to the regulations applicable to the field of study in question and to any other stipulations the Dean may prescribe on the condition that there shall be no overlap in the course content of the first degree and the second degree. Such a concession may be withdrawn by the Dean/Deans if the student does not perform satisfactorily.

#### 2. Acknowledgement of modules

- Subject to the stipulations of G.22.1, G.23.2 and the Joint Statute, a Dean may acknowledge modules passed at another tertiary institution or at this University in a department other than that in which the honours study is undertaken for the honours degree – provided that at least half of the required modules for the degree in question are attended and passed at this university.
- If there is overlap in the course content of the degree for which the student wishes to enrol or is enrolled and a degree already conferred, the Dean may not acknowledge any modules that form part of the degree already conferred.

### Ander programspesifieke inligting

Students choose one of the following two streams:

**Economic Statistics** or **Survey Statistics**



## Eksamens en slaagvereistes

In calculating marks, General Regulation G12.2 applies.

Subject to the provisions of General Regulation G.26, a head of a department determines, in consultation with the Dean

- when the honours examinations in his/her department will take place, provided that:
  - i. honours examinations which do not take place before the end of the academic year, must take place no later than 18 January of the following year, and all examination results must be submitted to the Student Administration by 25 January; and
  - ii. honours examinations which do not take place before the end of the first semester, may take place no later than 15 July, and all examination results must be submitted to the Student Administration on or before 18 July.
- whether a candidate will be admitted to a supplementary examination, provided that a supplementary examination is granted, only once in a maximum of two prescribed semester modules or once in one year module;
- supplementary examinations (if granted) cover the same subject matter as was the case for the examinations;
- NB: For the purpose of this provision, the phrase "not sit for an examination more than twice in the same subject" as it appears in General Regulation G.18.2, implies that a candidate may not be admitted to an examination in a module, including a supplementary examination, more than three times.
- the manner in which research reports are prepared and examined in his department.

**NB:** Full details are published in each department's postgraduate information brochure, which is available from the head of department concerned. The minimum pass mark for a research report is 50%. The provisions regarding pass requirements for dissertations contained in General Regulation G.12.2 apply mutatis mutandis to research reports.

Subject to the provisions of General Regulation G.12.2.1.3, the subminimum required in subdivisions of modules is published in the study guides, which is available from the head of department concerned.



## Kurrikulum: Finale jaar

Minimum krediete: 120

### Kernmodules

#### Meerveranderlike tegnieke 720 (MET 720)

**Modulekrediete** 15.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** STK 310 en STK 320

**Kontaktyd** 1 lesing per week

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Semester 2

#### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

Estimation: methods of moments and maximum likelihood. Cramer-Rao inequality, mean squared error, loss and risk functions, Bayes estimators. Sufficient statistics, completeness, the exponential class. Tests of statistical hypothesis: power function, critical region and Neyman-Pearson lemma.

#### Mikro-ekonomie 780 (MIE 780)

**Modulekrediete** 15.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** Toelating tot betrokke program

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Ekonomie

**Aanbiedingstydperk** Semester 1

#### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

The core concepts of microeconomic theory will be the focus of the module, including: demand and supply, consumer theory, firm theory, markets and market structure, general equilibrium, information economics and behavioural economics. Applications of this theory will feature prominently.

#### Statistiese proseskontrole 780 (SPC 780)

**Modulekrediete** 15.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** STK 310, 320 or WST 311, 312, 321, 322

**Kontaktyd** 1 lesing per week



**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Semester 1

### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

Quality control and improvement. Shewhart, cumulative sum (CUSUM), exponentially weighted moving average (EWMA) and Q control charts. Univariate and multivariate control charts. Determining process and measurement systems capability. Parametric and nonparametric (distribution-free) control charts. Constructing control charts using Microsoft Excel and/or SAS. Obtaining run-length characteristics via simulations, the integral equation approach, other approximate methods and the Markov-chain approach.

## Inleiding tot statistiese leer 720 (EKT 720)

**Modulekrediete** 15.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** RAL 780, WST 311, 312, 321, 322

**Kontaktyd** 1 lesing per week, 1 webgebaseerde periode per week

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Semester 2

### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

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.

## Navorsingsverslag 795 (STK 795)

**Modulekrediete** 30.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** STK 310, STK 320, RAL 780

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Jaar

## Regressie-analise 780 (RAL 780)

**Modulekrediete** 15.00



**Diensmodules** Fakulteit Gesondheidswetenskappe  
Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** STK 310 en STK 320

**Kontaktyd** 1 lesing per week, 1 webgebaseerde periode per week

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Semester 1

#### Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

Matrix methods in statistics. Simple and multiple regression models. Sums of squares of linear sets. Generalised t- and F-tests. Residual analysis. Diagnostics for leverage, influence and multicollinearity. Indicator variables. Regression approach to analysis of variance. Weighted least squares. Ridge regression. Theory is combined with practical work.

### Steekproefnemingstegnieke 720 (SFT 720)

**Modulekrediete** 15.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** BScHons: WST 311, WST 312, WST 321, WST 322; BComHons: STK 310, 320

**Kontaktyd** 1 lesing per week

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Semester 1

#### Module-inhoud

Simple random sampling. Estimation of proportions and sample sizes. \*Hierdie inligting is slegs in Engels beskikbaar.

Stratified random sampling. Ratio and regression estimators. Systematic and cluster sampling. Complex survey methodology. Handling of nonresponse.

### Tydreeksanalise 720 (TRA 720)

**Modulekrediete** 15.00

**Diensmodules** Fakulteit Natuur- en Landbouwetenskappe

**Voorvereistes** STK 310 en STK 320

**Kontaktyd** 1 lesing per week

**Onderrigtaal** Module word in Engels aangebied

**Akademiese organisasie** Statistiek

**Aanbiedingstydperk** Semester 2



## Module-inhoud

\*Verwys na die Engelse weergawe van die Course Catalogue.

### Makro-ekonomie 780 (MEK 780)

<b>Modulekrediete</b>	15.00
<b>Diensmodules</b>	Fakulteit Natuur- en Landbouwetenskappe
<b>Voorvereistes</b>	Toelating tot betrokke program
<b>Kontaktyd</b>	1 seminaar per week
<b>Onderrigtaal</b>	Module word in Engels aangebied
<b>Akademiese organisasie</b>	Ekonomie
<b>Aanbiedingstydperk</b>	Semester 1

## Module-inhoud

\*Hierdie inligting is slegs in Engels beskikbaar.

This module will cover the core theoretical concepts of macroeconomics focussing specifically on labour and goods markets as well as intertemporal issues, such as capital markets. Topics will include economic growth, exogenous and endogenous, business cycles, monetary economics, stabilization policies and structural policies.

Die inligting wat hier verskyn, is onderhewig aan verandering en kan na die publikasie van hierdie inligting gewysig word.. Die [Algemene Regulasies \(G Regulasies\)](#) is op alle fakulteite van die Universiteit van Pretoria van toepassing. Dit word vereis dat elke student volkome vertrouwd met hierdie regulasies sowel as met die inligting vervat in die [Algemene Reëls](#) sal wees. Onkunde betreffende hierdie regulasies en reëls sal nie as 'n verskoning by oortreding daarvan aangebied kan word nie.