Universiteit van Pretoria Jaarboek 2018

MCom Wiskundige Statistiek (Gedoseer) (07250343)

Minimum duur van studie	1 jaar
Totale krediete	180
Kontak	Prof IN Fabris-Rotelli inger.fabris-rotelli@up.ac.za +27 (0)124205420

Programinligting

Hierdie inligting is slegs in Engels beskikbaar.

Toelatingsvereistes

- Relevant honours degree in Mathematical Statistics or equivalent with an average of at least 65% in Mathematical Statistics.
- Student numbers are limited to a maximum of 20, collectively over all master's programmes in the Department of Statistics.
- A candidate may be refused admission to a master's degree by the head of the department if he/she does not comply with the standard of competence in the subject as determined by the department – with the proviso that a candidate who does not comply with the required level of competence, may be admitted, provided that he/she completes additional study assignments and/or examinations.
- The head of department concerned may set additional admission requirements.
- Specific departments have specific requirements for admission.
- The number of students will be determined in line with the growth strategy of the University of Pretoria as approved by the Executive.
- Allowance will be made for the diversity profile of students.
- A completed Postgraduate Diploma in Economic and Management Sciences (07220026) can also be considered for admission to the Master's programme in Entrepreneurship. All MCom candidates need to have adequate knowledge of Management, Financial and Economic Sciences as well as Statistics, as determined by the head of department concerned, in consultation with the Dean.
- A pass mark in the following modules: Financial accounting 1 (FRK 111 and FRK 121/122); Economics 1 (EKN 110 and EKN 120); Statistics 1 (STK 110 and STK 120) and one of the following: Business management 1 (OBS 114 and OBS 124); or Marketing management 1 (BEM 110 and BEM 122); or Public administration 1 (PAD 112 and PAD 122); or Industrial and organisational psychology (BDO 110 and BDO 120) or equivalent modules passed at another institution as approved by the head of the department concerned in consultation with the Dean.

Ander programspesifieke inligting

As long as progress is satisfactory, renewal of registration of a master's student will be accepted for a second year of study in the case of a full-time student. Renewal of registration for a third and subsequent years for a full-time student will only take place when Student Administration of the Faculty receives a written motivation (the required form can be obtained from the Head of Department) that is supported by the Head of Department and Postgraduate Studies Committee.(See Regulations G.32 and G.36.)

Eksamens en slaagvereistes

The pass mark for both a dissertation and a mini-dissertation is 50%. The provisions regarding pass requirements for dissertations, contained in General Regulation G.12.2, apply mutatis mutandis to mini-dissertations.

A pass mark of at least 50% is required in the examination of each module.

Navorsing

Dissertations/mini-dissertations, curricula and modules

1. The degree programme requires that a dissertation/mini-dissertation must be submitted in a field of study chosen from the fields covered for the honours degree, provided that the Dean may, on the recommendation of the head of department/Postgraduate Committee concerned, approve the replacement of the required dissertation by the successful completion of a prescribed number of module credits and a mini-dissertation/research article.
2. Information on modules, credits and syllabi is available, on request, from the head of department/Postgraduate Committee concerned.
3. A module in Research Methodology is compulsory in all programmes. The Dean may, on the recommendation of the head of department/Postgraduate Committee concerned, waive the prerequisites.
4. Sufficient number of bound copies of the dissertation/mini-dissertation must be submitted to the Head: Student Administration for examination, after permission is granted by the supervisor.

Article for publication

A dean may require, before or on submission of a dissertation/mini-dissertation, the submission of a draft article for publication to the supervisor. The draft article should be based on the research that the student has conducted for the dissertation/mini-dissertation and be approved by the supervisor concerned. The supervisor should then have the opportunity to take the paper through all the processes of revision and resubmission as may be necessary and/or appropriate in order to achieve publication.

Submission of dissertation/mini-dissertation

A dissertation/mini-dissertation is submitted to the Head: Student Administration/Departmental Postgraduate Office, before the closing date for the various graduation ceremonies as announced annually.

For examination purposes, a student must, in consultation with the supervisor, submit a sufficient number of bound copies and/or e-copies of the dissertation/mini-dissertation, printed on good quality paper and of good letter quality, to the Head: Student Administration/Departmental Postgraduate Office. Permission to submit the dissertation/mini-dissertation in unbound form may be obtained from the supervisor concerned on condition that a copy of the final approved dissertation/mini-dissertation is presented to the examiners in bound format or electronic format.

In addition to the copies already mentioned, each successful student must submit a bound paper copy as well as

two electronic copies of the approved dissertation/mini-dissertation to the Head: Student Administration/Departmental Postgraduate Office in the format specified by the faculty and in accordance with the minimum standards set by the Department of Library Services, before 15 February for the Autumn graduation ceremonies and before 15 July for the Spring graduation ceremonies, failing which the degree will only be conferred during a subsequent series of graduation ceremonies.

Kurrikulum: Finale jaar

Minimum krediete: 180

Kernmodules

Meerveranderlike analise 880 (MVA 880)

Modulekrediete	20.00
Diensmodules	Fakulteit Natuur- en Landbouwetenskappe
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Semester 1 of Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Supervised and unsupervised methods, including computational methods, within the broader context of data mining. Supervised learning. Linear methods for Regression, Classification and Prediction. Basis Expansions, Regularisation, Smoothing, Additive models and Support Vector Machines.
Unsupervised learning: Clustering, principal components, dimensional reduction. Data methods: Organisation of data and exploratory data analysis.

Capita selecta: Statistiek 880 (STK 880)

Modulekrediete	20.00
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week, 1 ander kontak per week
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Semester 1 of Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

The module is primarily an article based on and covers the most recent literature that discusses the developments and research in, for example, Shewhart charts, Exponentially Weighted Moving Average (EWMA) charts, Cumulative Sum (CUSUM) charts, Q-charts, Parametric and Nonparametric charts, Univariate and Multivariate charts, Phase I and Phase II control charts, profile monitoring and other research topics.

Navorsingsoriëntasie 899 (STK 899)

Modulekrediete	0.00
Diensmodules	Fakulteit Ekonomiese en Bestuurswetenskappe

Voorvereistes	Geen voorvereistes.
Kontaktyd	Ad Hoc
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Jaar

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

A compulsory bootcamp must be attended as part of this module – usually presented during the last week of January each year. Details regarding the venue and specific dates are made available by the department each year. The bootcamp will cover the basics of research to prepare students for the research component of their degree. Students can be exempt from the bootcamp if it was already attended in a previous year or for a previous degree. Each year of registration for the master's degree will also require the attendance of three departmental seminars. Students should ensure that their attendance is recorded by the postgraduate co-ordinator present at the seminars. The department approves the seminars attended. Students are also required to present their mini-dissertation research proposal within the department or at a conference.

Tydreeksanalise 880 (TRA 880)

Modulekrediete	20.00
Diensmodules	Fakulteit Natuur- en Landbouwetenskappe
Voorvereistes	WST 321 of TRA 720
Kontaktyd	1 lesing per week
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Semester 1 of Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Difference equations. Lag operators. Stationary ARMA processes. Maximum likelihood estimation. Spectral analysis. Vector processes. Non-stationary time series. Long-memory processes.

Toegepaste regressie-analise 880 (TRG 880)

Modulekrediete	20.00
Diensmodules	Fakulteit Ekonomiese en Bestuurswetenskappe
Voorvereistes	Geen voorvereistes.
Kontaktyd	1 lesing per week
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Semester 1 of Semester 2

Module-inhoud

*Hierdie inligting is slegs in Engels beskikbaar.

Regression introduction: Simple and multiple regression. Multicollinearity, Heteroscedasticity, Ridge regression. Logistic regression: Estimation, inference and applications. Non Linear regression: Estimation, inference and applications. Text mining: Topic modelling with applications. Survival regression: Survival models applied in regression. Regression extensions: CART, MARS and Conjoint analysis.

Miniverhandeling: Wiskundige statistiek 895 (WST 895)

Modulekrediete	100.00
Diensmodules	Fakulteit Natuur- en Landbouwetenskappe
Voorvereistes	Geen voorvereistes.
Onderrigtaal	Module word in Engels aangebied
Departement	Statistiek
Aanbiedingstydperk	Jaar