



University of Pretoria Yearbook 2025

Statistics 122 (STC 122)

Qualification	Undergraduate
Faculty	Faculty of Economic and Management Sciences
Module credits	13.00
NQF Level	05
Programmes	BCom 3-year programme BCom in Accounting Sciences BCom specialising in Economics BCom specialising in Financial Management Sciences BCom specialising in Information Systems BCom specialising in Investment Management BCom specialising in Law BCom specialising in Statistics and Data Science Bachelor of Information Technology in Information Systems [BIT] BSc in Computer Science BSc in Information Technology in Information and Knowledge Systems BA specialising in Philosophy, Politics and Economics BSc in Meteorology BSc in Meteorology 4-year programme BScAgric in Agricultural Economics in Agribusiness Management
Prerequisites	Minimum final mark of 60% in STK110/STK120/STK121/STC121. Average of modules equivalent to STK110 may not be a prerequisite. If minimum final mark of 60% not obtained in STK110, minimum final mark of 60% should be obtained in STK120/STK121/STC121.
Contact time	1 tutorial per week, 1 practical per week, 3 lectures per week
Language of tuition	Module is presented in English
Department	Statistics
Period of presentation	Semester 2



Module content

Introduction to data and exploratory data analysis: Graphical representations and descriptive measures for numerical and categorical data; relationships between explanatory and response variables; data transformations. Foundations of inference: Simulation; sampling with and without replacement; confidence intervals with bootstrapping; hypothesis testing with randomization; inference with mathematical models (normal distribution and central limit theorem). Statistical inference: Inference for a single proportion, for comparing two proportions, for two-way tables, for a single mean, for comparing two independent means, for comparing paired means, and for comparing many means. Regression and inferential modelling: Correlation; simple linear regression models with numerical or categorical predictors; least squares regression; residual analysis; goodness-of-fit; outliers; prediction and extrapolation; inference. All module content is demonstrated and interpreted through practical coding and simulation within a data science framework.

This module is also presented as a summer school for students who initially elected and passed STK 120 or STK 121 or STC 121 with a final mark of at least 60% and then decide to further their studies in Statistics as well as for students who failed STC 122 during semester 2.

General Academic Regulations and Student Rules

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.