

# University of Pretoria Yearbook 2023

## Linear mixed models 781 (STK 781)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Economic and Management Sciences</a>
<b>Module credits</b>	15.00
<b>NQF Level</b>	08
<b>Programmes</b>	<a href="#">BComHons (Statistics) <i>Statistics and Data Science</i></a> <a href="#">BScHons (Mathematical Statistics)</a> <a href="#">BScHons (Mathematical Statistics) <i>Statistics and Data Science</i></a>
<b>Service modules</b>	Faculty of Natural and Agricultural Sciences
<b>Prerequisites</b>	Admission to either BScHons Mathematical Statistics or BComHons Mathematical Statistics or BScHons Statistics and Data Science or BComHons Statistics and Data Science
<b>Contact time</b>	1 lecture per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Statistics
<b>Period of presentation</b>	Semester 1 or Semester 2

### Module content

Specification of linear mixed model, model assumptions, estimation (REML and ML), diagnostics, hypothesis tests, interpretation of parameter estimates, calculating predicted values. Specific models: two- and three-level models for clustered data, intraclass correlation coefficients, repeated measures data, random coefficient models for longitudinal data, models for clustered longitudinal data, models for data with crossed random factors. Using statistical software to analyse LMMs.

### Regulations and rules

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

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.

#### **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 (HEQF) 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.