

2021



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and
Agricultural Sciences
Fakulteit Natuur- en Landbouwetenskappe
Lefapha la Disaense tša Tlhago le Temo

FACULTY

AT A GLANCE





1999

The amalgamated Faculty of Natural and Agricultural Sciences was established in 1999. It was made up of the Faculty of Natural Science, which has been around since 1908, although established in 1919, and the Faculty of Agriculture (1917).



LEGACY OF EXCELLENCE

1908

The University of Pretoria was established in 1908. Today, it is one of the largest research universities in South Africa. UP has transformed into a dynamic university community of staff and students who come from a range of diverse backgrounds and cultures showcasing South African and global societies.



TEACHING & LEARNING



Our educational approach has a strong focus on inclusivity and equitable access to education, but ultimately on equity of outcomes.

UP effectively uses contact sessions in traditional lectures, seminars, laboratories and practical sites, together with online learning platforms. This has enabled access and success for an increasing number of students. The teaching and learning approach is based on inquiry-based learning, hybrid learning and community-based learning. This means that students can ask questions and do research in their field to learn and discover answers on their own; while also being taught in a classroom environment and accessing additional resources online.

VISION & GOALS



OUR VISION IS TO BE

A leading research-intensive university in Africa, recognised internationally for its quality, relevance and impact, and also for developing people, creating knowledge and making a difference locally and globally.



OUR GOALS ARE TO

1. enhance access and successful student learning
2. strengthen the University's research and international profile
3. foster and sustain a transformed, inclusive, and equitable University community
4. optimise resources and enhance institutional sustainability
5. strengthen the University's social responsiveness and impact in society.



HYBRID LEARNING AMIDST DISRUPTION

Through UP's hybrid model of teaching and learning, part of the learning is dependent on access to the online learning management system known as ClickUP.

A system is in place for students to buy their own devices at very competitive rates but more than **6 000** computers are available in computer laboratories across all campuses and within residences for student use. There are Wi-Fi hot spots across all campuses for use by students with their own devices.



95%

Undergraduate modules
available online

NAS

The Faculty of Natural and Agricultural Sciences is the largest of its kind in Africa. This diverse faculty is renowned for its expertise in forestry and agriculture, food systems, biotechnology, life sciences, and mathematical and statistical sciences. Our broad range of disciplines allows us to tackle interdisciplinary societal problems by finding solutions to complex issues in modern society such as the sustainability of food production and food security and cures for poverty-related and infectious diseases such as Tuberculosis, HIV/AIDS and Malaria. This is achieved through targeted research, and appropriate training focused on the latest technology and innovation.



ACADEMIC OFFERING

33

Specialised
undergraduate
degree programmes

142

Specialised
postgraduate
degree programmes

UNIQUE DEGREES

BSc Meteorology (only degree of its kind offered in sub-Saharan Africa)

BSc Culinary Science (only degree of its kind in Africa)

13

specialised academic
departments

STUDENTS

4 791

Undergraduate
students



1 759

Postgraduate
students

2020 GRADUATES

618 Undergraduate degrees

311 Honours degrees

201 Master's degrees

106 Doctoral degrees

806

International students



81%

Undergraduate pass rate

RESEARCH EXCELLENCE

301

Academic staff members

20

Research Chairs

4

Research Institutes

85%

Academic staff members
with a doctorate

6

Research Centres

214

NRF-rated researchers

WORLD-RENOWNED

- Centre for Microbial Ecology and Genomics (CMEG)
- Mammal Research Institute (MRI)
- UP Natural Hazard Centre

RANKINGS



TOP 101-150

in the world for Agriculture and Forestry
2020/21 QS Rankings

TOP 301-350

in the world for Biological Sciences and Environmental Sciences
2020/21 QS Rankings

TOP 401-450

in the world for Mathematics
2020/21 QS Rankings

IN
SA

#1

Centre for Science and
Technology Studies (CWTS)
Leiden Rankings

TOP 1%

globally for Agricultural Sciences, Biology and Biochemistry,
Molecular Biology and Genetics, Environment/Ecology,
Microbiology, and Plant and Animal Science
Essential Science Indicators

1ST

WORLD FIRSTS

- A study using SA's MeerKAT telescope has led to the discovery of a group of 20 galaxies, likely the most neutral hydrogen gas-rich group ever discovered.
- The Faculty contributed to the first interactive app in the country that provides real-time data on COVID-19 using R-Shiny.

RESEARCH FOCUS AREAS



AGRICULTURE: Wide-ranging expertise in crop breeding, pre and post-harvest applications, crop pests and pathogens, animal breeding, animal welfare, agricultural economics and extension, food production, consumer adoption, sensory evaluation, African crops, food systems and food security.



BIG DATA AND DATA SCIENCE: Bioinformatics and computational biology, mathematical modelling in bioengineering and biosciences



ENVIRONMENTAL SCIENCES: Hazards modelling, environmental modelling, sustainable environmental management and biodiversity conservation



INFECTIOUS DISEASES: Human (Tuberculosis, HIV/AIDS, malaria) and veterinary diseases (ticks and tick-borne diseases, rabies, Helminths, African Horse sickness, bluetongue disease, etc)



PHYSICAL SCIENCES: Radio astronomy, biophysics, green chemistry, drug discovery, separation science, renewable energy



TRADITIONAL MEDICINES AND NATURAL PRODUCTS: Bioprospecting, medicinal plant science

INTERFACULTY RESEARCH CHAIRS



Ampath Chair in Human Genetics



York Timbers Chair in Wood Engineering



DSI/NRF South African Research Chairs Initiative (SARChI) in Sustainable Malaria Control

The UP Way

It's as much about where UP comes
from as to **where we are headed**

It's about UP's excellence, innovation,
diversity, growth, kindness and
making a difference every day

It's about what we do to...



[www.up.ac.za/
faculty-of-natural-
agricultural-sciences](http://www.up.ac.za/faculty-of-natural-agricultural-sciences)



ENQUIRIES

Admission

Student Service Centre
+27 (0)12 420 3488

Make today matter