In a Nutshell



Make today matter

www.up.ac.za

OUR GOALS ARE TO

- Enhance access and successful student learning
- Strengthen the University's research and international profile
- Foster and sustain a transformed, inclusive, and equitable University community
- Optimise resources and enhance institutional sustainability
- Strengthen the University's social responsiveness and impact in society.

INNOVATIVE AND FORWARD-LOOKING

UP is the only South African university ranked in the 2023 World University Rankings for Innovation.

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OVERVIEW

1908 - 2023 115 Years of Making today matter

The University of Pretoria has Africa at its heart and aspires to become an African Global University that is locally responsive, but continental in scope and globally engaged in making a significant contribution to transforming the world.

We are a key contributor to South Africa's economic growth and social development, exerting influence through three major pathways: teaching, research, and service to society.

#3 IN AFRICA

Ranked among the Top 3 universities in Africa¹





AS WE ENTER THE AGE OF AI, THE UNIVERSITY
OF PRETORIA IS POISED TO USE ARTIFICIAL
INTELLIGENCE NOT JUST TO PERFORM MUNDANE
TASKS FOR HUMANS, BUT TO CONNECT MORE
FULLY WITH WHAT IT MEANS TO BE HUMAN.

Justice Sisi Khampepe, Chancellor: University of Pretoria



UP AT A GLANCE

Academic offering



Economic and Management Sciences • Education • Engineering, Built Environment and Information Technology • Health Sciences • Law • Humanities • Natural and Agricultural Sciences • Theology and Religion

Veterinary Science



Centres of Excellence

African Centre of Excellence for Information Ethics • ARUA CoE in Sustainable Food Systems • CoE in Food Security • DST/ NRF CoE in Tree Health Biotechnology

Some of our research hubs solve the world's greatest challenges:

Forestry and Agricultural Biotechnology Institute • UP Institute for Malaria Control • Future Africa • Engineering 4.0 • Innovation Africa@UP • lavett-UP Art Centre • The Centre for the Future of Work



· Gordon Institute of Business Science



Research Institutes and Centres



Research Chairs

Among the world's top universities to study business



#1 for Business

GIBS is ranked top in South Africa in the UK Financial Times rankings for their Executive MBA programme. The only African business school in the paper's annual Executive MBA Ranking, GIBS moved to position 74 in 2022.

TOP 1% IN THE WORLD

UP ranks in the top 1% internationally in 14 fields.²

A top-notch traditional university

- With the most academic staff to have a PhD (70.9%)
- With the highest research outputs by academic staff (2.24)
- With the most NRF-rated researchers (605)
- With the largest number of students enrolled (54 466)



2. Web of Science Essential Science Indicators

Unique features

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. We are often the first or only South African, or African, institution to be invited to collaborate on or spearhead projects.

- World's leading laboratory in DNA typing of rhinoceros
- First WHO Collaborating Centre in Africa (for the prevention of deafness and hearing loss)
- Africa's first Virtual Reality Centre for mine design
- Africa's first independent transport reference and testing facility
- Africa's lead laboratory in malaria control
- the Blackboard Ally (to make digital courses

more accessible to all students)

- Only Faculty of Veterinary Science in South Africa
- South Africa's first Diabetes • First in Africa to implement Research Centre at a public academic institution

Among the largest and most diverse

We remain one of the largest contact universities in South Africa with 54 466 students enrolled in 2022.



54 466 Total student numbers



16 278 Postgraduate students



Black students in 2022 Women students in 2022





Black postgraduate students in 2022



Female postgraduate students in 2022



International awards for technology in teaching

Two teams from UP's Department for Education Innovation won honours at the 2022 Anthology Catalyst Awards, where they were selected from a record 149 nominees from institutions in 22 countries, including the United States, Canada and Australia. The awards recognise educators who push the boundaries of what is possible when leveraging technology.

The Department also won an award in the Student Success category which measures solutions that have led to increased retention, increased completion, or improved outcomes.



CONNECTING FOR SUCCESS

We are recognised as one of the leaders globally in leveraging digital technologies for teaching, learning and research. We also aim to be innovators of technology, making full use of extended and virtual reality, and other disruptive technology skills. Equally important in this equation are generic skills, such as adaptive thinking, strong people management, negotiation and decision-making skills, cross-cultural competencies, computational thinking, new media literacy, and virtual collaboration.

Hybrid teaching and learning

The University's hybrid teaching and learning model offers students the best of both worlds – online and contact – and is designed to enable them to succeed at university and in life beyond university.

The model assumes three phases in teaching and learning:

- (a) preparation before class,
- (b) engagement in class, and (c) consolidation after class.
- (c) consolidation after class.

This teaching model places UP in the perfect position to develop the skills students need

to function effectively in the 4IR. It encourages students to prepare independently for each class and engage and critically discuss issues in class.

In 2022, the University launched Blackboard Ally to help build a more inclusive learning environment by helping students control course content with usability, accessibility and quality in mind.

This completes a suite of technologies that support our flexible, interactive, and active learning environments.



Work-integrated learning

Strengthening work-integrated-learning is an important feature of our curriculum design as we prepare students for the future. We place increasing focus on embedding innovation, entrepreneurship and digital literacy into the broad suite of student competencies. In 2022, some key developments in this area were:

3D printing

Centre for the Future of Work:

Through research this Centre intends to address issues such as youth unemployment, the gig economy and improved and better ways of flexible and hybrid work.

Digital Capability Laboratory:

This laboratory will help students with the skill-set to thrive in the evolving world of work. It is part of the European Union's (EU) Erasmus+ SUCCESS Project, an initiative that researches ways to tackle youth unemployment and boost student employability in South Africa.

Smart learning resources:

UP's Forensic Anthropology Research Centre has set up a facility to help with the 3D-printing of replicas of bones and organs. Besides improving research methods and the teaching of students, this facility can open up the job market for students. This complements UP's unique Makerspace which brings ideas to life with specialised equipment, including 3D printers.

Get ready to work

Other ways in which we prepare our students for the future workplace and enhance their employability include:

- Ready for Work online courses help our students prepare for the workplace and what to expect from a corporate work environment.
- An Entrepreneurship programme teaches students how to use their knowledge, skills and talents to start their own business. In this way, they can become job creators rather than job seekers.
- The UP Career Services
 Mentorship Programme
 recognises the importance of the guidance of industry specialists to prepare students for the world of work and links students with industry experts for six months.



Alumni make us proud



Our 322 586 alumni continue to be sterling ambassadors of the University, and their achievements in an array of disciplines show that they gained more than a degree from UP.



Dr Gopolang Mohlabeng (BSc Physics, 2010) has earned a spot on the global 25 Rising Stars in Astronomy List for his research into dark matter.



David Kabwa (MA, Diplomatic Studies 2022) was selected to be part of the 2022 United Nations (UN) UNITE 2030 Ambassadors Programme.



Darren and Justin Oates,

mechanical engineering graduates of the class of 2019, signed a licensing deal with Sony Music Entertainment Africa. They are also founders of Gaztron, a company that converts vehicles to run on gas.



Emrie Brown (BCom Accounting, 1990) has been appointed as the new CEO of RMB, making her only the second woman to lead a corporate and investment banking unit in South Africa.



Ndavi Nokeri (BCom Investment Management, 2022) was crowned Miss South Africa 2022. She is the third consecutive Miss SA to have graduated from UP.

Future-fit graduates



Ongoing efforts to make our students future-fit have earned the University international recognition. In the 2023 QS World University Rankings, UP is now ranked second in South Africa and 190th in the world according to the Employer Reputation indicator. This indicates that we produce graduates who understand the world of work and can make a valuable contribution right from the start.

Shaping resilient graduates

The University implements a multipronged strategy to enhance student success, the main driver of this strategy being the FLY@UP initiative.

The FLY@UP initiative uses various tools and tactics to help students graduate in minimum time. The FLY acronym, which stands for 'The Finish Line is Yours', is a tagline unique to UP and it serves as a reminder to students that they are responsible for ensuring they complete their studies in the minimum time.

- The **Academic Orientation Programme** provides comprehensive support to encourage the academic development and success of first-year students.
- Faculty Student Advisors (FSAs) provide a safety net service, advising students on, and referring them to, the support or intervention they may require.
- Online learning platforms ensure that students can attend a tutorial from wherever they may be, or log in to work through the recorded tutorial.

- The High Impact Modules (HIMs) project seeks to improve the module success rate of modules that indicate a pass rate of below 75%, by providing targeted interventions.
- **Peer advisors** work closely with FSAs to answer questions around administrative processes such as degree planning and registration of modules.

We believe our multi-layered support systems play a large role in student success. As an example, the overall module pass rate increased from 82.9% to 85.7% between 2018 and 2022. During the same period, the examination pass rate increased from 80.8% to 85.8%.



85.7%

The overall module pass rate for our students has increased from **82.9%** to **85.7%** between 2018 and 2022.

Successfully obtaining a degree in minimum time is but one aspect of getting an education. UP takes a holistic and integrated approach to developing students so that they are prepared to grasp life opportunities while contributing meaningfully to the good of society.



First Year Experience (FYE) Programme: Assists first-year students to deal with challenges and issues they face during their first academic year.



Disability Unit (DU): Helps with the added challenges experienced by people with disabilities as they adapt to the new university environment.



Student Counselling Unit (SCU): Provides readily accessible counselling services through virtual or face-to-face consultations. Information is shared through a range of media and channels including podcasts, posters, the SCU-B chatbot and social media.



Student Health Services: Provide comprehensive primary healthcare and health promotion programmes to all registered students.

Snappy help

The Student Nutrition and Progress Programme (SNAPP) addresses the issue of student hunger. In 2022, the programme received a generous donation as part of the Tiger Brands' Plates4Days Programme.



3.3% INCREASE

students helped

food parcels distributed

in the grades of students helped



UP cares

Among the many ways that UP cares for the well-being of its students are:

- "Psychological first aid" training sessions
- A BounceUP podcast, providing relevant mental health content
- A visit by TOP Dogs to offer animal-assisted therapy sessions ahead of examinations
- SCU-B ('Scooby'), an artificial intelligence (AI) tool, stimulates conversations through voice commands and text chats for counselling purposes.



Top Dogs

Among the world's top universities to study³





#33 for Mineral and Mining Engineering



#51-60 Veterinary



#60 for Law

Teaching excellence

Maintaining high levels of quality and excellence is, to a significant extent, dependent on the knowledge and skills, talent and commitment of our academic, professional and support staff.

Just one of the indicators of our quality staff is UP's ranking among the world's top universities to study 20 subjects (up from 18 in 2021) in the 2022 QS World University Rankings by Subject. UP was ranked in four broad subject areas: Arts and Humanities; Social Sciences; Life Sciences and Medicine; and Engineering and Technology.

A notable accomplishment is UP's Mineral and Mining Engineering ranked at position 33 (48 in 2021), which is among the top 50 worldwide.

The Times Higher Education World University Rankings 2022 by subject has ranked UP 60th in the world for law. This confirms that UP's Faculty of Law has remained the leading law faculty on the African continent for five consecutive years. A further measure of our research strength is the 605 NRF-rated researchers

in 2022 (2021: 592). We had 17 A-rated researchers and 104 B-rated researchers.

UP continues to have a high proportion of academic staff with a doctorate (70.9% in 2022). This far exceeds the 48% of all permanent instructional/research staff at public universities in South Africa as reported by HEMIS data (Higher Education Management Information System).

Outside the classroom

After 750 days of operating under the national lockdown, we had many reasons to celebrate the return to normality in 2022.

A highlight was the much-anticipated annual Principal's Concert that UP could host after a two-year hiatus. The concert was held on the Aula Lawn of the Hatfield Campus under the theme 'Ukuthula: Celebration of peace', a symbol of unity in the University community's collective struggle to make the world a better place for all.



On the sporting front, the University of Pretoria also had much to celebrate as TuksSport athletes took centre-stage in 2022. Some highlights of their international achievements are listed below.

Just when we thought that TuksSport could not improve on its Olympic success of 2021, our athletes went on to excel at the Birmingham Commonwealth Games, winning 11 of the 27 South African medals and contributing 40% of the medal tally.



Tuks swimmers were responsible for seven of the 11 medals won during the Games.

Tuks's archers made a near clean sweep during the African Championships hosted by UP, winning no fewer than five gold medals.

Eight Tuks players were selected to play for the Springbok Women's Sevens team. They were in action at the Commonwealth Games, the World Cup Tournament and a World Qualifier Tournament.

Tuks athletes won three gold, seven silver and three bronze medals during the Africa Championship held in Mauritius. On the local front, TuksHockey made history when their women's and men's teams clinched Varsity Tournament titles within hours of each other. This was the first time this has happened in the history of Varsity Sports.

Thanks to TuksHockey's heroics, UP won four of the eight completed Varsity Tournaments. In addition to the two hockey tournaments, the Tuks rugby team won the Varsity Cup Tournament, and the Tuks under-20 rugby team was the Varsity Young Guns Champions.

WE PLAN FOR STUDENTS TO SUCCEED



85.7%

Overall module pass rate



of the 2021 graduates were either working or studying full-time or parttime in 2022



85.8%

Examination pass rate



Pass rate for veterinary nurses completing the only BVetNurs degree in Africa

Financial aid to students increases



Producing work-ready graduates



2ND IN SA 190TH IN THE WORLD

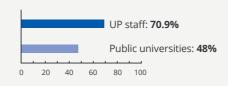
UP is ranked second in South Africa and 190th in the world for producing graduates who understand the world of work and can make a valuable contribution right from the start.4



Success through the highest number of qualified staff

70.9%

UP staff with PhD qualification Average at other public universities: 48%⁵



613

Number of NRF-rated researchers



... supported by AI

UP's family of robots consist of SmWoef, a robotic dog that works in the Engineering 4.0 research facility to collect routine data among agricultural crops for future use and improved farming techniques. Libby is our robotic library assistant who works at the Merensky II Library, and Stevie is the gender-neutral robot based at Steve Biko Academic Hospital.



RESEARCH THAT MATTERS

80

As one of South Africa's premier universities, we are also one of the largest producers of research in the country. More importantly, our research matters because it is aimed at changing lives, as we strive to achieve greater societal impact by creating knowledge that addresses local and global challenges.

The University strengthened its position in the world rankings in 2022. UP registered its best performance thus far in the Times Higher Education (THE) Impact Rankings where it was placed among the top 150 universities in the world.

Our best performance is also in the impact and sustainability rankings run by THE and Quacquarelli Symonds, where we are ranked joint second with the University of Cape Town (UCT).

New research centres

As the first post-pandemic year, 2022 saw numerous initiatives and projects being launched to strengthen our reputation for quality, relevance and impact. A small sample follows.

UP is already at the forefront of biodiscovery research and two new centres will entrench its leadership role. A **Biodiscovery Centre** will be used to create a library of natural products in Africa and establish UP as a leader in the field of natural product research in South Africa. An **African Centre for Biosecurity and Disease Risk Assessment** will offer "One Health-One Biosecurity" solutions to address global disease- and animal health-related challenges, contributing to food security in Africa. The National Biosecurity Hub will be coordinated by Innovation Africa @UP.

The University launched the **Pan African Cancer Research Institute** (PACRI) to transform the fight against cancer in Africa. PACRI intends to consolidate cancer research efforts and resources in order to provide a platform for research growth and development throughout South Africa and beyond.

The launch of the **Sustainable Development Solutions Network** (SDSN) South Africa National Network at UP's Future Africa Campus cemented our commitment to contributing to the development and wellbeing of people and societies. The South African SDG Hub aggregates the best and most relevant research on SDGs from South African and selected non-South African universities.

Other new initiatives are the establishment of an **African Centre for the Study of the United States** at the University of Pretoria (ACSUS-UP), as well as a **Centre for Asian Studies in Africa** (CASA).

This affirms our leadership and commitment to build capacity in Africa and to accelerate and scale impact.

To amplify our impact, we pursue collaborations with over 3 000 institutions across the globe and have some 230 international institution-wide partnerships across 70 countries and six continents.

ESI Indicator fields

The University is rated among the top 1% globally in 14 of the 22 Essential Science Indicator (ESI) fields (up from 12 in 2021). UP was the only university in South Africa to feature in Economics and Business. It is possible to use ESI statistics to identify the top 1% of scientists and published articles internationally, based on citations. As of January 2023, a total of 265 UP-published papers were among these top papers world-wide, spread over 20 of the 22 ESI subject fields. UP continues to dominate the subject category of Plant and Animal Sciences with 78 top papers.

Research Chairs

The University of Pretoria has 51 active chairs. This includes 19 industry-funded research chairs and 31 Department of Science and Innovation DSI-NRF South African Research Chairs Initiative (SARChI) chairs. Five of our research chairs focus on 4IR technologies and data integration to proactively solve current and future problems.

Groundbreaking research

UP has always been characterised by a spirit of transdisciplinary and international cooperation and we list a small selection that illustrates the breadth, depth and excellence of our collaborative research in 2022. Two professors from the Departments of Plant and Soil Sciences, and of Biochemistry, Genetics and Microbiology, led the South African component of a leading-edge multidisciplinary study on the effects of grazing in deserts.

The Department of Zoology and Entomology joined over a hundred collaborators from around the world in an international study to investigate termite and microbial wood discovery and decay.



Dr Mia Wege, a scientist and lecturer in the Department of Zoology and Entomology, was part of an international research team that discovered the world's largest fish breeding colony in the Weddell Sea off the coast of Antarctica.



Research focus areas



Agriculture and sustainable food systems



Climate change and the environment



Economic development and sustainable futures



Energy



Heritage studies



Inequalities, Social Justice and Human Rights



One Health



Water

UP's Mammal Research Institute Whale Unit and WWF South Africa teamed up to support research on southern right whales in response to warming oceans and changes to ocean processes which are affecting the number of whales visiting SA's shores.

UP's Department of Medical Virology combined with a high-level team of local and international researchers to detect and characterise the genome of strains of the old-world Middelburg virus.



TOP 1% GLOBALLY

Ranked among the top 1% of universities globally⁶

in 14 of the 22 Essential Science Indicator (ESI) fields, and the only university in SA to feature in Economics and Business





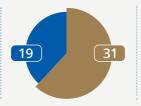
51 Research Chairs



SARChI



Industry

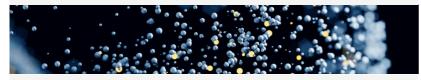


5

Number of research chairs that focus on 4IR technologies and data integration.

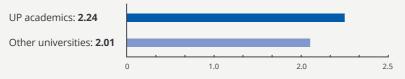
Recognised research university

UP is one of only two universities from SA invited to join the Worldwide Universities Network, a network of 22 leading research universities in six continents



Prolific academic staff

Weighted research outputs⁷



Patently innovative

15

New invention disclosures in 2022

12

International patents filed

7

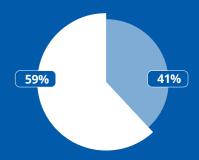
SA patents filed and granted

Increasing public understanding

Research Matters and Re.Search magazine help communicate our researchers' findings in accessible ways. Educating the public on why rigorous scientific endeavour is necessary is even more critical in a time when non-scientific views, which could have disastrous consequences, are gaining popularity.



Sought out by postdoctoral fellows



59%

International

41%

South African

Ranked among the Top 100 in the world

FOR IMPACT

#30

SDG 15: Life on Land

#44

SDG 8:

Decent Work and Economic Growth

SDG 17:Partnership for the Goals

#88

SDG 9:

Industry, Innovation and Infrastructure

ENGAGEMENT WITH IMPACT

Service to society

As an integral part of society and an institution for the public good, the University recognises the importance of our stakeholders and the need to engage with them meaningfully in areas of shared interest.

An example of our approach is our continued effort to advance transdisciplinarity in teaching, learning and research. This involves both internal and external stakeholders. From an internal stakeholder perspective, there is increasing collaboration between different faculties around defined complex challenges, and using the platforms created in the University such as Future Africa, Javett Art Centre and Innovation Africa.

Institutional collaboration is largely through multi-university networks covering an

expansive African footprint, and an equivalent global reach. Networks include the African Research Universities Alliance (ARUA), the Association of Commonwealth Universities (ACU), the Australia-Africa Universities Network (AAUN), the Regional Universities Forum for Capacity building in Agriculture (RUFORUM), the Alliance for African Partnerships – Michigan State University (AAP), and the University Social Responsibility Network (USRN).

In 2022, the University had 202 active international partners, made up of universities or entities in the higher education sector with whom we share Memorandums of Intent, Institutional Agreements of Faculty Agreements.





Engaging events

The University hosted a number of highprofile events which underscored our engagement on many levels. Five are listed below.

Sustainability Research and Innovation Congress 2022 (SRI2022): A joint initiative of Future Earth and the Belmont Forum, SRI is a global platform for sustainability scholarship and innovation, transdisciplinary and cross-sectoral collaboration, and knowledge to action.

Just Energy Transition: In partnership with the United Nations Development Programme (UNDP), the Presidential Climate Commission (PCC), and the University of Johannesburg, UP hosted a public lecture and panel debate that included a lecture by Dr Kgosientsho Ramokgopa, Minister of Electricity.

Africa Week 2023: This annual scientific leadership summit, held at UP's Future Africa Campus, outlined the priorities that need to be pursued to advance open science on the continent. Open science is

a global movement to make information about scientific research easily accessible at all levels of society. Thought leaders, academics, and government representatives included Minister of Higher Education, Science and Innovation Blade Nzimande

2022 Mail & Guardian 200 Young South Africans: UP was proud to host some of the 22 individuals associated with UP who featured on the list of promising young professionals under the age of 35. Since the inaugural awards in 2005, 137 UP alumni and alumni associates have made an appearance on the 200 Young South Africans list

MBH Business Hub: UP hosted the launch of the Mamelodi Business Hub in collaboration with UNICEF and PwC. The MBH's primary purpose is to develop entrepreneurs in the local community.

UP in a Nutshell

UP in a Nutshell

Community engagement

Students apply their knowledge and skills to solve problems in partnership with local communities that have identified challenges in their environments.

Student learning is therefore highly contextualised and, as such, develops social responsibility. Students learn how to work with underserved communities, to help them solve immediate problems, and to transfer and develop skills so they can independently solve problems in future.

In 2022, 15 000 students participated in curricular community engagement activities, involving more than 3 000 projects, with over 1 000 community partners in various parts of Pretoria.

Two ways in which we shared our skills for the benefit of the community in 2022 are mentioned below.

The Faculty of Engineering, Built Environment and Information Technology has adopted the Phathudi Comprehensive School in Atteridgeville, Pretoria. The Faculty will revitalise a computer centre and offer basic computer training to learners, and assist them with the Eskom

Expo for Young Scientists and other projects. The school will also join the Junior Tukkie initiative and use the Junior Tukkie online platform.

The Pre-University Academy (PUA) collaborated with the Hong Kong Polytechnic University to provide school learners from Mamelodi with a rich learning experience in robotics and coding. The PUA is a secondary school project that readies high school learners for tertiary education, focusing its efforts on Mathematics, Science, creative writing and Philosophy. The PUA group was the only group from Africa to participate in the project.





Recognised for caring

UP is the only university in Africa to belong to the University Social Responsibility Network, where members are selected for their responsiveness to their local context.







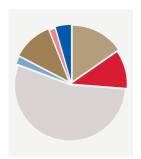


Learners e-learning platform

JuniorTukkie is a flagship project that helps high school learners with schoolwork and career choices. JuniorTukkie has a YouTube channel as well as an e-learning platform, juniortukkie. online. The platform provides extensive free learning content for Mathematics, Physical Science, Accounting, Life Sciences, Natural Sciences and English for Grades 8 to 12 across South Africa.



Where to find our international partners





Asia

Europe

Middle East

North America

Oceania

South America

Active international partners in 2022

The University collaborates with over **3 000** institutions across the globe and has some **230** international institution-wide partnerships across **70** countries and **six** continents.

Connected, collaborative and impactful

44%

Percentage of research that UP conducts with international collaborators

20

Number of student exchange agreements signed in 2022

#1

in Africa for Environmental Impact (#139 in the world)⁹

33

New agreements signed with global partners in 2022



Learning by doing

Our students earn credits towards their degrees while applying their knowledge in the service to the community.

300

modules and

15 000

students are involved in

3 000

projects with

1 000

community partners



100%

degrees in SA:10

future

of all Veterinary Science degrees

UP contributes to the following

We're building the



11%

of all postgraduate degrees



15%

of all master's degrees



10%

of all doctoral degrees



9%

of all engineering degrees



