

Our

2020 Journey

UNIVERSITY OF THE FREE STATE

*Inspiring excellence.
Transforming lives.*



UNIVERSITY OF THE
FREE STATE
UNIVERSITEIT VAN DIE
VRYSTAAT
YUNIVESITHI YA
FREISTATA

Our vision

The UFS is a research-led, student-centred, and regionally engaged university that contributes to development and social justice through the production of globally competitive graduates and knowledge.

Our motto

IN VERITATE SAPIENTIAE LUX
(In Truth is the Light of Wisdom)



Front cover: An artist's impression of the three UFS campuses.

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WHO WE ARE



“Everybody must feel welcome and safe when they enter our learning and living spaces. It must be a place where both social and academic dreams are realised – an experience that provides a balanced foundation for whatever the future demands.”

- Prof Francis Petersen,
UFS Rector and Vice-Chancellor

MESSAGE FROM CHANCELLOR



*Prof Bonang Mohale
Chancellor,
University of the
Free State*

I assumed my role as Chancellor of the UFS during a year that tested the higher education community through unprecedented challenges brought about by a global pandemic, continued student protests related to access and funding, and economic inequalities that put opportunities out of reach for many. The higher education system's most pressing challenge is that of transformation. It is highly elitist and class-based in nature, patriarchal, and racialised with a strong urban focus. The UFS is in an advanced stage of transforming itself to ensure that, beyond merely changing the gender and racial character of the institution, it is confronting the challenges of high unemployment, which in turn, leads to increasing inequality and grim poverty facing our country – exacerbated by the pandemic precisely because the face of scholarship is changing!

It is humbling indeed to be a part of an institution during a time when the pandemic

serves as a catalyst for change. How we respond, equip our students, serve the general population, and contribute effectively to the South African and global economy will ultimately define and differentiate us. Despite these unusually deadly times, the UFS community has nimbly managed to adapt seamlessly to the changes and ensure that a bright, achievable future for our students is not a far-fetched mirage. As illustrated in this publication, the UFS has taken action to ensure that no student is left behind, to prevent dropouts, to increase financial, digital, and technological access, and to ensure the safety, health, and well-being of our students.

The strongest among us are those who help others, even if they have challenges of their own. I am confident that together, we will see an institution of inclusive excellence in research, teaching, and learning, advancing sustainability in the short term, while building long-term resilience as an institution and sector.

MESSAGE FROM COUNCIL CHAIR



*Dr Willem Louw
Council Chairperson,
University of the
Free State*

Never in the past 116 years of its existence has the character of the University of the Free State (UFS) been tested as during the 2020 calendar year. Largely because of its continued focus on caring and diversity, the year has once again translated into an outstanding university experience for all involved. This was evident from the innovation, sound leadership, and resilience displayed by staff and students, which ensured that the university remained solidly on course in terms of meeting its strategic goals. It was a year in which many of the staff and students' lives were irrevocably affected by the devastating effects of the COVID-19 pandemic. It was also a year of cutbacks and drastic reduction in activities for so many businesses, institutions, and organisations globally. For the UFS it was, however, a year characterised by growth, development, reflection, and opportunity.

The solid, level-headed, visionary leadership provided by the Rector and Vice-Chancellor,

Prof Francis Petersen, his management team, and all the governing structures of the UFS, deserves a great share of the credit for what could be accomplished in 2020 amid great challenges. Early reaction and a sustained focus on the risks of the pandemic characterised the UFS response action to COVID-19. It was immensely reassuring to see the carefully considered emergency systems kick into action, marked by centralised decision making and communication, and underscored by sound scientific thinking.

In the words of Henry Ford:
"Obstacles are those frightful things you see when you take your eyes off your goal."

A solid, undeterred focus on its goals – taking into account pressing immediate needs as well as long-term sustainability concerns – is what has made this a successful year of visible innovation and value-creating impact for the UFS.

MESSAGE FROM RECTOR AND VICE-CHANCELLOR

The year 2020 will probably always be associated with the significant disruption, change, and uncertainty brought about by the COVID-19 pandemic in all sectors of society. Higher education in general and the University of the Free State in particular did not escape this impact. But along with all the challenges, several opportunities also presented itself, which we took care to actively make use of.

Our 2020 theme of '*Visibility and Impact*' was determined long before the first COVID-19 infection landed on our shores. We take immense courage from the fact that we still managed to live up to this motto – albeit in a very different way than we had initially envisioned.

Through timeous reaction and a carefully considered, comprehensive, centralised response strategy, we managed to *lessen the impact* – prioritising the health and safety of our staff and students by swiftly moving to an online and blended teaching and learning environment, assisting staff and students to access online resources and ensuring effective communication with all stakeholders.

We were also able to play our part in *making an impact* in the fight against

the pandemic, assisting government in various ways by providing scientific expertise, experience and facilities, as well as reaching out to diverse communities affected by the pandemic. We managed to live out our vision of being a university that enjoys academic freedom and institutional autonomy but is engaged with the communities it serves. We must be enquiry-driven, and at the same time community-focused. We must be professionally attuned, but humanely informed, taking our global responsibilities seriously.

And even though our *physical visibility* may have been severely curtailed by the restrictions of the national lockdown, we could find innovative ways to establish an *online visibility* in various fields of academia and management – making a contribution, tapping into opportunities, and generally making our presence felt not only locally and nationally, but also in the global arena.

We will build on the valuable experience gained in 2020, especially around '*Visibility and Impact*', and continue to find innovative ways to circumvent challenges and meet the goals we have set for ourselves.



*Prof Francis Petersen
Rector and Vice-Chancellor,
University of the Free State*

*Visibility
and
Impact*

OUR STORY

The University of the Free State creates opportunities and growth through leading learning and teaching, focused research, and impactful engagement with society. We offer world-class benefits to all individuals. What makes us special is that our students are holistically supported to achieve some of the highest success rates in the country and they are highly employable. What's more, we produce research

that has industry and social impact and real-world application. Our culture promotes equity, ubuntu, and accountability. We address challenges and issues as they emerge, and we deal with them openly in a way that promotes social justice and human rights. Situated in the heart of South Africa, our character of caring and diversity translates into an outstanding university experience.

The UFS in numbers



Established in
1904

7
faculties

34 822
total
undergraduate
students



6 403
total
postgraduate
students




2 581
total
permanent
staff



1 888
distance-learning
students,
South Campus

41 675
total students



127
departments
where academic
staff have been
appointed

41
locations of
teaching

8 606
graduates per
annum

1 156
international
students



Campuses

The **Bloemfontein Campus**, situated in the capital of the Free State, is the oldest and biggest of the three campuses. Undergraduate and postgraduate studies in all seven faculties are presented here. All campus facilities are available in one location, characterised by unique architecture and artworks, modern sports facilities as well as eco-friendly waterwise gardens.

Braille-guided areas, ramps and elevators for visually and mobility impaired students contribute to a culture of care and kindness.

The vibrant **Qwaqwa Campus** in the picturesque Eastern Free State serves a rapidly growing number of rural students from the immediate area and surrounding provinces.

The campus has a strong focus on socio-economic development, informed by a rural context. Programmes, underpinned by a strong research agenda, focus on identifying the best possible strategies to create jobs and stimulate economic growth in this area.

Our **South Campus** provides alternative access to higher education for promising students who did not obtain the required marks in their final school examinations. Several programmes are in place that offer students the opportunity to access higher education.

This is also the Open, Distance and e-Learning (ODEL) hub of the university.



Bloemfontein Campus



Qwaqwa Campus



South Campus

Faculties



Faculty of
Education



Faculty of
the
Humanities



Faculty of
Natural and
Agricultural
Sciences



Faculty of
Economics



Faculty
of Health
Sciences

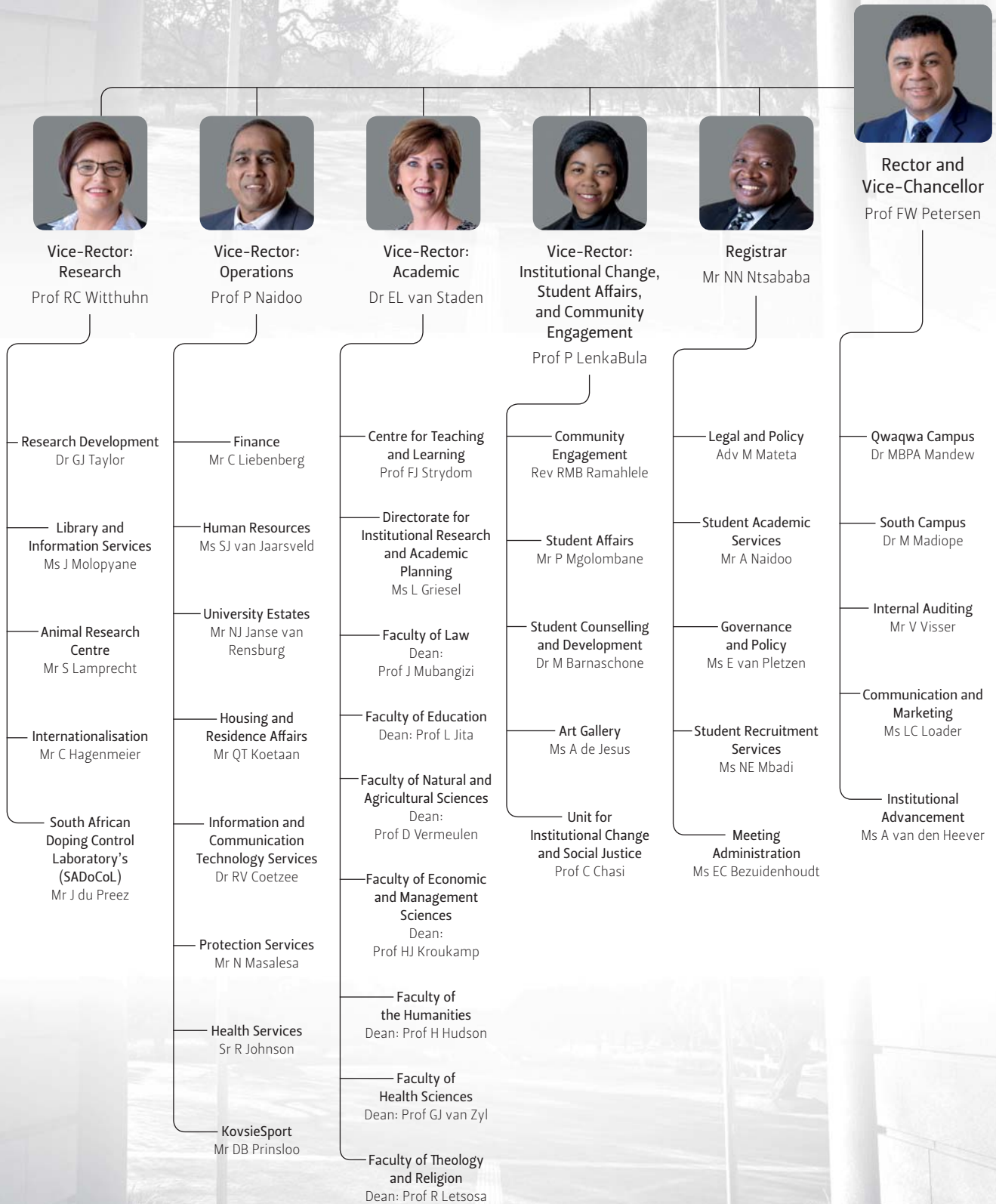


Faculty of
Law

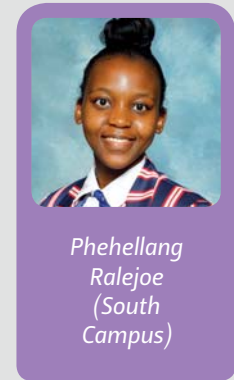


Faculty of
Theology
and Religion

UNIVERSITY LEADERSHIP



Student Leadership: SRC Presidents



70%

student participation
in governance
structures

UFS Strategic Goals



1 Improve **student success** and well-being



2 Renew and transform the **curriculum**



3 Increase **UFS contribution** to local, regional and global knowledge



4 Support development and social justice through **engaged scholarship**



5 Increase the efficiency and effectiveness of **governance** and **support systems**



6 Achieve **financial sustainability**



7 Advance an **institutional culture** that demonstrates the values of the UFS





THE GREAT 2020 CHALLENGE



“Never in the past 116 years of its existence has the character of the University of the Free State (UFS) been tested as during the 2020 calendar year.”

- Dr Willem Louw, UFS Council
Chairperson

CRISIS MANAGEMENT

Early reaction and a sustained focus on the period after the pandemic characterised the university's response action to the unique challenges presented during 2020 – the year that will probably always be known as 'the COVID year'.

As Rector and Vice-Chancellor, Prof Francis Petersen oversaw all response efforts.

A UFS COVID-19 task team was already formed in February, as news of the first infections trickled in from Wuhan. The first priority was the health, safety and well-being of staff and students. The second priority was to complete the 2020 academic year. And the third priority was to structure all response efforts in a socially just manner, where no student would be left behind.

Clear communication was a big priority and stakeholders such as unions, student leadership,

staff and alumni were kept involved and informed throughout.

“When it came to university matters, we wanted no anxiety, uncertainty or confusion. We also made it clear that there would be no job losses in 2020,” explains Prof Petersen.

But along with all the challenges, several unique opportunities presented themselves during 2020. The fact that students and staff made the most of these, is a testament to their commitment and resilience.

“When it came to university matters, we wanted no anxiety, uncertainty or confusion.”



Effective data management

Despite facing load shedding, failure of the global networking infrastructure, and increasing digital threats in 2020, the UFS data infrastructure enabled ICT Services to maintain a 100% integrity level in terms of all institutional data. No data was lost during this reporting period. During 2020, various additional data backup and disaster recovery technologies were put in place to reduce the recovery time and ensure that services running on virtualisation platforms could be quickly recovered in a disaster.

The rapid, forced migration from a traditional campus-based academic provider to an online academic institution posed a major challenge.

The UFS was the first to enter into formal contracts with all national mobile data providers 'outside' any centrally (nationally) negotiated arrangements. These contracts and the data it provided became the basis for the UFS data provisioning initiative and are maintained at a price point far lower than the current going rate for data provisioning. The UFS was also the first South African university to provide a managed data-provisioning solution to students and staff through the GlobalProtect Virtual Private Network (VPN). The GlobalProtect app has been in operation since early April 2020.

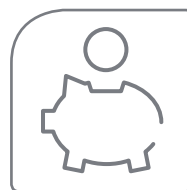
Risk-adjusted approach

The COVID-19 pandemic had material implications for some of the UFS' agreed-upon projects, as stated in the Annual Performance Plan (APP). This phenomenon is visible across the sector nationally, but also globally. During this time, the University of the Free State applied a risk-adjusted approach and managed to sustain the Academic Project through a contextually responsive multimodal teaching and learning plan for the completion of the 2020 academic year. The risk-based approach has assisted the university in investing its resources in those activities that, if not achieved, would have a material impact on the university as a going concern.

Special Executive Group overseeing COVID-19 risk

During 2020, the focus was on mitigating risks relating to the COVID-19 pandemic. Accordingly, a Special Executive Group (SEG) as the decision-making entity on the pandemic, was established to respond to the risks related to the pandemic.

COVID-19 was identified as a risk that negatively impacted the business continuity and was managed as a separate item on the risk register. This focused approach ensured that the related risks were identified, assessed, and mitigated in a coordinated manner. The Special Executive group was chaired by the Rector and Vice-Chancellor, Prof Francis Petersen, and included expertise in the areas of scenario planning, project management, virologists and/or epidemiologists, communication and institutional culture.



R50 million

saved as a result
of cost-cutting
measures in 2020



6%

reduction in
operational budget due
to austerity measures

GOING REMOTE

In 2020, the UFS – like other institutions worldwide – had to change its approach to learning and teaching and student support to meet the challenges posed by the global COVID-19 pandemic. The pandemic created a unique opportunity to reflect on what a ‘new normal’ in a post-COVID-19 world could look like.

Teaching and learning during the pandemic also required the pivoting of existing student support and success initiatives, such as the Academic Student Tutorial Excellence Programme (A_STEP), Academic Advising, Student Transition (UFSS), and Language and Literacy Development. Pivoting at the most concrete level meant adapting the ways in which these services are offered to allow them to continue in a remote online environment. However, in many instances, it also meant expanding the scope of the services offered to include more holistic support and greater reach.

The pandemic also resulted in the initiation of the strategic Digitalisation Implementation Plan. The plan aims to transform leadership, institutional culture, technology, and how the institution approaches strategic and operational tasks through digitalisation. The consultation process for the development of this plan started in October 2020 with an inclusive Design Thinking workshop focusing on developing a shared vision for UFS 2030. The plan is currently being finalised with the inputs of various stakeholders.



New initiatives launched in 2020

#NoStudentLeftBehind

Data analytics was used to identify students who were not connecting to online learning platforms in order to reach out to those requiring assistance. The quantitative data was integrated with students’ qualitative narratives to tailor individualised responsive support through academic advising, tutorial support, and other student-support services in faculties and student affairs. This was one of many other faculty and institutional initiatives deployed during the pandemic to promote equitable outcomes despite the disparities that students face as a result of the pandemic. The #NoStudentLeftBehind campaign has fast-tracked the use of analytics and student narratives to transform the way the UFS supports students and enhances student success by effecting behavioural change. It has been an exercise of shared efforts to cultivate effective learning, teaching, and support that has exemplified the UFS’ organisational growth-mindedness, and has helped it develop into an agile, focused, and responsive institution.

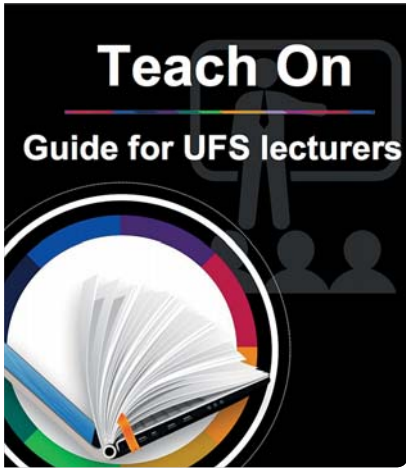
Going remote in numbers:



39 blackboard reports analysed to monitor how much time students spent learning and whether they were completing assessments



99,95% of students participated in the **first semester of 2020** (with the remaining 0,05% receiving support to continue their studies successfully)



#UFSTeachOn

Staff was supported to transform their materials and teaching approaches to a new reality.

More flexible learning and teaching approaches were developed that could serve as building blocks towards a blended learning and teaching model in a new normal.

#UFSLearnOn

Learning material was created that students could download on cellphones, providing them with the skills and ideas on how to get connected and create an environment where they could stay at home. These resources were shared with other universities to support a collaborative approach to addressing the COVID-19 challenge.



3 500 laptops distributed to vulnerable students



3 800 staff members trained to maximise efficiency in online environment



141 modules moved to form part of online tutorials



77 000 students viewed #UFSLearnOn website



177 000 Facebook users reached by #UFSLearnOn materials



4 685 students reached in tutorial engagements through A_STEP call centre launched in August

SOUND SCIENCE

Throughout 2020, the UFS not only took great care to base all its decisions around the COVID-19 pandemic on sound, verified science, but was also committed to using scientific knowledge and facilities in support of government's efforts to fight the COVID-19 pandemic.

During this challenging time, dedicated staff members at the UFS continued to provide services as a testimony to their commitment to advance public knowledge of COVID-19 for the greater good of South Africa.

The UFS actively assisted in a number of areas.

UFS participating in Public Health Emergency Solidarity Trial

Clinicians from the Department of Internal Medicine, the Department of Critical Care, and the Division of Virology worked with FARMOVS to participate in the Public Health Emergency

Solidarity Trial initiated by the World Health Organisation (WHO). During this international randomised trial, four treatment options for the treatment of COVID-19 were evaluated.



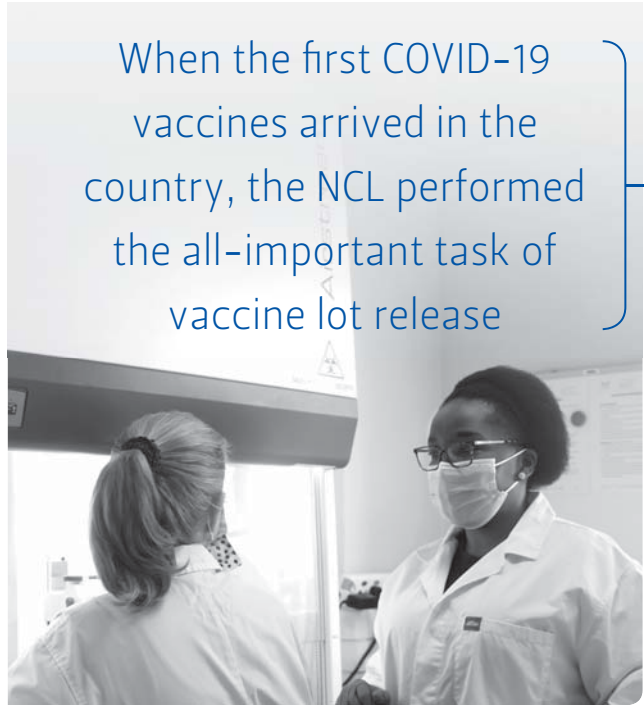
FARMOVS providing facilities and bioanalytical expertise

The UFS negotiated with the Free State Department of Health to offer support with the continuation of healthcare to non-COVID-19 patients in an attempt to free up space at the Universitas Hospital for the isolation of COVID-19 patients. FARMOVS also received feasibility requests for support with the

evaluation of existing drugs (repurposing) as well as the development of novel drugs for the treatment of COVID-19. Later in 2020, the FARMOVS bio-analytical lab was also involved in a randomised controlled study to determine the efficacy of Ivermectin as a potential treatment.



The dedicated team working tirelessly at the National Control Laboratory is, front row from the left: Kittie Cloete, Dr Quinton Meyer (Director), and Angela Sekabate. In the back row are from the left: Marli Watson, Charles Poonyane, Dr Yolandi Roodt, Esmé Marais, and Dr Ruan Ells.



When the first COVID-19 vaccines arrived in the country, the NCL performed the all-important task of vaccine lot release

NCL only qualified body to do vaccine testing

The National Control Laboratory for Biological Products (NCL) is one of only 12 laboratories worldwide contracted to perform vaccine testing for the World Health Organisation. The NCL is also the only vaccine-testing laboratory in the country that performs the final quality-control testing of all human vaccine batches marketed in South Africa on behalf of the South African Health Products Authority (SAHPRA). When the first COVID-19 vaccines arrived in the country, the NCL performed the all-important task of vaccine lot release.

COVID-19 task team in place

A UFS COVID-19 task team was established in March to advise the Special Executive Group using epidemiological knowledge in order to monitor the spread of the pandemic. The task team communicated with the National Institute for Communicable Diseases and the Free State Department of Health and assisted with the preparedness of staff and students on all three campuses.



Research and innovation at the forefront

The UFS hosts a SARChI Research Chair, held by Prof Felicity Burt, in vector-borne and zoonotic diseases, and has a biosafety level-3 facility at its disposal. Expertise in this field was used to plan and conduct research on zoonotic and medically significant viruses. In addition, there were research groups focusing on protein expression systems with the potential for utilisation in the development of diagnostic assays with application in either diagnosis or surveillance.

Researchers at the UFS established several projects contributing directly towards fighting the COVID-19 outbreak.

Prof Felicity Burt

Using sewage to test for COVID-19

Prof Anthony Turton from the Centre for Environmental Management headed a team that became the first to isolate the SARS-Cov-2 virus from wastewater and developed a viable virus risk forensic service. This innovative research achievement sparked significant international interest, as it holds great potential to monitor COVID-19 infections in designated

populations. The major risk arising from COVID-19 is the fact that people can be infected but show no symptoms. Asymptomatic carriers are often the vectors accelerating infection in society, and this is a problem that has to date defied a solution. As the government cannot test every citizen in the country, the answer may lie in sewage surveillance. "We have 824 wastewater treatment works in South Africa. Each of these serves a population of known size. By taking samples of sewage according to a defined protocol, it is now technically possible to determine the viral load of the entire population in the catchment area of that sewage works. This data can be compared weekly, and from this we can determine if the total viral load is increasing or decreasing," explains Prof Turton.



Prof Anthony Turton

Data analytics to inform decisions

Staff members in the Faculty of Health Sciences and the Centre for Teaching and Learning assisted different government departments and NGOs with data management, data infrastructure, modelling, forecasting, and advising on the approaches to be taken to put the necessary systems in place.

Multidisciplinary task team covering a range of fields

A team of researchers representing a broad range of disciplines was identified to address the outbreak using a multi-disciplinary approach. The team investigated innovative interdisciplinary science, modelling, and prediction that contributed towards the outbreak, and focused on building capacity for future outbreak preparedness. The team comprised academics from the natural and health sciences, clinicians, mathematicians, statisticians, actuaries, lawyers, the humanities, and social sciences. They liaised with the Free State Department of Health regarding matters such as modelling and prediction.



REACHING OUT

The pandemic provided opportunities for UFS staff to use their knowledge and skills in different fields to actively assist affected communities.

IDEAS LAB reaching out to school learners

The IDEAS LAB Project, situated on the South Campus, harnesses technology to provide superior educational opportunities to schools in order to improve learner performance and teacher development. One of the ways in which the project addresses learner and teacher development is by broadcasting daily lessons in

Courses were also developed to equip schoolteachers with the skills needed to use technology as a mode of instruction during times like lockdown.

16 subjects to learners in high schools as part of the Internet Broadcast Project (IBP). Lessons are presented in real time by a skilled teacher/presenter on one of the UFS campuses. The interactive environment also makes it possible for learners to ask questions and engage with presenters. Around 71 000 learners in over 80 different schools are normally reached every week. During lockdown, the IDEAS LAB's studios were made available to the Free State Department of Education, and technical assistance was provided to record the provincial trimmed annual education plan. The recording time for lessons and subjects covered was also increased, and a YouTube channel was launched to upload video lessons for learners affected by the lockdown. Computer hard drives were used to distribute video lessons to schools.

I AM

EMPLOYEE WELLNESS SHORT LEARNING PROGRAMME

I AM employee wellness programme launched

To help individuals cope with life challenges, exacerbated by the stress and uncertainty brought about by the COVID-19 pandemic, the UFS launched a short learning programme in 2020 that addresses all aspects of well-being. Participants are equipped to understand and improve their own personal and work-related well-being, and are empowered to increase their own well-being and reach their optimal potential in both their personal and work life. The programme is offered to UFS staff at no cost. It is endorsed by well-known South Africans such as former Public Protector **Thuli Madonsela** and Kovsie alumna and former Miss World, **Rolene Strauss**.



Teacher online training

During lockdown, staff from the South Campus, the UFS's online, distance-learning and e-Education hub, converted several courses to online short-learning programmes (SLP's). Courses were also developed to equip school teachers with the skills needed to use technology as a mode of instruction during times like lockdown. *Harnessing Social Media* is a basic course that focuses on social-media platforms such as WhatsApp as a teaching tool. *TeachOnline* is a more advanced SLP that shows you how to use Google Classroom effectively. All the assignments were also completed and uploaded on Google Classroom.

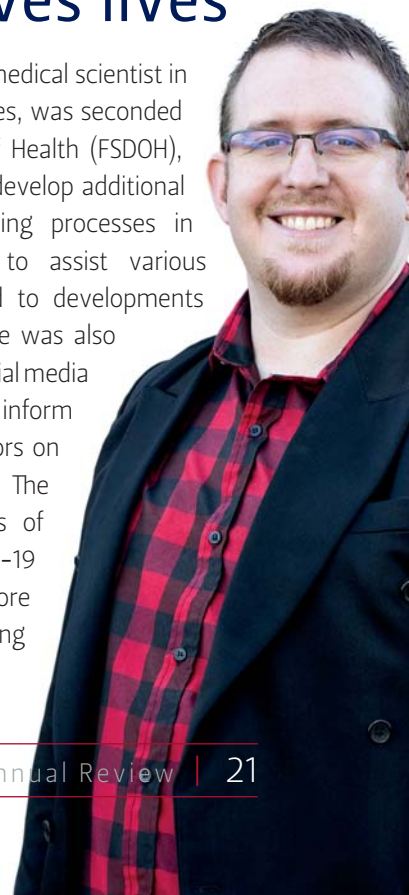
Health workers trained



The Department of Anaesthesiology at the University of the Free State, in collaboration with the Clinical Simulation and Skills Unit, trained around 500 hospital staff members dealing with the COVID-19 pandemic. The unit assisted doctors, nurses, and staff working at the Universitas and Pelonomi hospitals with training in the use of personal protective equipment (PPE), including protective clothing, masks, gloves, aprons, and eye protection.

Data that saves lives

Herkulaas Combrink, a data and medical scientist in the UFS initiative for Digital Futures, was seconded to the Free State Department of Health (FSDOH), where he identified the need to develop additional analytics for the already existing processes in risk communication in order to assist various communication strategies linked to developments regarding COVID-19 infections. He was also part of a scientific study where social media data was analysed in order to inform government health communicators on their communication strategies. The study used real-time snapshots of online interactions around COVID-19 as a means to augment more traditional methods of conducting research on a given topic.







LEADING LEARNING



“You can either let adversity beat you; or you can make use of it and transcend it.”

- Prof Francois Strydom, Director
Centre for Teaching and Learning

LEADING LEARNING

During 2020, the UFS continued to enhance the quality of teaching and learning, not only at our own institution, but also nationally. Our various initiatives to ensure student success, as well as the leading role we are playing to advance academic advising at all tertiary institutions, continue to bear fruit. From 2019 to 2020, our overall institutional success rate improved by 5%, with some faculties showing increases of between 9% and 11%.

Developing new approaches to learning and teaching is one of the critical challenges facing higher education globally. South African higher education has experienced uncontrolled growth over the past two decades. This has resulted in large classes and concerns around quality. In order to address these challenges, we developed a new five-year Learning and Teaching

Strategy. The purpose of this strategy is to articulate an innovative vision and commitment to high-quality learning and teaching; promote student success and enhance graduate employability; develop approaches for addressing current learning and teaching challenges; and provide a framework that can be used to align related policies and implementation plans.

International nursing award

Dr **Champion Nyoni** won the highly acclaimed Sigma Emerging Nurse Researcher/Scholar Award with the purpose of recognising nurses whose research and scholarship have impacted the profession and the people it serves. “To me, this is an indication that

the quality of our work in the School of Nursing is top-notch and meets international standards,” said Dr Nyoni.



Graduate attributes

During 2020, we continued to promote the intentional mapping and integration of graduate attributes into our curricula and co-curricula.



Written
Communication



Ethical
Reasoning



Oral
Communication



Critical
Thinking



Community
Engagement



Problem
Solving



Entrepreneurial
Spirit

Inspiring PhD student's passion for ecology opens doors



Qinisani Qwabe, a second-year PhD student in the Centre for Sustainable Agriculture, Rural Development and Extension, was selected in the education category of the Mail & Guardian Top 200 Young South Africans. He was also chosen to represent South Africa at a BRICS Conference in Russia. His paper, using a South African case study, was titled: *The role of agrobiodiversity on environmental management and its impact on human ecology*. "I want to see a society that leads a sustainable life and values its natural resources. This is what wakes me up every morning. That is what I am working towards," he said.

85% total success rate



9 609 total number of graduates



13% improvement in general success rate from 2010 to 2020



8% achievement gap between white and African students (compared to 16% in 2010)



100 departments, schools, centres and units undergoing quality review within past 5 years



Selected for future-professors programme

Drs Sandy-Lynn Steenhuisen, Senior Lecturer in the Department of Plant Sciences (UFS Qwaqwa Campus), **Oliver Nyambi**, Senior Lecturer in the Department of English (UFS Qwaqwa Campus), and **Alice Brink**, Senior Lecturer in the Department of Chemistry (UFS Bloemfontein Campus), were selected for the first cohort of this prestigious initiative by the Department of Higher Education and Training, presenting them with an exciting opportunity for networking, sharing, learning, and peer-reviewing with some of South Africa's best scholars.



Dr Sandy-Lynn Steenhuisen



Dr Oliver Nyambi



Dr Alice Brink

Agriculture students crowned world champions



Four students in the Centre for Sustainable Agriculture and the Department of Agricultural Economics walked away as victors in the International Case Study Competition presented by the International Food and Agribusiness Management Association. **Carien Denner**, **Alina Ntsiapane**,

and **Andries Strauss**, all three from the Centre for Sustainable Agriculture, and **Michelle Marais** from the Department of Agricultural Economics participated against teams from 17 countries all over the world and faced the Philippines in the final round before being crowned the winners.

Internationalisation at home

Our internationalisation-at-home process purposefully integrate international and intercultural dimensions into the formal and informal curriculum of all UFS students within their domestic learning environments. The Umoja Buddy Programme connects international and local students through meaningful lifelong friendships and fosters their academic, social, and cultural integration. The intellectual cross-fertilisation between students from different backgrounds provides opportunities for the acquisition of international and intercultural competencies by all students, and results in the enhanced employability of our graduates. During 2020, The Office for International Affairs has not only led the internationalisation of research, but also a European Union-funded project on the internationalisation of the

curriculum. This project allowed students at the UFS to join students around the world for classes presented by global academics in a programme that addresses transformation and decolonisation of the undergraduate curriculum.

1 156 international students



101 international postdoctoral fellows



59 international partnerships entrenched in signed MOUs



Maths professor in world's top 1% of scientists

Prof Abdon Atangana, Professor of Applied Mathematics in the Institute for Groundwater Studies, was awarded the TWAS Mohammad A. Hamdan Award by the World Academy of Sciences for the advancement of science in developing countries. He received the award for his contribution to fractal mathematics and partial differential equations. His work can be applied to make complicated predictions in the fields of science, technology, and engineering, such as helping to advise people drilling for water by predicting how groundwater is flowing in a complex geological formation. He was also named as one of the top 1% of scientists on the global Clarivate Web of Science list, plus appeared on a global list of leading scientists published by Stanford University in the United States.



Lecturer's cannabis and cancer research takes her to Germany

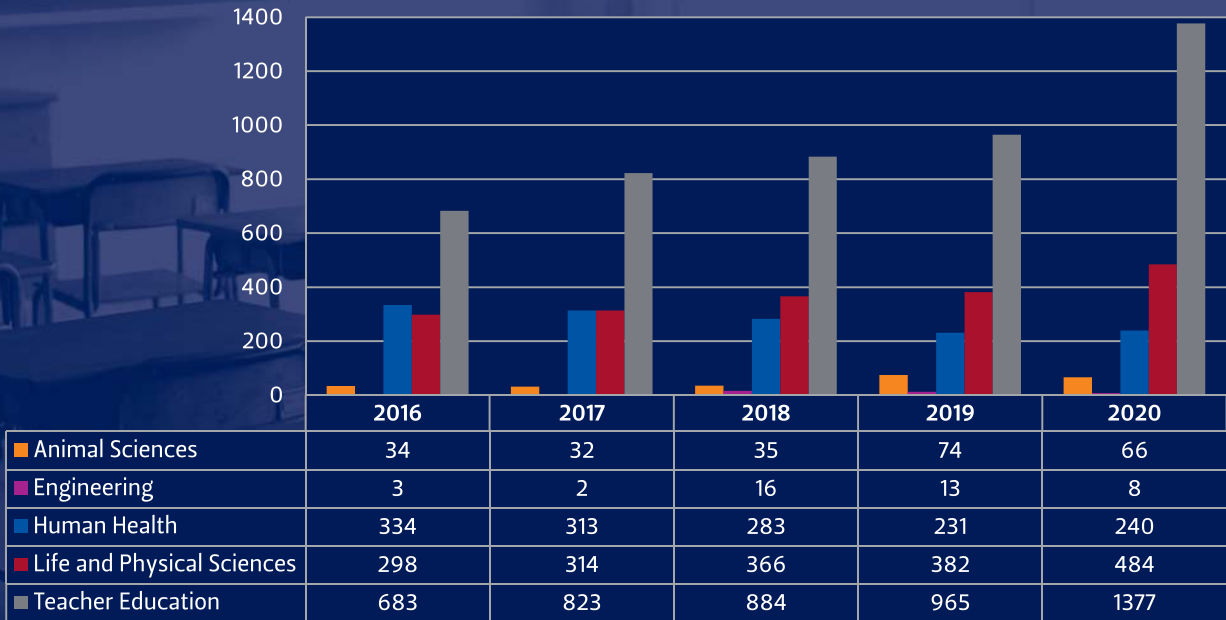


Innocensia Mangoato, Lecturer and Researcher in the Department of Pharmacology, was invited to visit the University of Bonn for nine months to work with Dr Ulrich-Merzenich, who heads the working group on Synergy Research and Experimental Medicine. Mangoato's PhD in Pharmacology, under the direct supervision of Prof Motlalepula Matsabisa, focuses on cannabis and cancer drug resistance reversal through studying various efflux transporters that play a major role in anticancer drug resistance. According to Mangoato, this is because anticancer drug resistance plays a major role in the failure of standard chemotherapy when treating human cancer.

Scarce skills

The concept of scarce skills features prominently in South Africa’s national development discourse. During 2020, we continued to respond well to these scarce skills, excelling in Animal Sciences, Physical Sciences, and Teacher Education. Concerted effort is required to meet

the targets for Engineering and Health Sciences. In this regard, the new addition of Engineering to the UFS PQM (Programme and Qualification Mix) and the turnaround plan of the Faculty of Health Sciences will contribute to broadening access to these critical skills.



Undergraduate scarce-skills graduates (headcount)

Accountancy lecturers part of top-35 2020 SAICA finalists

Haneke van Zyl and Mojalefa Mosala from the School of Accountancy made it into the top-35 South African Institute of Chartered (SAICA) competition.



Combating COVID-19 impact on students

The devastating impact of the COVID-19 pandemic on the holistic well-being of students worldwide has been widely documented, as has the crippling effect it has had on job opportunities. Only 29% of the 2 060 UFS graduates who completed the 2020 survey reported that they were already working at the time of graduation, compared to 57% in 2019. Institutional research indicates a steady improvement in UFS students' perceptions of the extent to which the university supports their well-being. However, positive student perceptions decreased relatively significantly during 2020 – from 72,2% in 2019 to 66% in 2020. We plan to turn this trend around by strengthening the relationship between the UFS and relevant government services, and by implementing a risk management policy at community service-learning sites. The development of an institutional policy on gender-based violence and a comprehensive first-year student experience strategy, as well as the implementation of the new Advocacy, Awareness and Analysis Strategy, the new policies on Student Mental Health and Universal Access and Disability Support), will also promote student safety and health during 2021 and beyond.



29%

of students employed at time of graduation



66%

of students had positive perceptions of UFS support for student well-being

Finance students excel in international university challenge

Monique Harcourt, Dawid Potgieter, Atlanta Watson, and Zoe Travers made it to the top four in the extremely competitive local Chartered Financial Analyst (CFA) University Challenge.







FOCUSED RESEARCH



“Fear of the unknown causes panic and hysteria. Education and awareness are key to managing it.”

- Prof Felicity Burt, SARChI Chair in Vector-borne and Zoonotic Pathogens

REGIONAL RELEVANCE, GLOBAL EXCELLENCE

Given our institutional vision – the UFS as a research-led, student-centred, and regionally engaged university that contributes to development and social justice through the production of globally competitive graduates and knowledge – our academic enterprise is informed by research and a culture of research engagement at all levels.

We want to be regionally relevant, focusing on the needs and strengths of our region and our own competitive advantage. Our research strategy responds to the institutional goal of increasing our contribution to local,

regional, and global knowledge, and aims to address fundamental and strategically important questions. We want to make an economic, social, and cultural impact at regional, national, and international levels.

NRF RATINGS EXPLAINED

NRF ratings are allocated based on a researcher’s recent research outputs and impact as perceived by international peer reviewers. It identifies researchers who count among the leaders in their fields of expertise and gives recognition to those who constantly produce high-quality research outputs.

A-RATING – Leading International Researchers

Researchers who are unequivocally recognised by their peers as leading international scholars in their

field for the high quality and impact of their recent research outputs.

P-RATING – Prestigious Awards

Young researchers (normally younger than 35 years of age), who have held the doctorate or equivalent qualification for less than five years at the time of application and who, on the basis of exceptional potential demonstrated in their published doctoral work and/or their research outputs in their early postdoctoral careers, are considered likely to become future international leaders in their field.



193
NRF-rated
researchers



3
A-rated
researchers



1
P-rated
researcher

Top rated scholars



PROF MELANIE WALKER (A1)

FIELD: Higher Education and Human Development

"None of us gets to where we are without the support of many others. I have been fortunate to collaborate with generous and dynamic colleagues while in the UK and now in South Africa."



PROF MAXIM FINKELSTEIN (A1)

FIELD: Probability, Statistics and Operations Research

"The rating should not be a goal as such for a researcher but should produce quality research that is recognised by peers and that, above all, brings a real satisfaction in life."

PROF WILLEM BOSHOFF (A2)

FIELD: Art

"There are definite parallels between publishing an academic article and exhibiting an artwork. Both are about sharing your findings with the public."



DR MATTEO GRILLI (P)

FIELD: Political History

"Working at the International Studies Group at the UFS has undoubtedly been the best experience of my life. It has made me the solid scholar I am today."



SARChI Research Chair in Higher Education and Human Development Research Programme: **Prof Melanie Walker**

This chair is concerned with advancing social justice and removing inequalities in and through higher education. The main focus is to interrogate the role of higher education in advancing or constraining human development. Questions about the kind of society we want; what is important in a democratic society; and thus, what kind of higher education is valuable and relevant, are addressed.



SARChI Research Chair in Disease Resistance and Quality in Field Crops: **Prof Maryke Labuschagne**

This chair is involved in the training of PhD and MSc students from all over Africa and South Africa. A specific research focus is on the genetic improvement of the nutritional quality of staple crops in Africa. Students trained under this Chair have gone on to release a large number of new crop cultivars all over Africa, which has contributed to food security in a number of countries.

SARChI Research Chair in Solid-state Luminescent and Advanced Materials: **Prof Hendrik Swart**

The main focus of his research group is the improvement of luminescent materials for applications in flat panel displays, solar cells, solid-state lighting, dosimetry, and thermometry. This chair has been key in the development of processes to synthesise and deposit thin films of various types of semiconductor nanoparticles, which will enhance the colour, luminescent intensity, and lifetime of such displays.





SARChI Research Chair in Vector-borne and Zoonotic Pathogens: Prof Felicity Burt

This research group focuses primarily on host immune responses to arboviral and zoonotic infections, as well as raising awareness of these viruses, defining associated diseases, and developing tools for surveillance programmes - contributing to understanding these pathogens and the public health implications.

SARChI Research Chair in Pathogenic Yeasts: Prof Carolina Pohl-Albertyn

Research under this chair focuses on the role of fatty acids and the production of immunomodulatory lipid metabolites (e.g. prostaglandins) in pathogenic yeasts. The Pathogenic Yeast Research Group brings together expertise in yeast molecular biology, yeast lipid metabolism, and immune response.



SARChI Research Chair in City-Region Economies: Prof Ivan Turok

The chair seeks to understand how cities can accelerate economic growth and inclusive development in SA. It analyses why some cities are more successful than others, and what policies and practices can improve conditions for citizens and communities.



The South African Research Chairs Initiative (SARChI) was established in 2006 by the Department of Science and Technology (DST) and the National Research Foundation (NRF). It is designed to attract and retain excellence in research and innovation at South African public universities through the establishment of research chairs at public universities in South Africa with a long-term investment trajectory of up to fifteen years. Its main goal is to strengthen and improve research and innovation capacity of public universities for producing high-quality postgraduate students and research and innovation outputs.

6

SARChI research chairs



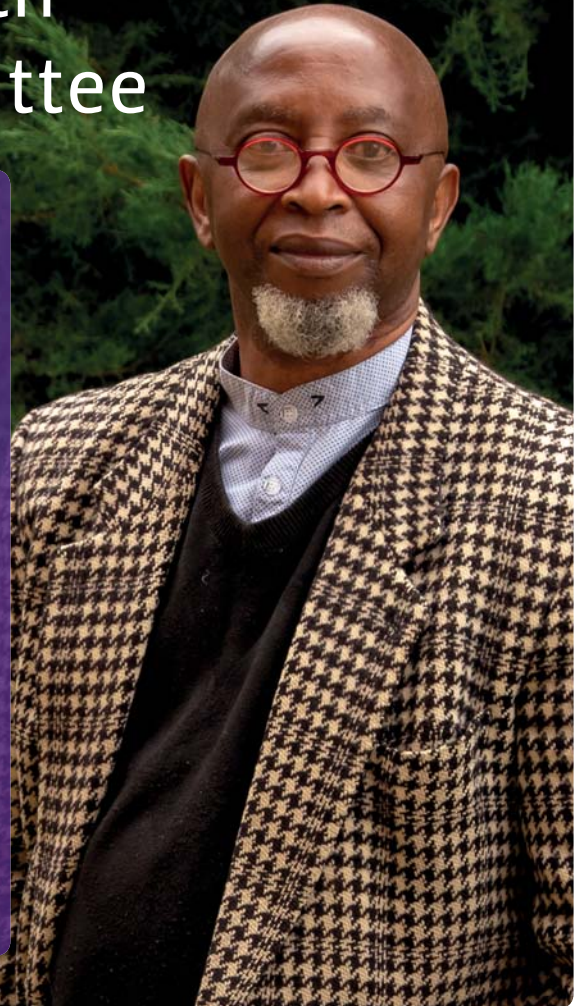
1 400

total research publication output units



Heading World Health Organisation committee

Prof Motlalepula Matsabisa from the Department of Pharmacology played a leading role in Africa's fight against the COVID-19 pandemic in 2020, when he was appointed as chairperson of the World Health Organisation's Regional Expert Committee on Traditional Medicines for COVID-19. Prof Matsabisa has been chosen over 25 other experts from 27 African countries to head this expert committee tasked with setting up research and clinical trials for COVID-19 and beyond. Its aim is to provide independent scientific advice and support to countries on the safety, efficacy, and quality of traditional medicine therapies. It is also an effort to enhance research and development of traditional medicines for COVID-19 in Africa. "I have taken this position and responsibility, knowing quite well what it entails. I want to do this for the continent and for the sake of good science of all traditional healers and consumers of traditional medicines on the continent and beyond," said Prof Matsabisa.



Indigenous knowledge systems unit explores healing attributes of *cannabis*

Cannabis is believed to be one of humankind's first cultivated crops. Its medicinal benefits have been well documented through the ages and include treatment for cancers, diabetes, hypertension, Alzheimer's disease, gliomas, osteoporosis, rheumatoid arthritis and pain. The UFS Department of Pharmacology has been mandated by the government to undertake

systematic medicinal research on *cannabis*. The UFS is the first and only university in the country that has been issued and granted a research permit in this regard. This effectively recognises the UFS as the leader in pharmacological research and product development of *cannabis* in South Africa.

Collaborative research projects

Various promising research collaborations between researchers from the UFS and the Central University of Technology (CUT) were approved for funding during 2020. Examples are:



A research project of **Dr Thuthukile Jita** from the School of Education Studies investigating the possibilities and affordances of **training student teachers** to embrace the Fourth Industrial Revolution, specifically by learning to teach Science in schools using mobile devices and mobile apps.

A research project titled '3D Printed laryngoscope for endotracheal intubation' involving **Dr Doors Fonternel** from the UFS Department of Anaesthesiology. The aim of the project is to provide video laryngoscopy to a much larger medical community.



The research of **Dr Evbuomwan Osayande**, a nuclear medicine specialist at the UFS/Universitas Academic Hospital, which will compare the efficacy of EC-DG (ethylenedicysteine-deoxyglucose) imaging with ultrasound imaging in patients with rheumatoid arthritis. This research could lead to the prevention of complications such as bone erosion and joint destruction.

Dr Alice Brink from the Department of Chemistry partnered in a research collaboration focusing on developing pharmaceuticals that can carry a radioactive metal centre. This project aims to identify potential lead compounds with novel mechanisms of action for the **development of cancer therapeutics**.



Global leaders

Eighteen scientists from the UFS were named on a global list of leading scientists by Stanford University in the United States. The list placed the UFS researchers in the elite group of the most cited scientists in various disciplines.

18
UFS scientists recognised
as global leaders



US funding for mountain-to-mountain research project

In 2020, the UFS further strengthened its ties with the Appalachian State University in the USA through an R8 million project funded by the US Embassy and Consulates in South Africa. The project covers two master's degree programmes in underdeveloped niche areas, meteorological weather stations, leadership capacity building for black women in academia, and doctoral research projects. "This project supports innovation in climate change research," explains project

leader, **Prof Geoffrey Mukwada**. "We will be able to understand how the climate of the region is changing and assist in developing adaptation measures and decisions that are applicable to agriculture, water, tourism, environment, and other sectors. This will enhance the capacity of the Afromontane Research Unit (a key UFS research hub on the Qwaqwa Campus) to contribute to the development of research in mountain environments."



UFS scientists nominated for 'Science Oscars'

Prof Zakkie Pretorius, Research Fellow in the Department of Plant Sciences, and **Prof Paul Oberholster**, Director of the Centre for Environmental Management, were nominated for the 2019/2020 National Science and Technology Forum (NSTF)-South32 Awards – popularly known as the 'Science Oscars'. Prof Pretorius was nominated in the Special Annual Theme Award: Research and Development and Innovation in Plant Health, as well as the Lifetime category. Prof Oberholster was nominated for the NSTF-Water Research Commission Award. This award is for an outstanding contribution in terms of sustainable water management, knowledge generation, and solutions over the past five to ten years, and is awarded in recognition of demonstrated leadership and impact.



Prof Zakkie Pretorius



Prof Paul Oberholster

International award for stock theft research



Dr **WA Lombard** from the Department of Agricultural Economics was announced winner of the Joseph F Donnermeyer New Scholar Award from the International Society for the Study of Rural Crime (ISSRC). Dr Lombard received the award for the research he conducted for the article: 'Economic impact and factors affecting sheep and goat theft in South Africa', published in *Acta Criminologica: African Journal of Criminology & Victimology*.

"It is great to know that research conducted by the UFS is considered valuable and of good quality by researchers around the world. It is also good to know that rural-crime research is receiving attention," Dr Lombard said.

It is great to know that research conducted by the UFS is considered valuable and of good quality by researchers around the world



New grass species discovered

In their search to learn more about the impact of humans and climate change on grasses in the Drakensberg Mountain Centre (DMC) – one of the most studied mountain systems in the region – a group of scientists found a new grass species, which they named *Festuca drakensbergensis*. The team includes **Dr Vincent R. Clark**, Head of the ARU on the Qwaqwa Campus, as well as scientists from the Smithsonian Institute in the USA and the Nanjing Forestry University in China.



First comprehensive African atlas on skin diseases

Dr **Lehlohonolo Makhakhe**, Senior Lecturer and specialist in the Department of Dermatology, has published the very first comprehensive African atlas on skin diseases commonly seen in the African setting.

African Atlas, Synopsis and Practical Guide to Clinical Dermatology contains more than 1 000 high-resolution images and is intended for medical and nursing students.

“I decided to write this book to help promote a culture of writing and producing quality, well-researched, locally brewed content that is relevant to our setting,” Dr Makhakhe said.

Coronavirus presentation gets international recognition

Dr **Satyajit Tripathy**, a postdoctoral fellow in Pharmacology, was awarded a medal for the best oral e-poster presentation at a UNESCO/UNITWIN Network webinar attended by more than 300 delegates from approximately 30 institutions from different countries. His presentations looked at immunotherapeutic techniques, such as the convalescent plasma (CP) therapy and possible diverse modes of action of the anti-malarial drug hydroxychloroquine (HCQ) against COVID-19 infection.



51

rated researchers under the age of 40



33%

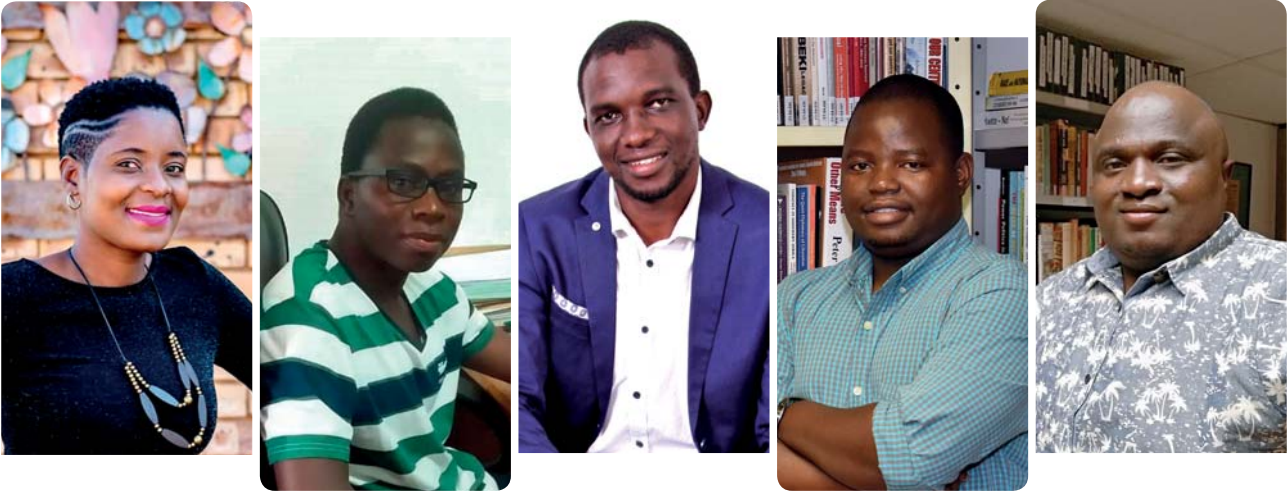
of rated researchers are females



19%

of rated researchers are black

Postdoc fellows in prestigious programme



The five postdoctoral fellows are from the left: Dr Joyline Kufandirori; Dr Joseph Kachim; Dr Hyden Munene; Dr Victor Gwande; and Dr Sibanengi Ncube.

An unprecedented total of five postdoctoral fellows from the UFS' **International Studies Group (ISG)** were selected for the African Humanities Programme (AHP), presented by the American Council of Learned Societies. The programme is funded by the well-known Carnegie Corporation of New York. "This is indeed a remarkable accomplishment – all the more outstanding because

we received close to 500 applications for our 45 postdoctoral fellowships this year," says Prof Fred Hendricks, AHP Associate Director for Southern Africa. "It is unique in the history of the AHP to award so many scholars from one relatively small programme and an accolade to the concentration of talent developing at the University of the Free State."

Lifetime journalism award


Acclaimed South African writer, author, and UFS research fellow **Zubeida Jaffer** was honoured with a lifetime achievement award for her career in journalism during the 2020 Standard Bank Sivukile Awards ceremony. She wrote her third book, *Beauty of the Heart: The Life and Times of Charlotte Manny Maxeke*, during her time as a writer-in-residence at the UFS. While at the UFS, she founded the online media platform, *The Journalist*, which provides history and context for key issues facing South African journalists. This portal also links students with academics across the country and will soon be extended to the African continent and the diaspora.







IMPACTFUL ENGAGEMENT



“The imparting of knowledge is not a one-way flow. People empower one another with knowledge, and in doing so, we build better communities.”

- Billyboy Ramahlele, Director
Community Engagement

IMPACTFUL ENGAGEMENT

Engaged scholarship has emerged as a fundamental strategic pillar of the UFS, aiming to position and apply the knowledge we produce in and through teaching, learning and research, in the quest to foster development, innovation, and advancing citizenship and service for the public good.

This concept involves the various ways in which an institution engages with the diverse community in which it finds existence. It is about linking the best of the research, teaching, and learning skills of staff and students to specific learning and development needs of civil society, the private sector, government, and non-governmental organisations. It involves university

citizenship and social responsibility in society as a whole. Engaged scholarship gives effect to the public common good dimension of the university. In turn, the curriculum, engaged research efforts, engaged teaching-learning, and student graduate attributes – especially citizenship and social responsibility – are all enriched through community engagement.



First SA university to implement mental health app

The UFS became the first university in South Africa and Africa to implement the MEGA mobile application in primary healthcare settings to improve access for children and adolescents to mental-health services and appropriate care. The MEGA project is a three-year project that started in October 2017 and is part of a larger European Union-funded project to build capacity by implementing the World Health Organisation's (WHO) Mental Health Gap Action Programme (mhGAP) mobile intervention in SADC countries. The project involves primary healthcare professionals installing the app either on their phone or on a device, and the app then automatically generates a patient ID when the healthcare professional starts the screening process.



New food tunnels assisting 'No Student Hungry' campaign

Food insecurity is a problem on university campuses worldwide and our three campuses are not exempt from this plight. Research findings indicate that more than 64% of students at the UFS go through periods of hunger, affecting their academic performance as well as physical and mental health. Aligning with the UFS strategic goal of improving student success and well-being, UFS staff is working hard to implement initiatives and obtain sponsorships and food donations

to ensure that students do not go hungry. One such initiative is the construction of two vegetable tunnels on the Bloemfontein Campus. In each tunnel, there are 20 raised wooden boxes. Each student residence received one box where they planted one type of vegetable crop, such as Swiss chard, cabbage, carrots, beet, kale, and broccoli. With this project, students are assisted to make healthy food choices but also educated on how to secure nutritional food for themselves.

2020 ENGAGED SCHOLARSHIP IN NUMBERS



150

longstanding partnerships



285

engaged activities



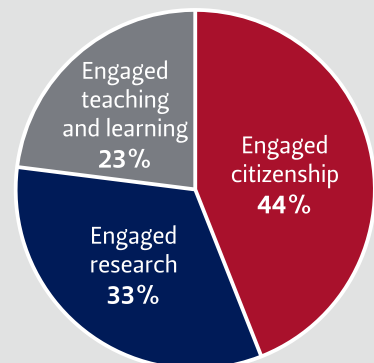
425

community impacts



77

service-learning infused modules presented



Engaged Activities



New principal for the South Campus

“The best decision I ever made was embracing Education and making sure that I was not only certified but learned to empower others in a humble way,” she says.

Dr **Marinkie Madiopé** took over the reins of the UFS South Campus in Bloemfontein at the beginning of January 2020. Educating and empowering others are key aspects of Dr Madiopé’s life. She has served as the Director for University Teaching and Learning at Unisa since 2015, achieving a transformative curriculum at the colleges under her care. Her expertise lies mainly in E-learning and she has been editor of the only journal in Open Distance Learning, *Progressio*, since 2016. Dr Madiopé holds a PhD in Education from Unisa, with specialisation in Didactics; her next two degrees were completed at the then RAU, today the University of Johannesburg: a BEd in 1999, followed by an MEd in 2001, both specialising in Computer-based Instruction. She previously obtained her BAEd in 1985 and a BEd in 1988 from the University of the North.

Overcoming challenges through E-Engaged Scholarship strategy

The COVID-19 pandemic forced the UFS to re-imagine its practice, platforms, and partnerships for engaged scholarship. This required a paradigm shift from working face to face to creating a blended e-community engagement environment. Most of the face-to-face community engagement activities could not take place during 2020 due to physical distancing restrictions. Therefore, an E-Engaged Scholarship Strategy was developed as an adapted virtual participatory learning environment, in collaboration with our community, business, and government partners.

Examples of E-engagements

- Master’s students from the UFS Department of Psychology produced and pre-recorded **podcasts on community psychology**. Their topics covered grief and self-compassion.
- The Department of Nutrition and Dietetics presented topics on a **healthy lifestyle and diet**.

- Fourth-year students from the School of Nursing engaged new mothers concerning **post-natal care**.
- The School of Clinical Medicine addressed the **warning signs of burnout and preventative measures**.



2020 UFS Thought-Leader Series: VIRTUALLY INSPIRING DISCOURSE

The third UFS Thought-Leader Series was presented as part of the Vrystaat Literature Festival's online initiative, VrySpraak-digitaal and in collaboration with *Vrye Weekblad*. In 2020, higher-education institutions globally were grounded in the reality that the world would not return to the normality of pre-COVID-19. Our responsibility as scholars remained to contribute to public discourse and offer innovative solutions. Debates were presented as monthly webinars from August to September, focusing on *Post-COVID-19*, *Post-Crisis*, with Health and Modelling, the Economy, Politics and Predictions for 2021 as the sub-themes. Participants included Dr Trevor Manuel (Chairperson: Old Mutual Limited), Prof Thuli Madonsela (Former Public Protector), Prof Glenda Gray (President: South African Medical Research Council), Prof Ivan Turok (SARCHI Research Chair in City-Region Economies at the UFS and Executive Director: *Human Sciences Research Council*), Mr Moeletsi Mbeki (Deputy Chair: South African Institute of International Affairs), and Mondli Makhanya (Editor-in-Chief of City Press).



DR TREVOR MANUEL
Chairperson
Old Mutual Limited



MS ANN BERNSTEIN
Executive Director
Centre for Development
and Enterprise (CDE)



MR MONDLI MAKHANYA
Editor-in-Chief
City Press



DR MAX DU PREEZ
Editor | *Vrye Weekblad*,
facilitator of the panel
discussion

Virtual Graduation Ceremonies

The UFS hosted its first virtual graduation ceremonies from 6 to 9 October 2020, giving well-deserved recognition to students spread across the country and around the globe for their academic achievements.



UFS rallying for gender and social justice



The 2020 programme around the 16 Days of Activism against Gender-Based Violence was run online, with various UFS entities rallying behind web-based advocacy efforts.

“For each person to register and log into the various programmes is a small step. But each such step makes a big difference by saying that the lives of survivors matter, and by underscoring that gender-based violence will not be tolerated at the UFS,” said **Prof Colin Chasi**, newly appointed **Director of the Unit for Institutional Change and Social Justice (UICSJ)** at the UFS.

The Gender Equality and Anti-Discrimination Office came up with a number of innovative online interventions, such as online webinars and seminars, and making telephonic services available that support, for example, the mental health of survivors of sexual violence.

“But each such step makes a big difference by saying that the lives of survivors matter, and by underscoring that gender-based violence will not be tolerated at the UFS.”



Gender-based violence awareness campaign among international winners for Communication and Marketing



Barend Nagel, Audio-visual Specialist in the Department of Communication and Marketing, won a 2020 IABC Gold Quill Award of Merit for his gender-based violence awareness campaign photographs in the Audiovisual Communication Skills category.

The IABC is a global network of communications professionals that have been recognising and rewarding excellence in strategic communication worldwide for the past 40 years. The awards programme is recognised as one of the most prestigious in the communications profession. This is the 9th award the department has received from the IABC.

Lelanie de Wet, Manager: Digital Communication, and her team also won a 2020 CASE Gold Circle of Excellence Award for the communication and marketing plan and the execution of the 2019 Kovies Multilingual Mokete.

CASE is a global non-profit association dedicated to educational advancement to transform lives and society.

These two international awards will increase the total number of international awards won by UFS Communication and Marketing since 2014, to fifteen.

Unique artistic exchange opportunity

The *Learning from Richmond* project, guided by **Dr Janine Allen-Spies**, is the first international learning initiative that the Department of Fine Arts has embarked on. This open-approach project between the department and the head of Option Construction in Geneve, allows students from two parts of the world to meet, explore, and respond to the intriguing specific context of Richmond (Northern Cape) and its surroundings. The project is modelled on the concept of a 'residential

knowledge exchange', which has made learning multifaceted and integrated, with participants living, cooking, and sharing meals together.



Neuro technology research for music students

An interdisciplinary research project between the Odeion School of Music (OSM) and the Department of Neurology was launched, utilising the Halo Neurosport system in the training of music students. The system was originally developed for athletes, using a specially designed app-controlled headset. The key is to activate the feasible muscle control to perform correct actions. The neuro-stimulation activates the brain quicker to master physical skills, technique, motor sequences, and the transmission of rhythmic motor patterns in music. The aim is to achieve more precise kinetic movements that improve technique, allows quicker memorising of music pieces, as well as better control over the instrument.



VIRTUAL VIRTUOSITY AT 2020 RECTOR'S CONCERT

The popular annual Rector's Concert took on an online format for the very first time in 2020, showcasing and celebrating the musical talents of students, staff, and alumni. This event embodied the fact that, during a challenging year, the UFS was not just surviving, but thriving and breaking new ground.







INCLUSIVE SPACES



“University environments will reflect knowledge spaces which inform and challenge their users. Names, symbols, and spaces will portray an environment that reflects a real commitment to diversity, inclusivity, and social justice.”

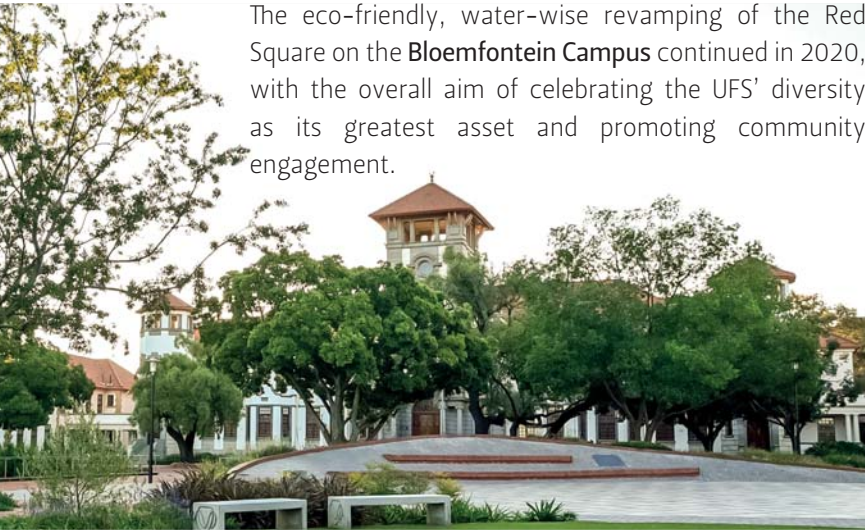
- From UFS Integrated Transformation Plan (ITP)

In line with the transformation goal that names, symbols, and spaces on our campuses will show our real commitment to diversity, inclusivity, and social justice, the conceptual framework for naming, renaming, acquisition, and de-acquisition of artwork, and the reconfiguration of areas and spaces was approved in May 2020 and implementation began immediately thereafter.



A set of new multi-purpose sports grounds on the **South Campus**, catering for a wide variety of sporting codes, were fully operational by the beginning of 2020.

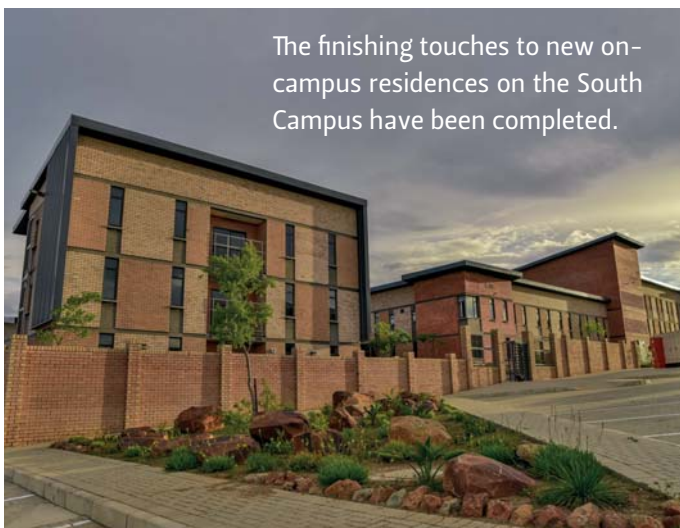
The eco-friendly, water-wise revamping of the Red Square on the **Bloemfontein Campus** continued in 2020, with the overall aim of celebrating the UFS' diversity as its greatest asset and promoting community engagement.



A new facility housing Economic and Management Sciences and Student Affairs on the **Qwaqwa Campus** neared completion by the end of 2020.



The finishing touches to new on-campus residences on the **South Campus** have been completed.



NEW BIOSAFETY LEVEL 3 LABORATORY ENABLES VITAL PATHOGEN RESEARCH

A new biosafety level 3 (BSL3) laboratory was erected to allow the university’s world-respected researchers to further advance their research on and surveillance of infectious pathogens, with the ultimate benefit being the improved quality of health for the communities of the Free State and beyond. Research and handling of infectious viruses and bacteria require appropriate biosafety and containment measures to prevent laboratory workers, personnel, and the environment being exposed to potentially biohazardous agents. A BSL3 laboratory is designed and precision-built to operate under negative pressure, and sees all exhausted air passing through a dedicated filter system to ensure that

no pathogens escape into the environment. In addition, researchers wear appropriate personal protective equipment suited to the pathogens under investigation. The Pathogen Research Laboratory is managed by **Prof Felicity Burt**, an arbo-virologist with more than 25 years’ experience in handling infectious viruses. “As COVID-19 is not the first pandemic and will not be the last, the ongoing potential for the emergence of novel viruses and bacteria underscores the need for training young researchers and developing skills to tackle future outbreaks, develop new vaccines, understanding how pathogens cause disease, and discover alternate ways to mitigate outbreaks,” Prof Burt said.

“As COVID-19 is not the first pandemic and will not be the last, the ongoing potential for the emergence of novel viruses and bacteria underscores the need for training young researchers and developing skills to tackle future outbreaks.”



Africa's largest microscope facility for undergraduate training



*From the left, front:
Gail Giordani,
Prof Francis Petersen,
Prof Jannie Swarts;*

*back: Prof Prakash Naidoo
and Prof Danie Vermeulen.*

The Faculty of Natural and Agricultural Sciences opened a new undergraduate microscope laboratory – the most advanced and largest digital classroom of its kind in Africa and the third largest in the world – on the Bloemfontein Campus, as part of the UFS vision to infuse cutting-edge technology in its practices. The microscopes are all interfaced with each other and a master computer, which is operated by the lecturer, enabling the instructor to observe what students are

observing at each microscope at any time during a laboratory session. Two large data projectors, two big screens, and twelve flat screens at strategic positions in the laboratory are also interfaced with the master computer. Students can furthermore project their microscope images onto their laboratory desks to help make high-quality drawings of what they observe. They can save these images and export them to their cellphones to include in their laboratory reports.



LIBRARY REVITALISATION

Revamping of physical spaces in our quest to create a world-class library continued during 2020. This involved the repurposing and redesign of UFS Library and Information Service (LIS) spaces into modern, flexible workspaces that meet differentiated and multi-purpose learning and research needs for undergraduate and postgraduate students. Part of Level 4 in the Sasol Library on the Bloemfontein Campus was repurposed, with four multipurpose spaces created, namely a quiet study space for students, two multipurpose spaces (seminars, training, tutorials, etc.), and a digital scholarship centre. The pandemic accelerated the migration to virtual and digital platforms in the mission of UFS LIS to meet the needs of its users.

New 24/7 study centre for Qwaqwa Campus



The building of a safe, convenient state-of-the-art study centre for students on our Qwaqwa Campus was completed in 2020.



Unique new residence for Health Sciences students

The Health Sciences Residence is a unique new co-ed first-year residence established in January 2020 on the Bloemfontein Campus and forming part of the vibrant East College cluster. It is the first on-campus residence designed to

accommodate primarily first-year students from the Faculty of Health Sciences, catering for their needs by providing a living and learning space that is conducive to supporting their demanding academic programme.



FOCUS ON RESIDENCE LIFE

Residence life continues to be an important focus area for the UFS in our mission to improve student experience. Our residences accommodate less than 20% of our students, while it is well known that residences play a huge role in academic success. We responded to this challenge in various ways. The Department of Housing and Residence Affairs (HRA) took on the task of accrediting off-campus residences where most students are staying, with the intention of influencing landlords to provide better quality accommodation to our students.



20%
of students accommodated
in on-campus residences



10 700
off-campus beds accredited





INSPIRING ALUMNI



“The more my career progresses, the more I realise how much effort, investment and influence these lecturers had on me as a student.”

- Henning Neethling, UFS Alumnus
(CFO Sky News Australia)



Makhosazana Masango, better known as 'Azana' in the music industry, was nominated in four categories of the South African Music Awards (SAMAs) for work released in 2020. The categories were *Best Newcomer of the year*, *Best Afro Pop Album*, *Record of the year*, and *Music Video of the Year* for her debut album *Ingoma*. Music has always formed an intricate part of Azana's life through church and school. Having grasped her passion for music at the tender age of 6, she started recording at 14. "I left home in the hope of one day finding happiness in music," she explains.

"Chasing my dreams and finding people to whom I could communicate my vision, while pursuing my studies (in Law), was imperative to my success."

"As a kid you take things for granted, but the more my career progresses, the more I realise how much effort, investment, and influence these lecturers had on me as a student."



Henning Neethling was appointed as Chief Financial Officer at Sky News Australia. Neethling completed his bachelor's and honours degrees in Accounting at the UFS between 2000 and 2004, together with a Certificate in the Theory of Accounting (CTA). He says he learned a great deal during his time as a Kovsie, not only in the classroom, but also on the rugby field playing for Shimlas. "The Department of Economic and Management Sciences, especially the amazing lecturers I had during my time there, as well as my fellow students, played a pivotal role in my education and prepared me for this job."



Mark Antony Dobson's theatre project *Liv Die X Vukollective* won first prize in the Lockdown Theatre Awards at the Cairo International Festival for Contemporary and Experimental Theatre. The production, a collaboration with singer Liv Die and directed by Dobson, is an allusion to TS Elliot's *The Wasteland*, portraying 'the distorted soul of Modern Man who now faces a fatal virus that changes the whole world'. Dobson founded the Vukollective theatre group in 2014 with the guidance and help of the UFS Department of Drama and Theatre Arts. He is a firm believer in the arts having the power to "give a voice to the voiceless, empower the powerless, and free the enslaved." He also believes in the resilience of the arts and artists.

"With the COVID-19 pandemic, artists come up with ways for all of us to grapple and engage with this global trauma and help in the healing process."

"I believe that access to legal services is a basic human right, and legal tech and innovation plays a huge role in making that happen."



Leah Molatseli, a legal technology and innovation specialist, as well as member of the UFS Council, released a book titled *LegalTech Startups and Innovation*. It deals with the intersection of law and technology and is a comprehensive guide for using new technologies in order to provide legal services that are not restricted by physical barriers. Molatseli said in her career as a lawyer, she has witnessed first-hand the need for ordinary citizens to gain greater access to justice. This has led her to adopt new technology that works for the client by cutting costs, improving efficiency, and reaching people more effectively. "The pandemic has cemented the need for access from anywhere in the world," she says.

Visibility and Impact



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