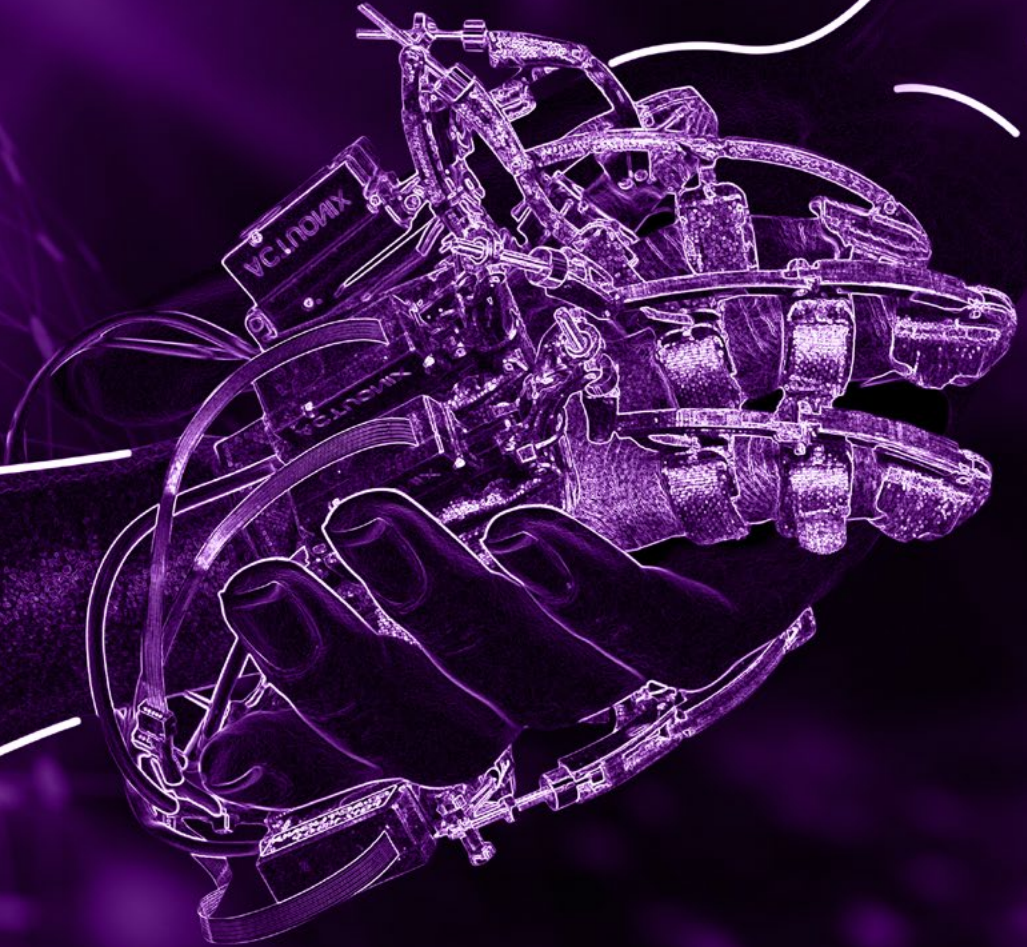




NWU®

NORTH-WEST UNIVERSITY  
NOORDWES-UNIVERSITEIT  
YUNIBESITHI YA BOKONE-BOPHIRIMA



VALUE CREATION WITH AN ETHIC OF CARE

PROFILE 2020/2021



# THE BIGGER PICTURE



Public higher  
education  
institutions in SA

26

Comprehensive  
universities

06

Conventional  
universities

14

Universities of  
technology

06

North-West University (NWU)

One of the conventional  
universities in SA



Universities South Africa

Governing body for SA's  
higher education institutions

Front page image:

## NeuHand set to revolutionise rehabilitation after stroke

The image on the front page is of the NeuHand, a rehabilitation system from the Faculty of Engineering. This innovation exemplifies our theme, "Value creation with an ethic of care".

One of the life-altering disabilities resulting from a stroke, is hand disability. Fortunately, the NeuHand invention, specifically developed for hand rehabilitation in South African conditions, could bring these patients new hope.

# CONTENTS

**02** Unlocking the future

---

**03** Making dreams come true

---

**04** Where it happens...

---

**05** Who's making it happen?

---

**08** Towards excellence: here we go!

---

**09** An academic medley

---

**10** Critical skills for the country

---

**14** The world is our stage

---

**16** Making a difference to our neighbours

---

**18** Going green

---

**19** Innovating for the future

---

**20** Heartbeat of the NWU: our faculties

---

**32** Knowledge knows no boundaries

---

**33** Producing well-rounded students

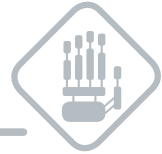
---

**37** Building imagination and muscle

---

Please note that all 2020 figures used are provisional as final auditing was still in progress at the time of writing.

# UNLOCKING THE FUTURE



## The spirit of the university

The spirit of the university comes alive when we unlock the future for people and enable them to make their dreams come true.

This spirit runs through everything we do, from our academic offerings and research to our student body, community engagement and sports achievements. The “keys” we use to unlock the future for our stakeholders include:

- ▶ Our focus on internationalisation (p14 - 15)
- ▶ Our faculties (p20 - 31)
- ▶ Our exceptional programmes (p20 - 31)
- ▶ Our entrepreneurial learning (p20 - 31)
- ▶ Our distance learning capability (p32)
- ▶ Our sporting excellence (p37 - 39)

## NWU logo

The interlocking links of our logo symbolise the unity of our university.



## Pay-off line



## Our digital transformation

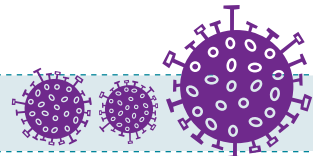
We are developing a digital business strategy, focusing on digital transformation for the future and embracing the Fourth Industrial Revolution. This is all about harnessing

emerging technology in meaningful ways to add value to the learning experience and academic success of the NWU student of the future.

## Our Covid-19 response

Experts from various faculties joined the fight against the Covid-19 pandemic. Their contributions ranged from developing an award-winning pre-screening app for schools to validating a new Covid-19 test and predicting the course of the virus in the North West Province.

Determined to continue the academic year while keeping our staff and students safe, we embarked on remote learning, which includes online and distance learning. We provided qualifying students with laptops and data packages to make sure no students were left behind.



# MAKING DREAMS COME TRUE



## A united institution

The NWU is committed to functioning as a unitary, integrated, multi-campus university that enables equity, redress and globally competitive teaching and research across all campuses.



## Our strategy statement

To transform and position the NWU as a unitary institution of superior academic excellence, with a commitment to social justice.



## Our dream

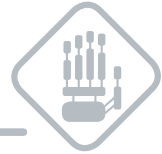
To be an internationally recognised university in Africa, distinguished for engaged scholarship, social responsiveness and an ethic of care.



## Our purpose

To excel in innovative learning and teaching and cutting-edge research, thereby benefiting society through knowledge.

# WHERE IT HAPPENS...



Our core activities, teaching-learning and research, are intertwined with community engagement and innovation in our eight faculties, most of which serve both distance and contact students.



## .....keeping this in mind

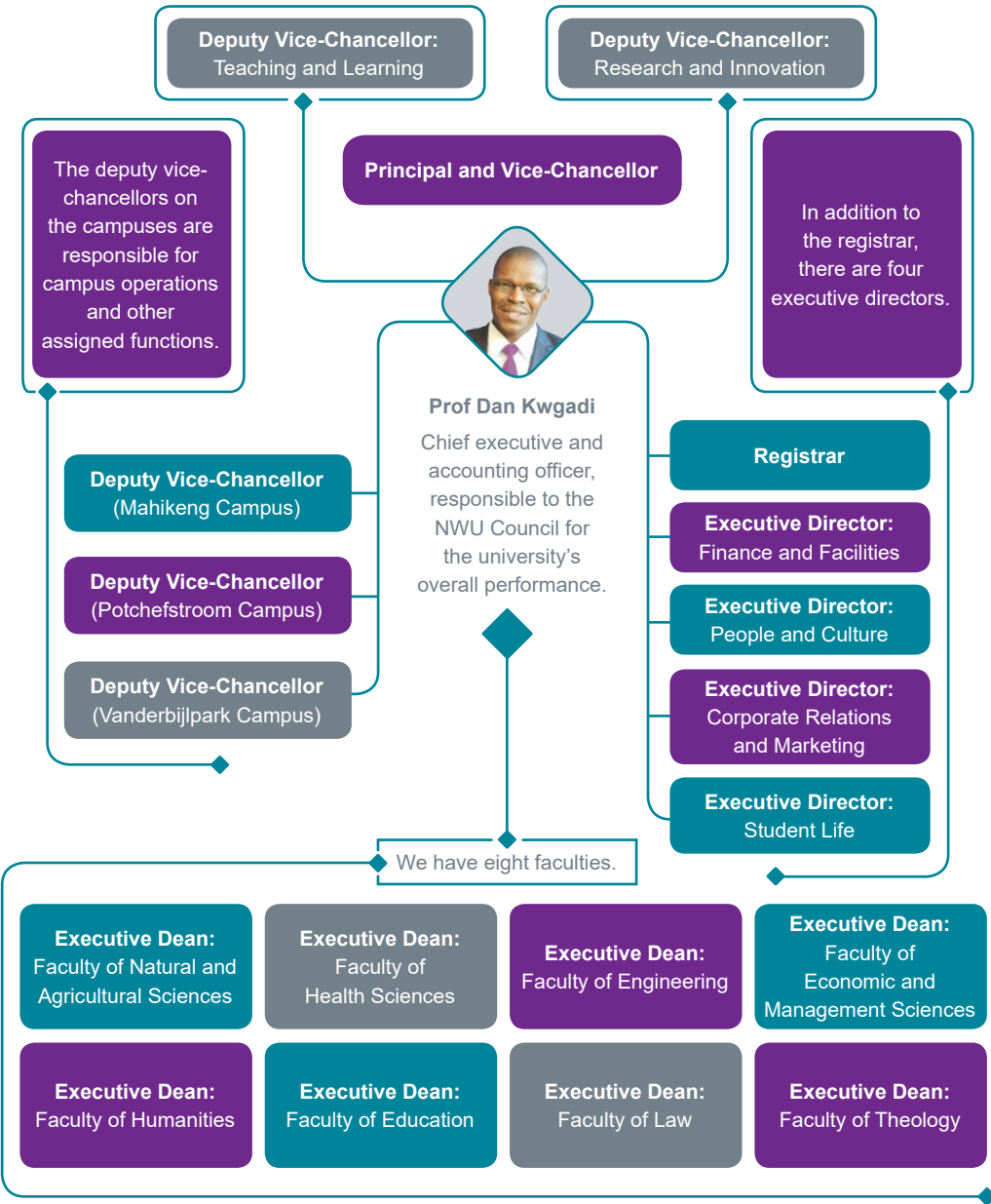
The NWU will foster engaged and caring staff and students and embed the following foundational values, based on the constitutional principles of human dignity, equality and freedom:

- ▶ Ethics in all endeavours
- ▶ Academic integrity
- ▶ Academic freedom and freedom of scientific research
- ▶ Responsibility, accountability, fairness and transparency
- ▶ Embracing diversity

# WHO'S MAKING IT HAPPEN?

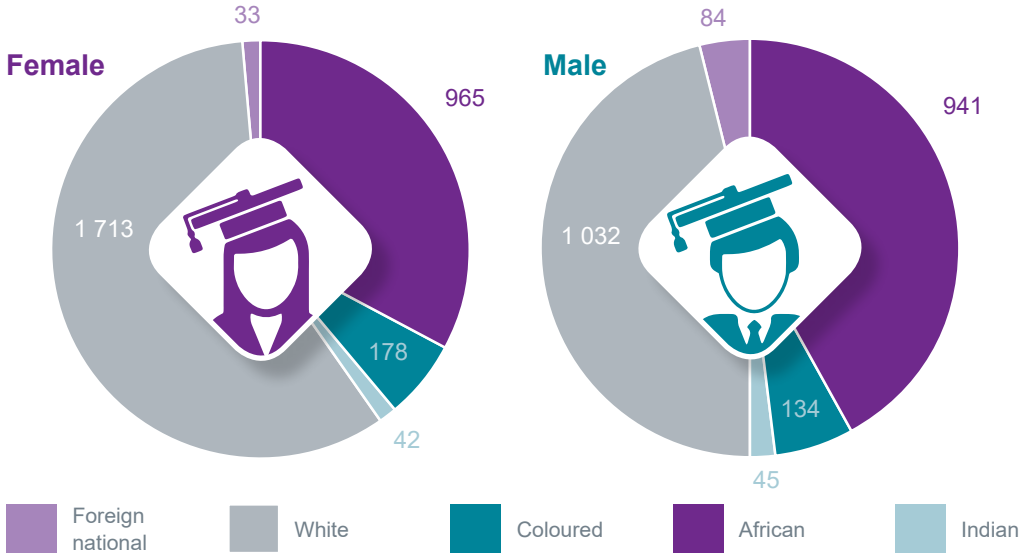


**A trusted leadership**



## A winning team

### Gender and racial composition of NWU staff in \*2020



**Female total: 2 931**

**Male total: 2 236**

*\*(2020 figures not final)*

## How we empower people

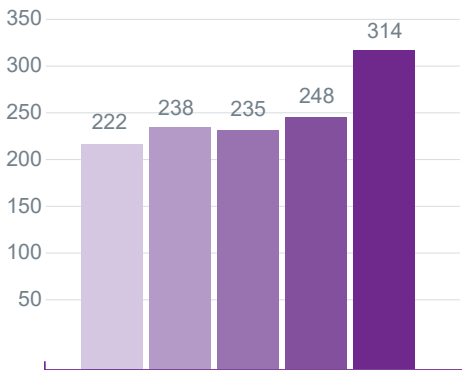
Black executive directors (as % of total university management committee members)	50%
Female executive directors (as % of total university management committee members)	50%
Black staff (as % of total staff)	37%
Female staff (as % of total staff)	57%



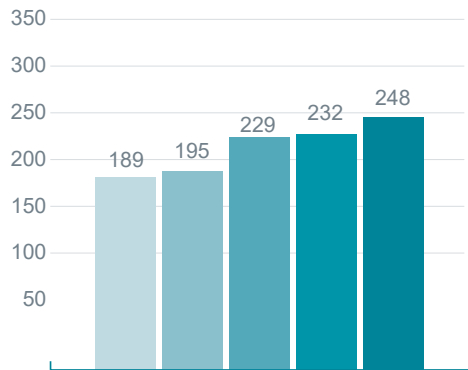
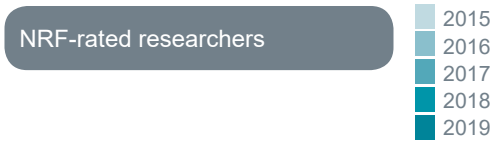
# Pathfinders and knowledge seekers

## Research scorecard

- ▶ 2 708,94 weighted research output units in 2018
- ▶ 1 438,281 article equivalents published in 2018
- ▶ 215 postdoctoral fellows in 2018



*Between 2015 and 2019, the number of PhDs awarded increased by 41,4%.*



*The number of NRF-rated researchers increased from 189 in 2015 to 248 in 2019.*

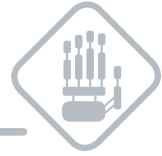
## Building research capacity

To encourage more academic staff to apply for ratings and raise their research output, the NWU provides training on preparing abstracts and conference papers, article writing and best practices in preparing research questionnaires.

## Recruiting postgraduate students

We are also broadening our pool of research skills by actively recruiting more master's and doctoral students. In 2019 we had 1 338 international postgraduate students on our campuses.

# TOWARDS EXCELLENCE: HERE WE GO!



## Our language policy is unique

In line with our multilingual policy, we strive to promote the academic status of the predominant African languages of the regions where our campuses are situated, namely Setswana and Sesotho. We do this in addition to maintaining English and Afrikaans as the current languages of instruction.

To reach these multilingual goals, we use all linguistic resources at the disposal of our staff and students, who have widely varying linguistic repertoires. Our ultimate purpose is to achieve improved teaching-learning.

This we accomplish by enhancing the student experience, which includes welcoming whatever languages students bring to the university.

Instead of having only one or two mediums of instruction, we have several: single medium (English, Afrikaans, Setswana and Sesotho), parallel medium, dual medium and educational interpreting.

We also use a variety of techniques to facilitate learning in a multilingual setting, including educational interpreting, translation and so-called translanguaging. This results in multilingual pedagogies (teaching-learning approaches).

Ultimately, we want our students to be able to master, internalise and reproduce teaching-learning content better – and to do so in a number of languages.



Our dream is to create a university where everybody will feel welcome in their languages and be able to use these to teach, learn and interact freely.

# AN ACADEMIC MEDLEY



The NWU offers more than just an education: we offer people a place in the world. Academically, students benefit from great choice and flexibility, enabling them to fulfil their potential and start preparing for their careers.

## Teaching and learning scorecard

We have significantly increased our student enrolments, pass rates and qualifications awarded since 2004, when the NWU was established.

### Students enrolled

2004 → 2019  
40 145 → 63 671

**58,6%**  
total growth

### Undergraduate pass rate

2005 → 2019  
78,02% → 83,8%

**7,4%**  
total growth

### Qualifications awarded

2004 → 2019  
9 657 → 14 961

**54,9%**  
total growth

### PhDs awarded

2004 → 2019  
87 → 314

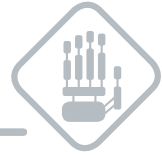
**261%**  
total growth

## Pass rates and qualifications from 2015 to 2019

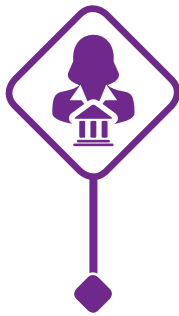
A year-to-year breakdown of our performance in the past five years gives a more recent perspective:

	2015	2016	2017	2018	2019
Undergraduate pass rate	85,1%	86,16%	85,08%	83,2%	83,8%
Graduation rate	24,3%	27,62%	25,6%	25,1%	23,5%
Degrees and diplomas awarded	15 597	17 510	16 004	15 350	14 961
Master's degrees awarded	742	744	813	753	798
PhDs awarded	222	238	235	248	314

# CRITICAL SKILLS FOR THE COUNTRY



The NWU has a range of qualifications and academic programmes that focus on developing scarce and strategic skills in its graduates. These are offered using contact, remote online and/or distance education and appropriate teaching-learning technologies.



## Teachers

The Faculty of Education makes a significant contribution towards meeting the critical need for qualified, professional teachers. The focus is on undergraduate and postgraduate programmes with scarce skill specialisations in education, such as sciences, mathematics and a variety of South African languages.

Technical skills in education are in short supply in South Africa. The faculty is one of a handful of higher education institutions involved in the training of educators in mechanical, civil and electrical technology and in engineering graphic design.

## Accountants

We are the only university in South Africa to offer four professional accountancy degrees up to honours level. They are the BCom in forensic accountancy, chartered accountancy, management accountancy and financial accountancy.

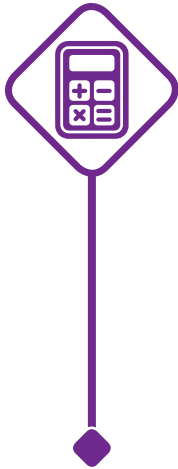
NWU students perform exceptionally well in the qualifying examinations of the South African Institute of Chartered Accountants.

We also offer master's and doctoral degrees in much-needed specialisations such as accountancy, forensic accountancy, taxation and management accountancy.



## Law experts

The Faculty of Law is known for its graduates in international trade law, environmental law and sustainable development, all fields that are important for a developing country.



## Mathematicians and natural scientists

We offer a number of undergraduate and postgraduate qualifications in the critical fields of mathematics, statistics and natural sciences. Mathematics is the language of science, underpinning all scientific development and research and providing methods for gathering, analysing and reporting data.

A qualification in statistics from the NWU opens doors. The broad field of statistics has been declared a vulnerable critical science by the Department of Science and Innovation and the NRF because of a severe shortage of statistical skills in the private industry and even in government departments such as Statistics-SA.

We also offer degrees in business mathematics and informatics with specialisations in business analytics, quantitative risk management and financial mathematics.

## Actuaries, data scientists and risk managers

The Centre for Business Mathematics and Informatics boasts several programmes that deliver professionals for the financial services industry, specifically insurance and banking.



## Computer, and information and systems specialists

In South Africa and globally, there is an urgent need for computer scientists and information technologists. Our programmes aim to equip graduates with degree-level expertise and skills in computer science and information systems, and prepare them for the challenges of the Fourth Industrial Revolution.

## Natural scientists

We deliver natural scientists such as physicists, chemists and biologists who are sought after in manufacturing, mining and pharmaceuticals, among others. Some graduates venture into applied physics research, where they investigate alternative and clean energy sources or make manufacturing processes more cost effective.

Astrophysicists use their high-level problem-solving skills to deliver important technological infrastructure and terrestrial and celestial breakthroughs.





## Language practitioners

In multilingual and multicultural South Africa, there is a growing demand for qualified language practitioners with specialised skills for translation, text editing, interpreting, audiovisual translation and sign language. Language technology and computational linguistics are also growth areas given advances in technology and the advent of the Fourth Industrial Revolution. These are all areas where we have dedicated undergraduate and postgraduate offerings.

Postgraduate students have opportunities to develop specialised research skills and explore advanced research methods, including corpus development and analyses, eye tracking and keystroke logging, software development and machine learning.

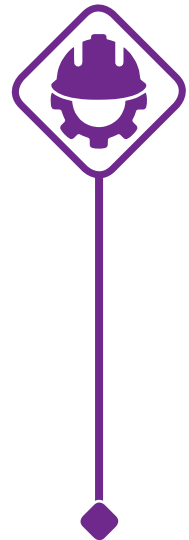
## Engineers

Our specialisations range from chemical engineering (including minerals processing) and pure mechanical and electrical engineering to a hybrid of electromechanical engineering. In keeping with the Fourth Industrial Revolution, we offer degrees in computer and electronic engineering, mechatronic engineering and industrial engineering.

All undergraduate programmes have a strong link to industry and research collaboration, extending into focused postgraduate degrees.

Through our research entities, we equip engineers and researchers to investigate integrated energy solutions, including fossil fuels, biofuels and hydrogen energy.

Further catering for scarce skills, we develop medical devices and commercialisation platforms, and do research on multilingual speech technology, intelligent systems, dynamic modelling and control, telecommunications, airplane design and manufacturing.



## Animal health technicians

We train animal health technicians who play a vital role considering the critical shortage of professionally qualified veterinarians in South Africa, and also produce technicians trained in research.

## Pharmaceutical scientists

One of the DSI/NWU Preclinical Drug Development Platform's functions is to train postgraduate students studying pharmaceutical sciences in the Faculty of Health Sciences. This hosted platform was initially funded by its namesake, the Department of Science and Innovation.





## Medicine regulation specialists

The WHO Collaborating Centre for the Quality Assurance of Medicines is continuously developing new short courses to build and strengthen the regulatory capacity of international medicines regulators.

## Occupational hygienists

The BHSc in occupational hygiene is the only four-year professional degree for occupational hygienists in South Africa. It is also of value to neighbouring countries, whose occupational hygiene frameworks rely on South African legislation and expertise.



## Interpreters of ancient languages

The NWU is unique in the number of ancient languages it offers. Knowledge of these languages has always been a scarce skill and although ancient languages is a small field, interpreters of ancient documentary evidence are in high demand.

## Environmental managers

The Department of Higher Education and Training has listed environmental management as a “highest demand” occupation and rates it 35th out of the 100 most scarce skills in South Africa.

Our master’s programme in environmental management, presented by the Unit for Environmental Sciences and Management, provides world-class postgraduate training and research on the performance of different environmental management approaches and instruments.



## Urban and regional planners

Urban and regional planning is also a national scarce skill, as well as one of five priority skills earmarked for immediate attention in the Joint Initiative on Priority Skills Acquisition (JIPSA) report.

Our Faculty of Natural and Agricultural Sciences offers a BSc in urban and regional planning. This professional degree is accredited by the SA Council for Urban and Regional Planners.

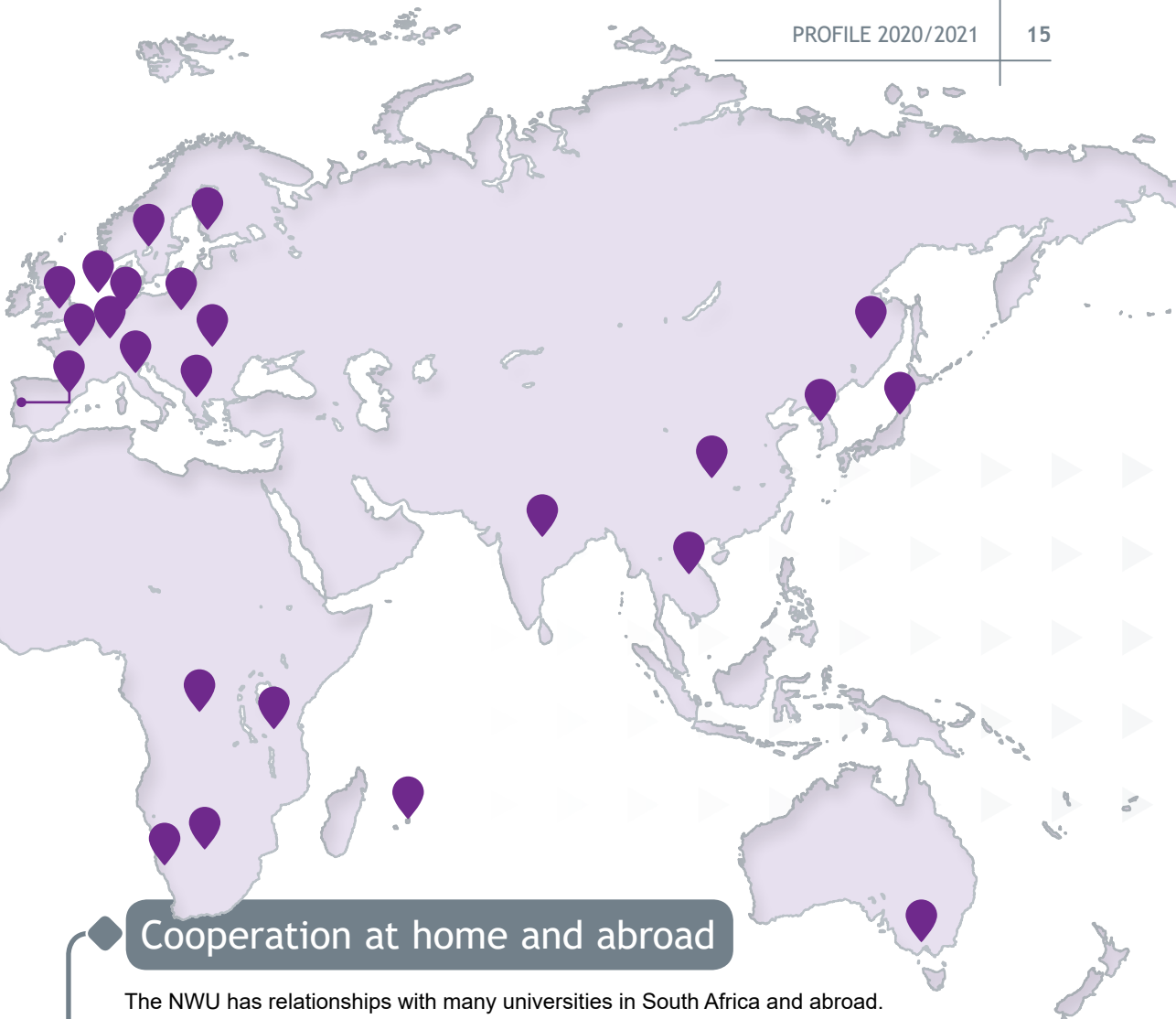


# THE WORLD IS OUR STAGE

Through collaboration with other universities and institutions internationally, we are part of the global higher education community. Our internationalisation activities include student and staff exchange and cooperation in academic, research, cultural and sports matters.

In 2019, we had 2 396 international students from over 70 countries. Among them were 1 295 postgraduates, including 491 doctoral candidates.





## Cooperation at home and abroad

The NWU has relationships with many universities in South Africa and abroad. (See world map.)

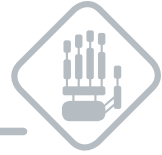
We also cooperate with numerous international bodies around the world. They are active in an array of disciplines, from medicine, health, theology and energy to economics, education, trade and sport.

In South Africa, we collaborate with local businesses and players in industries such as pharmaceuticals, tourism, mining, banking and electricity supply.

Then there are our relationships with national professional entities and governing bodies in the fields of psychology, law, education, health, tourism, agriculture, accountancy, treasury, engineering and artificial intelligence.

We also liaise with several provincial and national government departments, and cooperate closely with local communities, traditional authorities, sports clubs (local, provincial and national), business chambers and local municipalities.

# MAKING A DIFFERENCE TO OUR NEIGHBOURS



## Ensuring sustainable impact

Sharing our expertise is intertwined with our core business (teaching-learning, and research) and emphasises sustainability and community impact.

Some of these activities generate third-stream income through short courses, consulting or technology transfer.

However, our engagement activities are often not for profit. Rather, they enable staff and students to uplift the community through developmental engagement, community service projects, outreach and volunteering.

Our engagement activities also involve research about, with and in communities. These activities are interactive, entail two-way learning experiences and provide work-integrated learning or service-learning opportunities for students.

In 2019, the NWU was involved in nearly 290 community-related activities. In addition, the

office of the deputy vice-chancellor for community engagement in Mahikeng drove 10 outreach projects and two library projects. We run some of the projects ourselves and participated in others driven by other groupings.

Our commitment to engaging with local communities is embedded in our vision (dream), which highlights engaged scholarship, social responsiveness and an ethic of care. We consider the three municipal areas where our campuses are based as our primary communities.

Almost 107 student-driven community outreach activities took place on the three campuses. In addition, there were many ad hoc activities such as water collection drives and Cancer Association of South Africa support walks.



By hosting a mini-cricket event, we share our expertise and offer children from the community the opportunity to enjoy physical exercise while learning more about cricket.

## Engaging with communities

To enable, develop and engage communities, we initiate or participate in a variety of projects that:

- ▶ train pre-school caretakers, members of NGOs, government officials, business start-ups (focusing on female entrepreneurs) and empower emerging farmers
- ▶ share our expertise on community radio programmes
- ▶ provide free legal services and primary animal health services to people who cannot afford commercial services
- ▶ present sport clinics in and around our campuses



Through NWU researchers' involvement in the Teachers without Borders project, more than 3 000 fold-out microscopes have been provided to schools. Each one consists of a microscope lens mounted on a cardboard body. It can be easily assembled even by very young learners and is a highly affordable alternative to conventional microscopes.



The School for Science and Technology Education developed this innovative mathematics teaching and learning kit for schools. Games, music and puppetry are used to make mathematics education more fun.

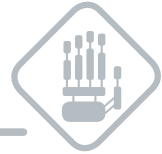
## Partnering with schools

We prepare promising grade 12 learners for their matriculation examinations, present a Winter School and a Science Week, donate MyLab sets and help with natural science experiments.

In addition, we train teachers, office-based staff and education leaders, help to establish new libraries or assist existing ones to expand, teach music to talented young musicians and help teachers to hone their skills as sport coaches.

Our Sustainability and Community Impact team has also completed several studies for corporate and civil society partners, measuring the impact of their community-based interventions.

# GOING GREEN



Environmental stewardship and awareness are important to us. We run annual energy-saving competitions for student residences and are currently determining baseline consumption of all essential resources. Our efforts to ensure we comply with all environmental laws and regulations are paying off. The rectification process we embarked on after auditing our legal compliance is close to completion and many of our activities are now compliant.

Working groups help to manage and reduce consumption of water and energy. A draft strategy and policy have been written for further consultation.

During Global Climate Change Week, we display books on climate change and hold art exhibitions (with artworks from recycled materials) and panel discussions on the topic in collaboration with the faculties of Law and Education and student leadership.

**NWU**

## FLIP THE SWITCH

become part of the **CHANGE**

**5** SIMPLE WAYS TO REDUCE ENERGY CONSUMPTION

- 1 Switch off lights in unoccupied areas
- 2 Utilize natural light where possible
- 3 Set AC temperature to 23°C
- 4 Unplug unused appliances
- 5 Take shorter showers

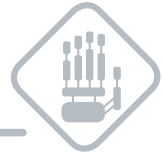
SWITCH ON THE **IDEA** OF SWITCHING OFF

FLIP THE SWITCH

MAKE YOUR PURPLE MORE GREEN

Our Flip the Switch project is aimed at creating awareness of energy consumption and the impact it has on the environment.

# INNOVATING FOR THE FUTURE



## Income through innovation

### Protecting and commercialising our intellectual property

There are currently 40 active granted RSA-patented inventions in the NWU's intellectual property portfolio. A further 260 active patents have been granted and registered internationally. They span 59 different countries in total. Altogether 741 individual patent applications have been registered or filed to date.

Our Technology Transfer and Innovation Support office manages six licenses on behalf of the NWU. Our total income from royalties was R811 123.

### Spin-off companies

The NWU forms innovative small and medium-sized spin-off companies for commercial activities, the implementation of expertise and the commercialisation of university intellectual property or technology.

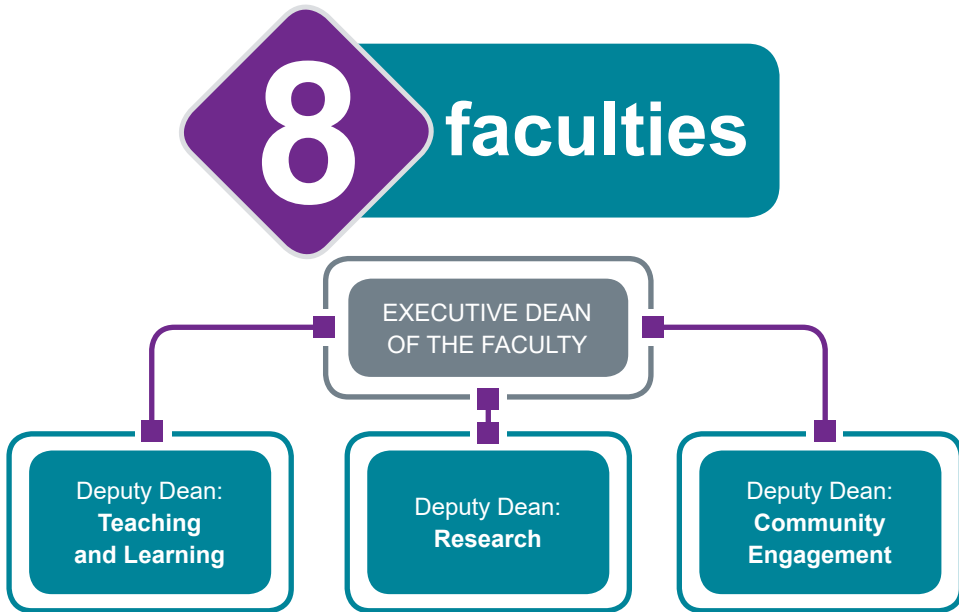
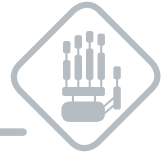
We have an interest in 27 active spin-off companies.

## Being money-wise counts

The NWU is a financially stable university that runs at a profit and has a growing income, despite cost pressures.

Total income in 2019: R5 411 million					
	2015	2016	2017	2018	2019
Total income	R3 527m	R3 838m	R4 193m	R4 901m	R5 411m
Surplus (recurrent items)	R136m	R229m	R500m	R860m	R906m
Staff cost/total cost	54,7%	54,8%	55,9%	55,2%	54,2%
Self-generated income	R946m	R990m	R1 038m	R1 166m	R1 190m
% of income from government	38,8%	40,1%	41,4%	41,0%	39,7%
% of income from tuition fees	33,2%	32,4%	33,8%	35,1%	34,7%
Capital expenditure on upgrading projects	R63m	R53m	R72m	R115m	R119m

# HEARTBEAT OF THE NWU: OUR FACULTIES



Here are the faculties' student numbers for \*2020:

Faculty	Students	Faculty colour
Education	18 478	Blue
Economic and Management Sciences	10 800	Orange
Engineering	1 490	Grey
Health Sciences	5 932	Pink
Humanities	5 338	Yellow
Law	2 839	Red
Natural and Agricultural Sciences	6 046	Green
Theology	541	Purple
<b>Total</b>		

\*(2020 figures are not final)

# EDUCATION

## Entrepreneurial learning

As part of teacher education, the Economic and Management Sciences for Education subject group offers programme content with strong entrepreneurial foundations to promote financial independence and contribute to economic growth.

Short learning programmes with entrepreneurial content are offered as part of the professional development and training of in-service educators.

## NWU research entities

- ▶ Education and Human Rights in Diversity (Edu-HRights)
- ▶ Self-Directed Learning (SDL)
- ▶ Community-Based Educational Research (COMBER)
- ▶ Edu-Lead

## Research chair

- ▶ UNESCO Chair on Multimodal Learning and OER (Open Educational Resources)

## Exceptional programmes

We are a one-stop teacher training facility, spanning the full spectrum of education phases and teacher needs, and catering for contact and distance learning.

- ▶ The faculty's offerings address all levels of schooling and teacher development. The flagship offering is the BEd, which spans the full spectrum of initial teacher education programmes, namely the foundation, intermediate, senior and further education and training phases, as well as technology.
- ▶ Postgraduate programmes include the Postgraduate Certificate in Education, an advanced programme taught through contact or distance learning, and BEdHons, MEd and PhD qualifications.
- ▶ We also offer various continuing education programmes at certificate and diploma levels, as well as the sought-after BEdHons, MEd and PhD programmes.

## Community engagement

- ▶ We offer short learning programmes in leadership and management for school management teams, while postgraduate students in education psychology offer specialised support services at a public school.
- ▶ The Little African Scientists project assists with in-service training of

foundation phase educators in a group of schools, and monitors and supports learners in mathematics and science.

- ▶ The faculty is raising funds to provide 'green' sanitary ware to female students for the duration of their studies. The next phase of this project involves manufacturing and entrepreneurial initiatives.

# ECONOMIC AND MANAGEMENT SCIENCES

## Entrepreneurial learning

Entrepreneurship is widely considered to be an engine for economic development and growth. Universities play an essential role by promoting a culture of entrepreneurship among students and local communities.

- ▶ The NWU's bhive Enterprise Development Centre (bhive EDC) develops the entrepreneurial capacity of students, females and local entities. Initiatives include two student societies, YEBO and Enactus, the student business competitions Leopards' Lair and Entrepreneurship Intervarsity, the Enterprising Women Programme and incubation support services for local entrepreneurs.
- ▶ Entrepreneurship is integrated into the academic programme for BCom Management Sciences students. This programme, as well as the BSc IT and BSc Consumer Sciences curriculum, also has modules in managerial problem-solving.

## Exceptional programmes

- ▶ Our faculty's programmes cover transport economics, logistics management, forensic accountancy, international trade, agricultural economics, tax, banking and financial risk management, applied risk management, management accountancy, financial accountancy, and tourism management.
- ▶ The short learning programme in wildlife management attracts national and international participants and our Centre for Applied Risk Management offers an exceptional two-year part-time MCom in applied risk management.
- ▶ The programme in forensic accountancy hosts the preparatory courses and board examination for full membership of the Institute of Commercial Forensic Practitioners.

## NWU Business School

With the vision "creating strategic thought leaders for tomorrow", the NWU Business School has programmes relevant to students and industry executives alike and fills in skills gaps while addressing current economic challenges.

The Business School is an autonomous entity within the faculty and has sites of delivery in Mahikeng, Potchefstroom and Vanderbijlpark. Our MBA is accredited by the international Association of MBAs.

We offer various modes of delivery in our flagship programmes – the MBA as well as the Postgraduate Diploma in Management – and strive to give our students the edge in an ever-changing business environment.

Through the Business School, industry has access to specialised skills development programmes and certificates in management development.



### Research chair

- ▶ World Trade Organisation Chair (WTO)

### NWU research entities

- ▶ Tourism Research in Economic Environs and Society (TREES)
- ▶ Workwell: Research Unit for Economic and Management Sciences
- ▶ Trade and Development (TRADE)
- ▶ Applied Research in Management Cybernetics
- ▶ Global Innovative Focussed Talent (GIFT)
- ▶ Technology-Enhanced Learning and Innovative Education and Training, South Africa (TELIT-SA)

### Community engagement

- ▶ Staff from the School of Accounting make their expertise available to the public sector by serving on the boards of General de la Rey and Thusong hospitals, offering financial training to Mahikeng local municipality and upskilling accountancy teachers at local schools.
- ▶ Students give extra accounting and mathematics classes at local schools to assist learners and are also involved in book collection and recycling projects.
- ▶ We organise entrepreneurial programmes for women and, through the Economic Literacy Centre, have helped 30 men from the community with financial management.

**ENTERPRISING WOMEN**

1. From idea to concept
2. Validating the market
3. Establishing a market presence
4. Assessing financial feasibility
5. Navigating the environment with your business model

**ARE YOU A FEMALE SMALL BUSINESS OWNER / ASPIRANT ENTREPRENEUR?**  
Do you need support in navigating the current challenging economic conditions?

**Yes!**

**THEN THIS PROGRAMME ▶ COULD HELP YOU TO GEAR-UP FOR A NEW FUTURE!**

**ENTERPRISING WOMEN**

**SHORT LEARNING PROGRAMME**  
for business start-ups: female entrepreneurs

TO BE CONSIDERED FOR PARTICIPATION IN THE PROGRAMME, YOU NEED TO:

- Be willing to commit to a multi-modal business development programme, with online learning and contact sessions
- Have a minimum of a Matric qualification and a good written and spoken understanding of English
- Be computer literate, with access to the Internet, e-Mail and WhatsApp

**PROGRAMME DURATION:**  
June to October 2020

The Enterprising Women short learning programme is a multi-modal business development programme with online learning and contact sessions.

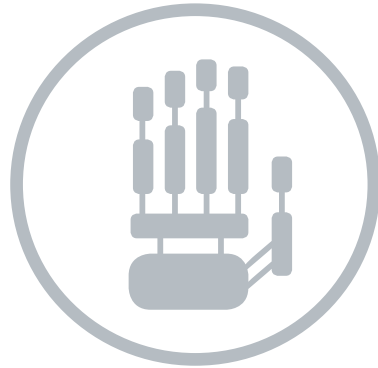
# ENGINEERING

## Entrepreneurial learning

Our academic approach is based on entrepreneurial thinking. Several final-year and postgraduate projects have become successful enterprises, examples being the Centre for Advanced Manufacturing (CFAM) Technologies, Jonker Sailplanes and Genio Intelligent Roasters.

For the business engineering module within industrial engineering, the students formulate a fundable business plan, while the engineering management module has a multi-disciplinary and inter-disciplinary approach that includes engineering economics and systems engineering.

In collaboration with various industries and other universities, our students conduct research and development that is relevant to industry, nationally and internationally.



## NWU research entities

- ▶ Centre of Excellence in Carbon-Based Fuels
- ▶ Unit for Energy and Technology Systems
- ▶ Multilingual Speech Technologies (MuST)

## Exceptional programmes

- ▶ Our internationally accredited BEng degrees have eight different areas of specialisation.

These are chemical engineering, chemical engineering with minerals processing, computer and electronic engineering, electrical and electronic engineering, electromechanical engineering, mechanical engineering, mechatronic engineering (starting in 2021) and industrial engineering.

- ▶ All the engineering fields have extensive postgraduate study opportunities. In each of the fields offered, students can complete a master's degree as an MEng or an MSc in chemical, computer and electronic, electrical and electronic, mechanical and nuclear engineering.
- ▶ We are one of very few engineering faculties to offer a postgraduate diploma in nuclear science and technology.

The Faculty of Engineering has developed the NeuHand, which is an inexpensive, automated mechatronic hand rehabilitation system.

## Research chairs

- ▶ DSI/NRF Research Chair in Coal Research (SARChI)
- ▶ DSI/NRF Research Chair in Biofuels and Other Clean Alternative Fuels (SARChI)
- ▶ DSI/NRF Research Chair in Nuclear Engineering (SARChI)
- ▶ ESKOM EPPEI Specialisation Centre for Emission Control

## Hosted entities, platforms and institutes

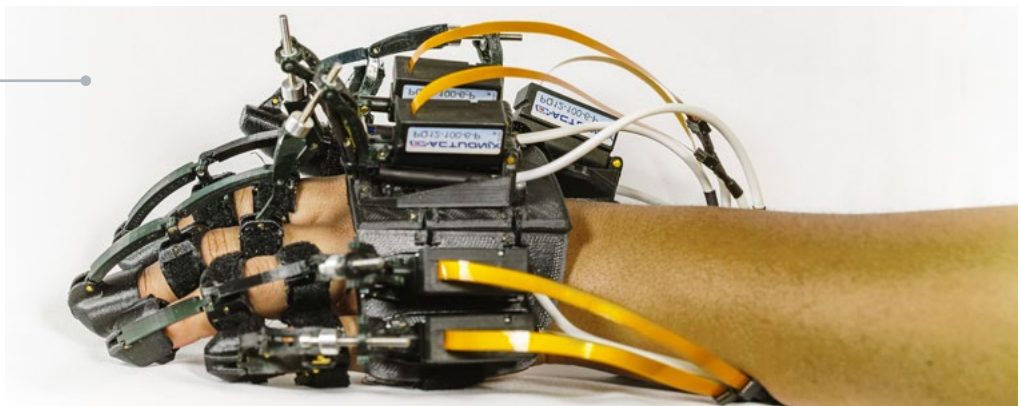
- ▶ DST/HySA Infrastructure Centre of Competence in hydrogen production, storage, reticulation and safety codes and standards
- ▶ DTI Centre for Advanced Manufacturing (CFAM)

## Community engagement

- ▶ Our Science, Engineering, Technology and Health (SETH) Academy prepares future engineers through extra classes at a high School in Potchefstroom and another one in Bethal.

The academy also runs a pre-university programme, Xcel, that helps applicants to improve their National Senior Certificate results in mathematics and physical sciences. Similarly, at the Mathematics, Science and Commerce Training Centre in Mahikeng, learners receive a second chance to improve their matric results.

- ▶ We also build devices and apparatus that assist staff and patients at the Occupational Health section of the Potchefstroom Hospital, and develop facilities for an Orange Farm community garden project.
- ▶ The faculty collaborated with various industry stakeholders, experts and other universities during the COVID-19 pandemic to develop products to support the healthcare system and healthcare workers. We also collaborated with business and community stakeholders to provide disaster food relief within our communities.



# HEALTH SCIENCES

## Exceptional programmes

- ▶ We have a rich variety of programmes, from pharmaceutical sciences, nutrition and occupational hygiene to positive psychology and child protection.
- ▶ Our Master of Pharmacy in pharmacy practice programmes offer pharmacists specialised training in pharmacovigilance and pharmacoepidemiology, pharmaceutical and health economics and policy, and pharmaceutical public healthcare governance.
- ▶ Other notable programmes are:
  - MSc, PhD in pharmaceutical sciences
  - MSc (nutrition), MSc (dietetics)
  - MHSc, PhD in health professions education
  - Master's, PhD in consumer sciences
  - MHSc in transdisciplinary health promotion
  - PhD in transdisciplinary health sciences
  - MHSc in cardiovascular physiology
  - Master's, PhD in nursing science
  - BHSc in occupational hygiene and biokinetics
  - MA, PhD in positive psychology
  - MHSc in research psychology
  - PhD in physiology
  - MSc, PhD in pharmaceutical chemistry, pharmacology and pharmaceutics

## Entrepreneurial learning

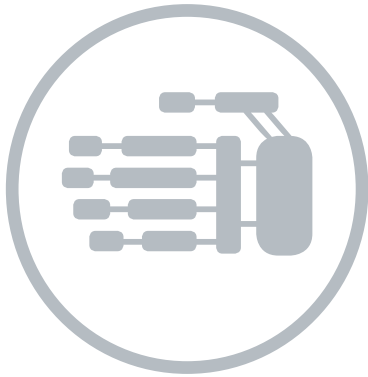
- ▶ Consumer sciences is pro-entrepreneurial, giving students practical and theoretical exposure to food, fashion, business management and marketing.
- ▶ Social Greenhouse® enables sustainable community-based technology implementation.
- ▶ DST/NWU Preclinical Drug Development Platform programmes are needs based and straddle academia, industry and government.

## Research chairs

- ▶ DST/NRF Research Chair in Early Detection and Prevention of Cardiovascular Disease in Africa (SARChI)
- ▶ DST/NRF Albertina Sisulu Research Chair in Nursing Science (SARChI)

## Hosted platforms, centres and institutes

- ▶ DST/NWU Preclinical Drug Development Platform (PCDDP)
- ▶ Medical Research Council Extramural Unit for Hypertension and Cardiovascular Disease



## Commercial research entity

- ▶ Centre for Pharmaceutical and Biomedical Services

## NWU research entities

- ▶ Centre of Excellence for Nutrition (CEN)
- ▶ Centre of Excellence for Pharmaceutical Sciences (Pharmacem)
- ▶ Hypertension in Africa Research Team (HART)
- ▶ Africa Unit for Transdisciplinary Health Research (AUTHeR)
- ▶ Community Psychosocial Research (Compres)
- ▶ Physical Activity, Sport and Recreation (PhASRec)
- ▶ Quality in Nursing and Midwifery (NuMiQ)
- ▶ Lifestyle Diseases
- ▶ Medicine Usage in South Africa (MUSA)
- ▶ Occupational Hygiene and Health Research Initiative (OHHRI)

## Community engagement

Through mutually beneficial collaborations we strive to improve the health of all:

- ▶ The NWU/NWDoH COVID-19 task teams provide projected scenarios on COVID-19 to inform government's health systems. The AitaHealth app (for community-oriented primary care) enables targeted household testing and screening.
- ▶ 20 wellness champions with the Western Cape Provincial Department of Health were trained.
- ▶ Ikageng-based women attend exercise classes and residents of House Amelia (care centre for mentally disabled) develop their motor skills.
- ▶ Phelophepa Train deploys psychology, pharmacy and nursing students to serve communities.
- ▶ ImpENSA improves early nutrition and health by empowering health professionals and community health workers. The African Nutrition Leadership Programme develops leadership capacity in nutrition among professionals in Africa.
- ▶ The Hypertension in Africa Research Team (HART) supports global and local high blood pressure awareness and screening campaigns.
- ▶ OHHRI collaborates with the Southern African Institute for Occupational Hygiene and the National Institute for Occupational Health to assist the national Department of Health with Covid-19 guidelines for healthcare workers and testing facilities.

# HUMANITIES

## Exceptional programmes

- ▶ Our four-year BA Graphic Design programme is geared towards producing creative problem-solvers who are ready for the job market.
- ▶ Our BA in public governance with municipal management and leadership offers students a pathway towards serving in local government, whether as elected or appointed municipal officials. This programme aims to alleviate the severe capacity constraints within our municipalities.
- ▶ The NWU Choir Academy (NWUCA) offers a short course, Introduction to Choral Conducting, aimed at empowering conductors and choristers in choral conducting, vocal development and practical musicianship.

## NWU research entities

- ▶ Unit for Language and Literature in the South African Context
- ▶ Enabling Optimal Expression of Individual, Social and Institutional Potential (OPTENTIA)
- ▶ Population and Health
- ▶ Social Transformation
- ▶ Understanding and Processing Language in Complex Settings (UPSET)
- ▶ Indigenous Language Media in Africa (ILMA)
- ▶ Musical Arts in South Africa: Resources and Applications (MASARA)
- ▶ Visual Narratives and Creative Outputs through Interdisciplinary and Practice-led Research (VINCO)

## Hosted platforms, centres and institutes

- ▶ South African Centre for Digital Language Resources (SADiLar)



## Community engagement

The faculty encourages community engagement as a way of learning and service to the community. The following are some of the leading research projects:

- ▶ The Musikhane Community Music Engagement Programme at the School of Music creates opportunities for learners and student teachers to have meaningful musical experiences. It explores music education, staff development and community music participation.
- ▶ *Byderhand* is an interdisciplinary digital literature project of our subject group Creative Writing.

It provides interactive, multisensory reading experiences to visually impaired learners, using digital devices and a variety of media, content and settings, including botanical and poetry gardens.

- ▶ Other School of Music projects that benefit the community and contribute to the educational skills of our students are drumming for learners with special needs, music appreciation through listening activities and facilitating learning experiences at a rural daycare centre.
- ▶ The School of Languages is involved in a number of local academic literacy and language testing projects involving institutions of higher education. These are mainly through our networks and partnerships with the Inter-institutional Centre for Language Development and Assessment (ICELDA) and South African Digital Language Resources (SADiLaR).

## LAW

### Exceptional programmes

Our Faculty of Law is highly regarded for its leadership in growing fields such as environmental law, governance law and international trade law, while maintaining an edge in more traditional branches of the law such as mercantile law and criminal law.

Our postgraduate offerings include the following:

- ▶ Doctor of Laws in various disciplines, such as public law, criminal and procedural law, international trade and business law, environmental law and mercantile law
- ▶ PhD in law in the field of law and development
- ▶ Two LLM streams (research and coursework) with 19 different programme specialisations in different fields of law
- ▶ MPhil in environmental law and governance law and a professional LLM in criminal law and procedure

### NWU research entity

- ▶ Research Unit for Law, Justice and Sustainability

### Research chair

- ▶ DSI/NRF Research Chair in Cities, Law and Environmental Sustainability (SARChI)

### Community engagement

We share our legal expertise on community radio programmes and provide free legal services through our law clinics to people who cannot afford legal counsel.

# NATURAL AND AGRICULTURAL SCIENCES

## Entrepreneurial learning

We have various qualifications that focus on entrepreneurial learning, for instance in the fields of actuarial science, business mathematics and informatics, and business analytics.

## NWU research entities

- ▶ Centre for Space Research
- ▶ Unit for Business Mathematics and Informatics (BMI)
- ▶ Unit for Environmental Sciences and Management (UESM)
- ▶ Chemical Resource Beneficiation (CRB)
- ▶ Human Metabolomics
- ▶ Material Science Innovation and Modelling (MaSIM)
- ▶ Pure and Applied Analytics
- ▶ Food Security and Safety

## Research chairs

- ▶ DSI/NRF Research Chair in Astrophysics and Space Physics (SARChI)
- ▶ DSI/NRF SA-NAM Bilateral Research Chair in Astronomy and Astrophysics (SARChI)

## Hosted platforms, centres and institutes

- ▶ DSI/NRF Centre in Indigenous Knowledge Systems (CIKS)
- ▶ Centre for Human Metabolomics

## Exceptional programmes

In addition to its extensive array of undergraduate programmes, the faculty also offers several master's and doctoral programmes. These include:

- ▶ MSc in astrophysics and space science
- ▶ MSc in environmental sciences with integrated pest management
- ▶ PhD in animal health
- ▶ Bachelor and master's degree in indigenous knowledge systems
- ▶ PhD in science with disaster risk science
- ▶ BScHons in environmental sciences

## Community engagement

We run several projects aimed at addressing the needs of our communities.

- ▶ One of our projects brings disaster risk reduction knowledge to local governments to improve service delivery for local communities.
- ▶ We also teach a local community how to produce and market the climate change-resilient super food, amaranth grain, while our nano-water filtration plant provides safe drinking water to the village of Madibogo.
- ▶ Our two science centres promote science, technology, engineering, mathematics and information sciences to local schools and the public.
- ▶ The Nguni cattle project empowers emerging farmers to become commercially orientated, while another project is about developing indigenous therapies for cattle feed industries.



# THEOLOGY

## Exceptional programmes

- ▶ Our BA in ancient languages is one of the few programmes in Africa that offer specialisation in Greek, Hebrew, Aramaic and other languages used for deep analysis and study of ancient texts and the Bible.
- ▶ We are also among the few universities that offer a traditional classics degree. In addition, we have a course in ancient cultures and specialist courses in Egyptian, Mesopotamian and other ancient cultures.
- ▶ The BA in pastoral psychology prepares students for careers as teachers, and in the Christian ministry, while the BTh in Christian ministry is for students who wish to enter ordained ministry in the Apostolic Faith Mission, among others. The latter is presented through contact studies on the Mahikeng Campus and via distance delivery.
- ▶ In addition, the BDiv qualification is for students who wish to become ministers in the Reformed Churches in South Africa and is presented through contact studies on the Potchefstroom Campus and via distance delivery.
- ▶ The MDiv qualification with course work focuses on training for practical ministry in churches within the reformed tradition.
- ▶ We are also developing a postgraduate diploma that will enable students from study fields outside theology to do a master's degree in theology.

## Community engagement

We work with farm workers, inmates of correctional facilities and school learners on programmes that are both practical and spiritually nourishing.

- ▶ Our LIFEPLAN® Training and Equipping Programme offers farm workers training in relationships, self-image, financial management and citizenship.
- ▶ Through the Fatherhood Training and Equipping Programme, we train inmates at the Potchefstroom Remand Detention Facility to be more effective fathers.
- ▶ We have several programmes at local schools to encourage good citizenship, offer guidance with study methods, focus on female hygiene and promote literacy and academic skills for learners.
- ▶ The School for Ancient Languages presents formal language classes for primary and secondary school learners in Potchefstroom.

## NWU research entities

- ▶ Unit for Reformational Theology and the Development of the South African Society
- ▶ Ancient Texts: Text, Context and Reception

# KNOWLEDGE KNOWS NO BOUNDARIES



Our Unit for Open Distance Learning (UODL) is the second largest provider of open distance learning programmes in South Africa. The UODL manages the delivery of academic programmes from most NWU faculties, with the majority of students enrolled in education programmes.

In addition, the unit delivers the University Preparatory Programme (UnivPrep) to about 550 participants in South Africa.

Over the years, almost 100 000 NWU qualifications have been awarded to ODL students.

## How do we do it?

Our 86 learning support centres across South Africa, as well as in Namibia, are equipped with 200 interactive whiteboards. Students and lecturers use this technology to type, draw, see and hear one another on these interactive whiteboards.

Modern studios allow national and international broadcasts from the UODL building on the Potchefstroom Campus. Contact sessions are recorded and posted on the web so that students can access them later.

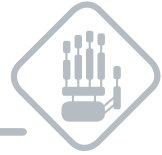
The unit has 114 exam centres across South Africa and Namibia and handles tens of thousands of exam scripts during each examination session.

During the COVID-19 pandemic, the UODL made contingency plans to mitigate the effect of the lockdown on academic programme delivery. In collaboration with faculties, it developed and implemented alternative assessment methods and ways of submitting assignments.

## Our footprint is growing

There has been a steady increase in requests from provincial education departments for bursary project agreements with the NWU, enabling unqualified and underqualified educators to enhance their qualifications and skills.

# PRODUCING WELL-ROUNDED STUDENTS



The NWU is a place where students can achieve academic excellence and at the same time unleash their imaginations, visualise their aspirations and incubate future success. Campus life is geared to holistic growth and development, and students are encouraged to participate in a wide range of cultural, sports, counselling and wellbeing activities.

## Student profile

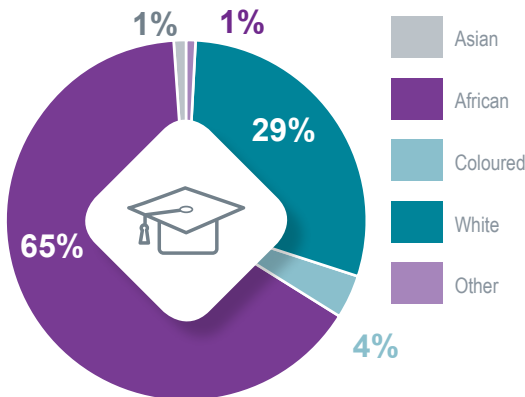
Diversity is the defining characteristic of the NWU's student profile. This gives our students a competitive advantage as they grow in their ability to communicate and interact.

**In \*2020, the NWU student profile looked like this (as on 1 May):**

	2015	2016	2017	2018	2019	2020
Total student enrolment	64 070	69 736	62 558	61 212	63 671	57 009
Contact	37 943	39 064	41 765	43 418	44 647	43 897
Distance	26 127	30 672	20 793	17 794	19 024	13 112

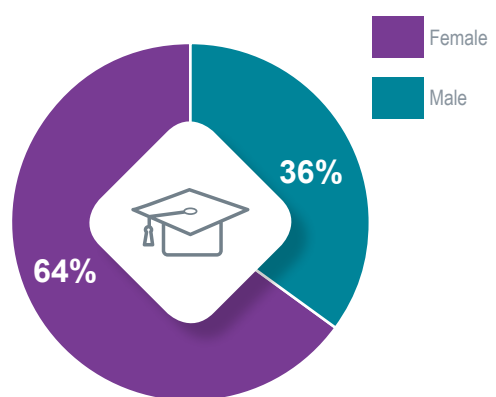
*\*(2020 figures are not final)*

## Racial composition



*\*(2020 figures are not final)*

## Gender composition



*\*(2020 figures are not final)*

## Undergraduate vs postgraduate

Although the majority of students were undergraduate students, the NWU also had significant numbers of postgraduate students in \*2020. Among them are:

**2 366**

master's  
students

**1 050**

doctoral  
students

*\*(2020 figures are not final)*

## Study options

Here are some of the study choices of students in \*2020:

Major field of study	Contact	Distance
Science, engineering and technology	12 124	182
Business and management	11 662	200
Education	8 100	12 228
Humanities and social sciences	12 010	502

*\*(2020 figures are not final)*

## Promoting academic success

We offer several programmes to assist students academically:

- ▶ All first-year students do academic literacy and skills tests to determine whether they would benefit from the additional academic literacy modules offered.
- ▶ Other academic support includes peer mentoring, tutorials, reading laboratories and writing centres.
- ▶ We also offer Supplementary Instruction (SI), which is an internationally recognised student academic support system.
- ▶ Our University Preparatory programme (UnivPrep) is a bridging programme for students who would otherwise not qualify for admission to university.
- ▶ We offer refresher programmes in mathematics to first-year students registered for programmes that include modules in mathematics.
- ▶ Our various extended programmes give students additional time to complete their studies.

## Caring for our students

Our campus health centres and student counselling and development units offer free medical services to students.

Besides organising awareness campaigns on HIV and Aids, gender-based violence and LGBTQIA+ rights, among others, we offer our students various counselling and social welfare services, following a holistic and multidisciplinary approach.

## Home sweet home

We provide 11 031 beds which are managed by Residence and Catering Services. These include beds owned by the NWU and others leased from private providers (operated as part of the formal residences of the university).

The number of students living in accredited housing facilities provided by private landlords is estimated at 3 500, while many more students live in private non-accredited facilities.

There are 38 NWU-owned residences on the three campuses, plus one off-campus residence in Vanderbijlpark, where we are also renting an additional four residences off campus.

An exciting new residence development has been approved by the NWU Council and will add 1 728 new beds on the Mahikeng Campus. Funding for this development has been secured and final approval from the office of the Minister of Higher Education and Training is awaited.



The aim is to house at least 50% of contact students and 75% of first-year students in residences in the next 10 years.

## Lending a helping hand

We encourage our students to contribute to society through volunteerism.

Since 2001, our Potchefstroom Campus has had the world's biggest registered student-driven welfare organisation (the Student RAG Community Service or SRCS).

The SRCS is currently involved in 80 projects in and around the Potchefstroom area, with more than 4 000 students actively participating in community projects every week.

In fundraising events during 2019 and 2020, students collected a total of 31 tons of clothing and 7,5 tons of maize meal and canned food for distribution in the community.

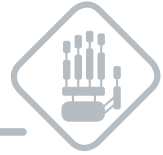
The SRCS also made a big contribution to the JB Marks Disaster Relief Project, thereby assisting 500 families who rely on this project.

In addition, the campuses hold fundraising events such as golf and jazz days and cycling events to ensure that needy students eat two balanced meals every day. Students also do voluntary community service at local children's homes, shelters for the homeless, old age homes and organisations that work with animals, such as the SPCA or Paws.



Close to 1 400 learners from 24 schools in the Dr Kenneth Kaunda District attended the Science Week Expo at the Science Centre on the Potchefstroom Campus. Learners also participated in activities such as measuring rainfall and discussing climate change.

# BUILDING IMAGINATION AND MUSCLE



Students have many opportunities to develop their talents by participating in sport, arts, cultural and other extramural activities.

## Culture in the spotlight

Cultural activities include debate, drama, dance and cultural societies, orchestras, first-year concerts, musicals, talent competitions, choirs, vocal groups, art festivals, exhibitions and competitions, beauty contests, campus radio stations and student newspapers.

## Off to a running start

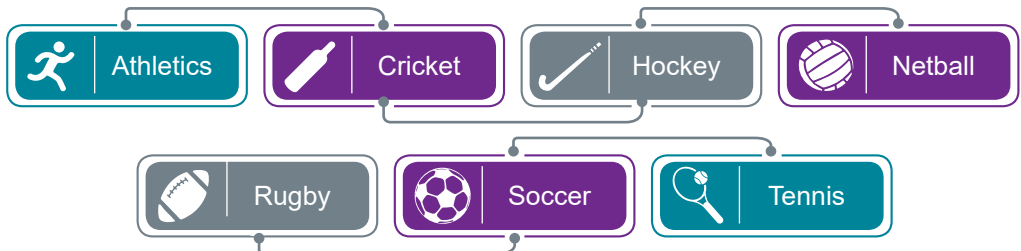
On all three campuses, students have the opportunity to play sport at various levels, from beginners through to the highest level of competitive sport.

When representing the university, our sports teams participate under the banner of the NWU Eagles.

Based on achievements on the sports field, the NWU is one of the top sports universities in South Africa. We boast the following:



### We offer seven major sports codes:



### We also have numerous smaller sports codes and activities:

Cycling / karate / softball / squash / rock-climbing / table tennis / competitive chess / body building / boxing / netball / dancing / rugby sevens / aerobics / ju-jitsu / water sports (rowing and canoeing) / marathon running / basketball / equestrian tent pegging

## We are the champions

NWU sports teams and individuals have produced outstanding performances in the University Sport South Africa (USSA) championships and the Varsity Cup Competition.

Here are some of the latest USSA highlights:



### KARATE FIRST

Overall winners for  
20 years in a row



### GYMNASTICS FIRST

Overall winners for  
three years in a row



Boxing, badminton  
(NWU A- team),  
netball, cross country



Men's football,  
and women's  
basketball, hockey  
and swimming



Bodybuilding, squash  
(NWU A- team),  
swimming (NWU club)  
and women's football.

## Top training venues

Elite sportspeople use the top-of-the-range facilities at the NWU High Performance Institute (HPI). It has one of the best-equipped sports gymnasiums in Africa and offers a complete range of sports training, medicine, research, nutritional and sport psychology services.

The Institute for Sport Science and Development provides scientific support services to national and provincial sports federations, the North-West Academy of Sport and various sporting codes on our campuses.

A modern Sports Village on the NWU's Potchefstroom Campus accommodates national and international sports teams that train at these venues.



## On the world map

A number of NWU students and coaches are making their mark in the international student sports arena.

Four of our football players were in the SA student side team in Naples, in Italy at the 30th World Student games in 2019. They are Tebogo Galane, Mduduzi Sithole, Kavendree Makhene and Siyabulela Mosiea.

Deidré Jordaan and Ruan Snyman represented South Africa at the All-Africa Badminton championships that took place in Cairo, Egypt in February, earning the men's team a bronze medal.

Four students were members of the South African team at the World Morganti Ju-Jitsu championships in 2019. Elvis Moyo won two gold medals and was announced best martial artist, while Lincoln Rakgoale and Moses Radebe each pocketed two gold medals and Sean Motshabi brought one gold medal home. In addition, David Tshose represented South Africa in the junior World Bodybuilding Championships and African Championships.

Reino von Wielligh and Nadia Blaauw joined the Swimming SA Open Water squad at the Len Cup 10 km event held in Barcelona, Spain in June 2019.

Nadia also represented South Africa at the 2019 LEN Open Water Cup series in

Barcelona. She was the first South African to swim over the finish line.

Chederick van Wyk competed at the World Relays in Yokohoma, Japan. He was part of the men's 4x2 00m squad that won a silver medal and also set a new SA- record. Chederick and Rantso Mokopane were also chosen for the ASA Team to respresent South Africa at the IAAF World Championships in Doha, Qatar in October 2019.

Pieter van den Berg was appointed as head coach for the World University 7's team that took part in the World Student Games in Milan, Italy in June and July 2019. Players Longelo Goza and Eugene Hare were included in the World University 7's team.

The NWU Athletics club turned in a sterling performance at the African Games in Rabat, Morocco in August 2019. Mpho Links (high jump) won his first-ever gold medal while Jo-Ané van Dyk (javelin) won her second African Games silver medal, beating Olympic silver medallist Sunette Viljoen for the first time in her career.

Anika du Plessis represented South Africa at the 2019 World Junior Chess Championships in New Delhi, India in August 2019.

Chanté du Toit competed at the FIG World Challenge Cup (gymnastics) in the individual division in Kazan, Russia in September 2019.

### Varsity Cup Competition (2019):



**2019**  
**Champions:**  
Soccer



**1st**  
Hockey, netball,  
athletics, track and  
field, cross country



# ENQUIRIES AND CONTACT DETAILS

## Jean Stidworthy

Acting Director: Marketing and Student Recruitment

Tel: +27 18 299 2378

Email: jean.stidworthy@nwu.ac.za

## Louis Jacobs

Director: Corporate Communication

Tel: +27 18 299 4918

Email: louis.jacobs@nwu.ac.za

## Warren Makgowe

Director: Stakeholder Relations

Tel: +27 16 910 3185

Email: warren.makgowe@nwu.ac.za

## Acknowledgements:

### Compilation:

Corporate Communication, NWU

### Design, layout and printing

Alexander Marnewick for AFRICAN SUN MeDIA

[www.africansunmedia.co.za](http://www.africansunmedia.co.za)

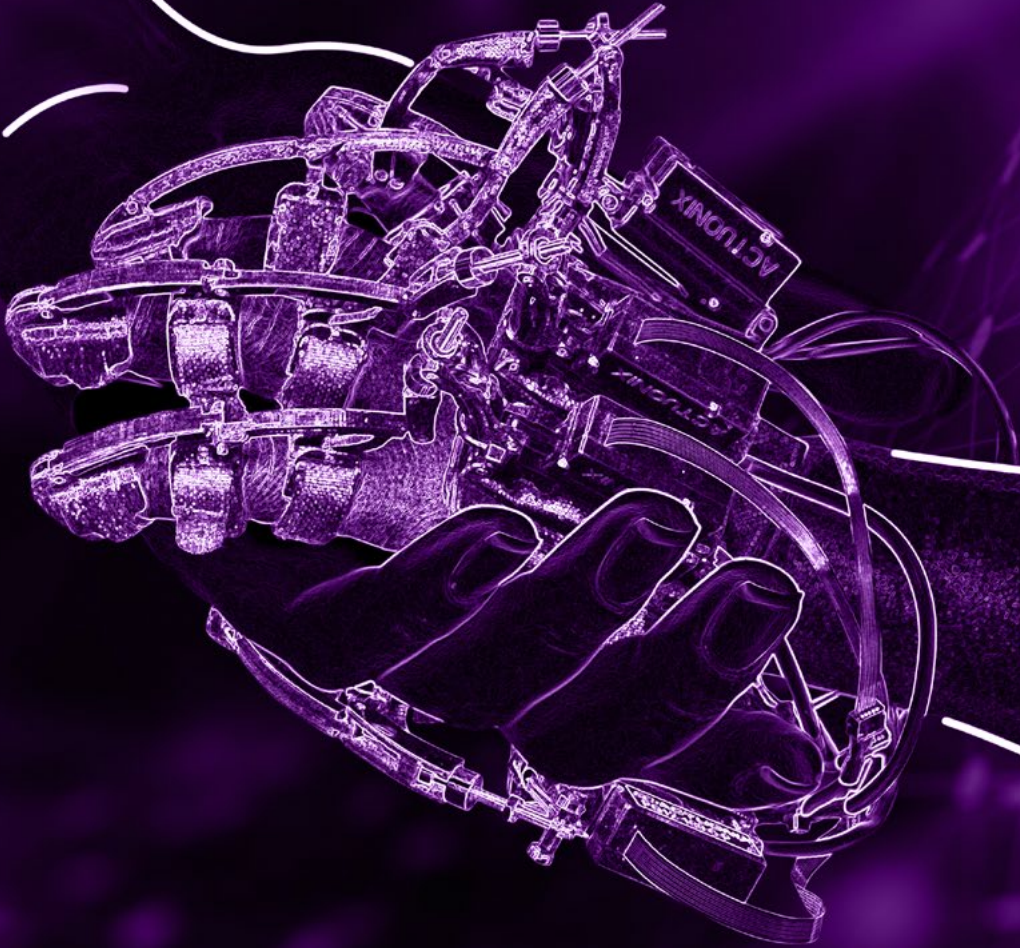
[info@africansunmedia.co.za](mailto:info@africansunmedia.co.za)

### Photography

NWU service providers and colleagues



It all starts here®



 NWU®