UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
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JuniorTukkie

May 2021 Edition

MAGAZINE

Inside this issue:

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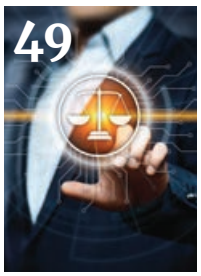
Contents

May 2021 EDITION

Adapting to a changed world where DIGITAL LITERACY rules



View the JuniorTukkie magazine online:
www.up.ac.za/juniortukkie>JT magazine

Project manager, editor and writer:
Anthea Pretorius
anthea.pretorius@up.ac.za

Editing by the UP Language Unit:
Dr Helena Kruger-Roux
helena.kruger-roux@up.ac.za

Proofreader:
Martie Kilian
martie.kilian@up.ac.za

Design and layout:
Dreamwave Design Solutions
info@dreamwavedesign.co.za

Editorials

JT virtual learning

The JuniorTukkie (JT) initiative in the Department of Enrolment and Student Administration (DESA) at the University of Pretoria transitioned all their onsite events online to continue supporting prospective students in the best way possible.

The Preparation Conference for Grade 12 learners and the Empowerment Week for Grade 11 learners were transformed into great digital experiences! JuniorTukkie also shifted its learning content online by presenting live streams and webinars on the JuniorTukkie YouTube platform, resulting in a staggering 125 000 visits during the period from July 2020 to December 2020.

Our online events' positive responses led to the new JuniorTukkie Online School, where highly experienced teachers will present online classes for Grade 10, 11 and 12 learners in Mathematics, Physical Sciences, Life Sciences, Accounting and English. In the second phase, the subjects Mathematics and Natural Sciences will also be presented to Grade 8 and 9 learners. This part of the project will be supported by UNICEF.

Creativity, critical thinking, problem-solving, decision-making, the ability to communicate and collaborate, and personal and social responsibility are essential life skills needed to become a well-rounded learner, student, and professional. UNICEF and Investec will be supporting the Life Skills and Enrichment programmes that will also be presented on the JuniorTukkie virtual platform.

The JuniorTukkie Team is also very excited about the development of our new online JuniorTukkie Membership system. So, what is new? When a JuniorTukkie reaches the final school year and is ready to apply for studies at UP, the applicant's personal information will already be on the University of Pretoria's database. The applicant should then only edit and update personal details, add the relevant first- and second-choice study programmes and complete the rest of the Application for admission to study at the University of Pretoria.

We hope that all learners from Grade 8 to 12 will register for the JuniorTukkie Online School and use the opportunity to improve their marks and therefore also improve their chances for admission to a study programme at UP. JuniorTukkie prepares learners for a smooth transition from high school to university.

Dr Petrus Lombard
Project Manager: JuniorTukkie

Adapting to a changed world

Given the South African environment and the pandemic-induced circumstances that we are currently navigating together with the rest of the world, there can be no doubt that life as we knew it has been seriously challenged.

In this context, I welcome you to the academic year 2021, which started later than would have ordinarily been the case. Although I, too, am unsettled and unsure of what the future might hold, I am encouraged by the extent to which individuals, families, communities and institutions have embraced what many have termed our 'new normal'. I am particularly inspired by what all of you achieved in 2020 – a year characterised by extreme challenges. As a COVID-19 survivor, I count myself lucky to be alive after the health setback I experienced in 2020.

Even those who did not contract COVID-19 were challenged in many ways. Yet, throughout the past few months, you have shown great determination in finding alternate ways to learn, connect and engage with others. You have also established innovative virtual connections with one another. It is a fact that we have been catapulted into relying heavily on technology in our day-to-day relationships and engagements with people. Although daunting at first, we have learned new ways of communicating. COVID-19 has really challenged us, forcing us to be flexible in adapting to tremendous change. Many people started working from home, schools turned to virtual learning where possible, and even doctors offered more online or virtual consultations than before. This pandemic has been a testament to just how resilient we are and how well we have adapted to take full advantage of technology.

However, I acknowledge that the transition to communicating everything online did not occur seamlessly for everyone, especially in the South African context. Many were unintentionally excluded and were consequently potentially isolated. Suffice it to say, COVID-19 reminded us that a lot remains to be done to bridge the digital divide, which is a challenge we must all embrace. Even for those with access to the necessary technology, it comes with its own challenges—computers crash, storage becomes full, and Zoom calls can end abruptly as connectivity can often be poor, especially when coupled with load shedding. Nevertheless, we have pulled through. Against all odds, you have progressed academically in an environment where digital literacy rules. For that, I wish to congratulate you and thank you for staying committed to your personal journey of discovery, development and meaningful growth.

As you all start yet another academic year under extraordinarily challenging conditions, I would like to remind you that last year was just as challenging, yet we prevailed. Let us approach this year with the same kind of attitude, energy and zeal. Once again, my sincere congratulations and welcome to the 2021 academic year!

Best wishes,

Mr Setlogane Manchidi
Head: Corporate Social Investment, Investec

What really matters? What will move humanity forward?

By Anthea Pretorius

The COVID-19 pandemic has undoubtedly been disruptive and intrusive, and has affected the way we live, learn, travel and engage with others. We have reached a turning point: Some things need to change, or our survival will be compromised.

The theme of this edition of the *JT magazine* is 'Adapting to a changed world where digital literacy rules'. As Phumelele Tshabalala from Career Wise points out: 'Students are expected to use technology confidently, creatively and critically.'

This means that students must find reliable data and evaluate the formats in which it is presented, use that data or information effectively, efficiently and responsibly in their studies to communicate and collaborate, and answer questions in examination papers. They should also consider how much content they are consuming and how much they are creating. Students must know how to build and protect their identity on all social media platforms in the online world.

I cannot help but ask: *How should we be living now? What should we be doing? Do our choices reflect what we value the most?*

The reality is that your story is currently airing – L I V E!

What were you keen to accomplish before the pandemic, and has this goal changed? We must follow our hearts and find new ways of being. No matter what happened in your life in the past year, it would help if you did not allow your life story to remain in the tragedy chapter. Indeed, by changing your frequency, you can change your circumstances! Today I would like to share with you the wisdom of several people I admire. Their insights may be as meaningful and encouraging to you as they are to me.

1 **Seth Godin**, a leading mind and the developer of the altMBA, on his blog post *The revolution in online learning*, writes that we need to distinguish between education and learning.

'Education is a model based on scarcity, compliance and accreditation. It trades time, attention and money for a piece of paper that promises value. But we learn in ways that have little to do with how mass education is structured. We're in danger of repeating the failed approaches of education in an online setting.'

Seth has launched a series of lectures[1] on how to make online learning work. For those who are interested, he has also placed a short series of recorded lectures[1] on Udemy.

Seth writes:

'We have a chance to build a future based on contribution, possibility and insight. And we can do it at scale.'

2 In his book, *The Actor*, **Don Miguel Ruiz** writes: 'Your mind is a glassblower, shaping a delicate world for your body to occupy. Command interest in the way you move and speak.'

3 **Rob Williams**, the originator of PSYCH-K®, offers us these immune-boosting goal statements or mantra's:

- I am a naturally optimistic person.
- I transform anger into peace.
- I love to serve myself and others.
- I see the gift in crises and turn them into opportunities.
- I celebrate life and allow myself to play and laugh.
- I am open and curious about what life has to offer.
- I lovingly take care of myself, and I have all the energy I need.
- I am safe and spiritually guided in every aspect of my life.
- I honour and respect myself.
- It is okay to be vulnerable and ask for help.
- I am confident in my dealings with people.
- Physical exercise is easy and fun.
- I nurture my body with healthy food and healthy thoughts.
- I am immune to all viruses and stay perfectly healthy.

1 www.udemy.com/course/seth-godin-on-learning-and-education

Editorials

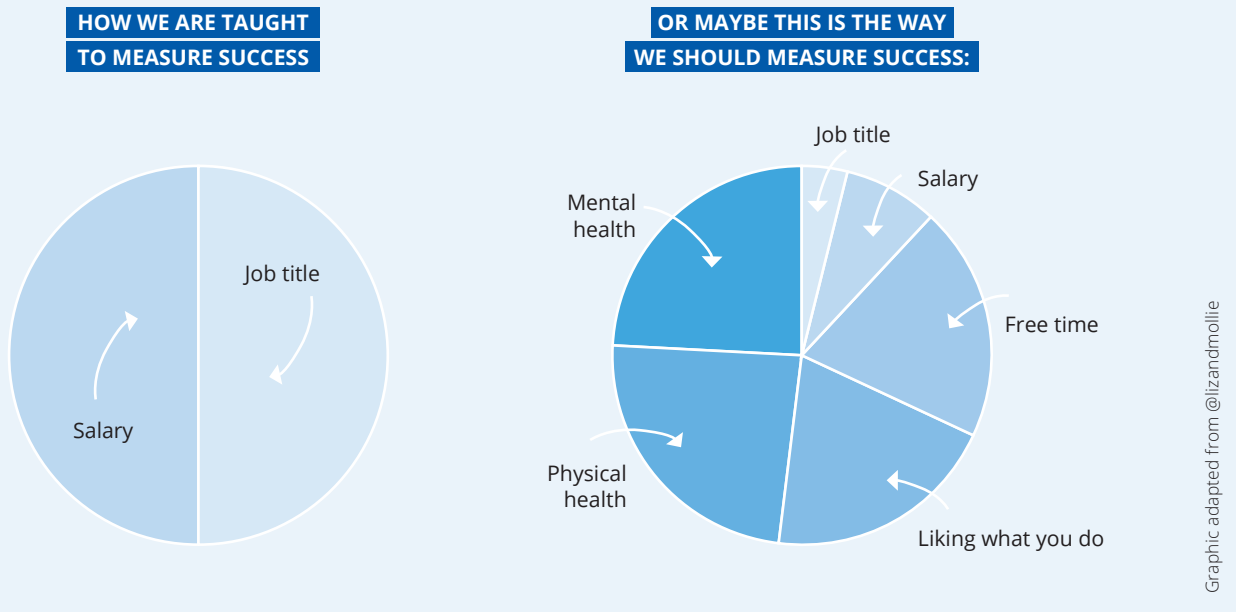
4 **Christian de la Huerta**, the author of *Awakening the soul of power*, writes that amid a 'myriad of messes . . . there are margins and . . .
in the margins, there is place
to think
to breathe
to wait
to wander
to marvel
to dream
to pause.'
He asks: 'What plan do you have that will capture your soul's attention?'

5 **Erin Telford** writes:
'We live in a world where criticism is rife; where people are dissed and dismissed; where they are silenced and shamed; mocked and rejected. We have all experienced the eye rolls or exasperated looks of certain people; we have all heard from others that we are annoying, disruptive, loud, or that our need of the moment is inconvenient. But how many times have you been encouraged to speak your truth politely and sincerely? How many times have you been encouraged to step into your power, use your gifts, bring your contribution, make a difference?'

Telford stresses: 'You have a responsibility to play your part and to play it hard and well and to its fullest, whatever it happens to be. Only you know what that is. When you get pushed against, you get refined. You get clarified. Through friction, you are polished, and you are forced to really get clear and own what you believe and why. That is a gift. I hope that as your inner truth percolates that it is finding both definition and flexibility. That you are finding ground and steadiness within. And that when the time comes where you can no longer hold it in, that you will allow honey and flames to pour out of your one-of-a-kind mouth. It's time to inhabit yourself in a new way.'

'To find your own ground underneath your feet. To redirect your energy from suppressing, denying, or looking the other way into laser-focused clear vision. To loving yourself so much that you can be YOU, with all people, in all situations, in all mediums, with ease and allowing, and without fear.'

6. How do you measure success?



7 **Timothy Shriver** encourages people to unite: 'People flourish when they unite, and they suffer when they're separate. Kids who learn empathy give up bullying for belonging. The most joyful people I've ever met open up and take everyone in. They seek unity in treating others with dignity. We need more uniters now. We are one, and when we act as one, we can work miracles.'

'Our differences make us special, unique—our stories, our cultures, our histories all deserve their place, but underneath our differences, we have common needs and dreams that bind us, that we can fulfil only through each other.'

'We are connected. What I do, affects you. What you do affects me. We're tired of hostility. We're starving for unity. We find purpose in each other's happiness. We need each other. Now more than ever.'

These notes come from *The Call to Unite: Voices of Hope and Awakening*, written by Timothy Shriver and published by The Open Field in 2021. Website: unite.us.

In closing, I encourage you to reconnect with your WHY.

Find out what it will take to ensure that you will thrive. Allow the sun to kiss your skin every day. Laugh often and tell your loved ones what they mean to you. Connect to others in meaningful ways.

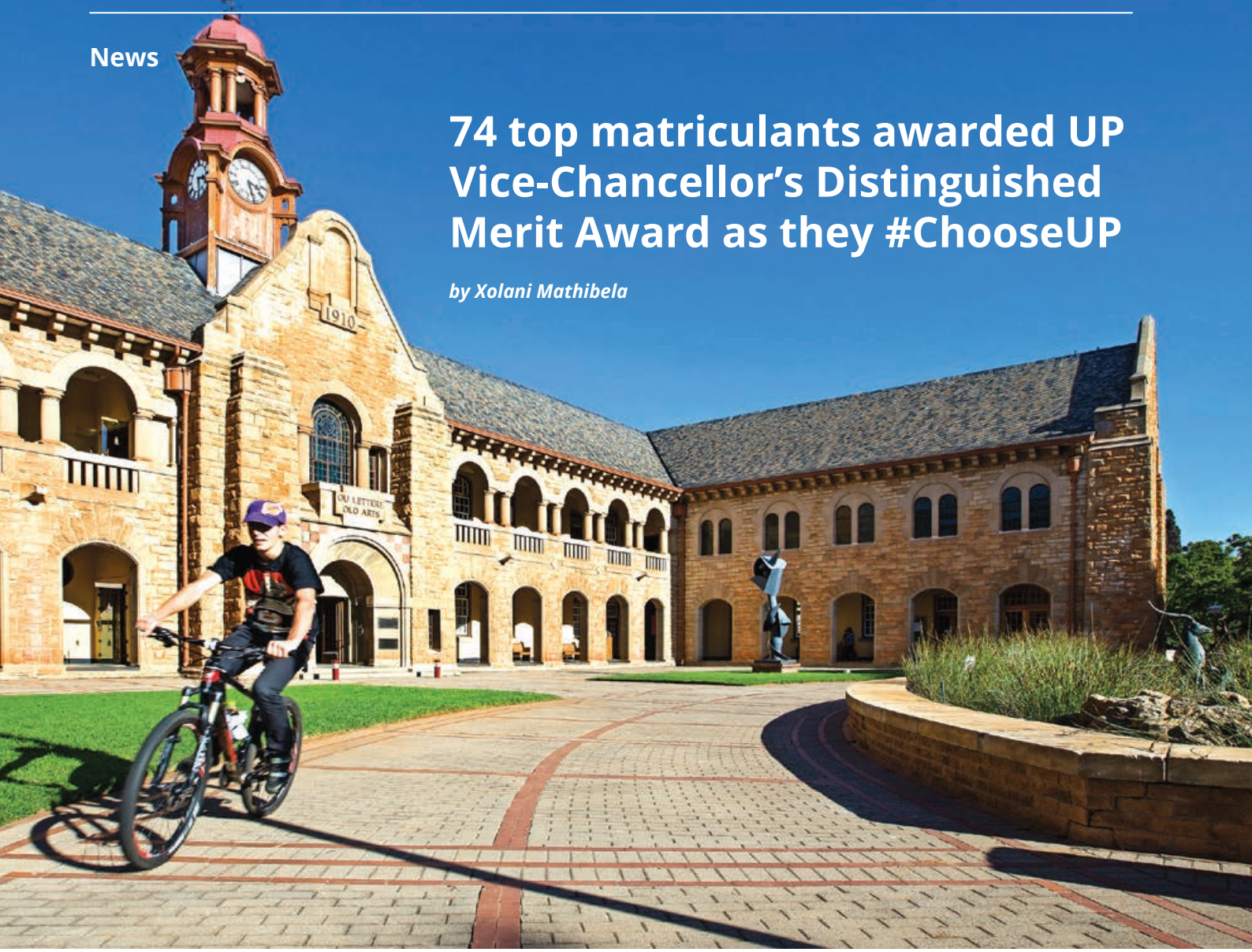
Be kind. Be attentive. Maintain boundaries that protect your heart, mind and body. Seek help when you find you are not coping. Live with hope alive in your heart. Use technology wisely and communicate on social media platforms with discretion. Being a student is a marvellous and thrilling time in your life!

You need not necessarily always tell people your plans—but show them your results!

News

74 top matriculants awarded UP Vice-Chancellor's Distinguished Merit Award as they #ChooseUP

by Xolani Mathibela



Seventy-four of 2020's top-achieving matriculants from across South Africa have chosen to pursue their academic studies at the University of Pretoria (UP), and met virtually with UP Vice-Chancellor and Principal Professor Tawana Kupe during the recent Vice-Chancellor's Distinguished Merit Award (VCDMA) Week.

The prestigious VCDMA accolade is awarded to students chosen by a selection panel. It includes a financial component of R70 000 in first year and covering tuition fees in the second and the third year (with certain terms and conditions). It also includes sponsorship for the EyeBrainGym programme of LectorSA, which helps with reading and comprehension of large volumes of academic material.

The award-winning students attended a virtual VCDMA Welcome and Leadership Conference between 1 and 5 March 2021. During this conference they met the Vice-Chancellor virtually and listened to various inspirational and knowledgeable speakers from the University of Pretoria, including Professor Carolina Koornhof, Executive Director: Finance and Student Enrolment; Professor Norman Duncan, Vice-Principal: Academic; and Dr Cila Myburgh, Director: Department of Enrolment and Student Administration: and many other members of UP leadership. They also listened to senior students giving their tips on how to cope at university. They were told that the academic journey is not always easy, but that they are always able to reach out for the vast array of professional support provided by the University of Pretoria.

University of Pretoria (UP) Vice-Chancellor Professor Tawana Kupe (centre) with recipients of the Vice-Chancellor's Distinguished Merit Award and members of UP's Student Representative Council.

News

295 students part of VCDMA programme

The conference included a three-day virtual leadership experience facilitated by Common Purpose South Africa. During this time, the students were challenged to engage with real work problems and provide solutions that can be tested and implemented.

According to the virtual event organiser, Wallace Isaacs, Deputy Director: Enrolment and Student Administration, 'Part of the purpose of the VCDMA is to encourage students to complete their degree in the shortest time possible and to go on to postgraduate studies at UP. In this way, they are encouraged to make a significant difference in their area of study, thus encouraging them to ultimately become part of the FlyHigher@UP programme, which supports students through postgraduate studies. The greatest benefit, however, is the relationships and cross boundary networks that they form, which might come in handy in the future.'

The VCDMA programme was established in 2016 with only 13 students, and has grown significantly over the years to 295 students from different provinces and backgrounds, in South Africa and beyond.

Addressing the VCDMA recipients, Prof Kupe encouraged the recipients to maintain their already high academic standard.

'You must work extremely hard to keep this award, and it is important to sustain excellence in all that you do. Work hard and excel, ask for help from your advisors and lecturers when you are uncertain of something, and complete your studies in the minimum time.

Graduate so that you can enter the world of work and start making a contribution to society. Remember, you made the right choice to study at UP. The Finish Line is Yours – we want you to FLY@UP!'

A 'competitive yet supportive environment'

Willem Kurpershoek, Mpumalanga's top matric learner for 2020 from Hoërskool Middelburg, is one of the VCDMA awardees. Willem (whose sister is also a recipient) is pursuing a medical degree. He says he chose to study at UP because it has one of the most recognised medical faculties in South Africa. 'I truly believe that UP will not only assist me in becoming a great doctor, but that the institution will allow me to grow as a human being. UP has a unique atmosphere where excellence is the main goal, and I will strive for excellence through UP.'

'Academically speaking I look forward to excelling in this competitive yet supportive environment, to become the best version of myself academically and on the social front. I am looking forward to meeting new people, especially new residence brothers at House Ukuthula. Also, I look forward to social events hosted by UP – should the COVID-19 pandemic allow it.'

Unathi Baloyi, who hails from Limpopo, says she chose to study at UP because the institution has the highest pass rate within its Chartered Accounting programme. Having obtained a 92% pass rate in the South African Institute of Chartered Accountants (SAICA) qualifying exam, she saw it as having an environment which could ensure her growth holistically.

'I look forward to meeting new people and learning new things at UP. Also, I look forward to growing and starting my career journey.'

KwaZulu-Natal born Ntando Dube says her reason to want to study at UP is that through her correspondence with the university she felt valued and appreciated, but more than anything she knew that she would feel at home at UP.

'I am looking forward to excelling and learning new things.'

News

What is DIGITAL LITERACY and why is it important?

By Phumelele Tshabalala

If you are reading this, you must be literate, which means you can read and write. In certain contexts, literacy can also be defined as competence or knowledge in a specific field. With this in mind, what do people mean when they say that digital literacy is essential to navigating the digital world?

What is digital literacy?

According to Developing Employability, an Australian Educator site, 'digital literacy is the ability to identify and use technology confidently, creatively and critically to meet the demands and challenges of life, learning and work in a digital society'. In other words, you need to be competent in the use of digital technologies such as the internet, social media and smartphones. Your competence can be a skill that can give you access to career opportunities. This is one of the reasons for the importance of digital literacy today.

Why is digital literacy critical?

There is an increasing demand for digital skills, particularly in the 'new careers of the future'. Employers now require professionals to possess the basic digital skills that will enable them to interact with people in digital environments, use information appropriately and collaboratively create new ideas and products. This means that you need to maintain your digital identity and wellbeing as the digital world changes quickly and continuously. People who lack digital literacy or competencies struggle to thrive in a technology-driven society. Corporate organisations need graduates and employees who can effectively do the following:

- Use digital tools to communicate, collaborate and solve problems.
- Find, evaluate and use online resources.
- Produce and effectively share knowledge.
- Create online content, rather than just being consumers of content.
- Curate data and media sources.

Finally, digital literacy is an unavoidable element of our digital world. You are never too young or too old to develop these skills. The best place to start is via YouTube (the second-largest search engine after Google) or a short course offered by an online platform.

Contact information
Tel +27 (0)86 100 7787
Email info@careerwise.co.za
Website www.careerwise.co.za

TOP FIVE KEY DIGITAL LITERACY SKILLS

Photo-visual literacy:
The ability to recognise a photo or infographic and understand the symbolism. You can intuitively 'read' the photo on the screen and understand the instruction and the message it conveys. For example, if you see an icon depicting a small trash bin, you immediately understand that it means 'delete'.

Socio-emotional literacy:
The ability to identify the advantage of working in the digital space while also being aware of the 'traps' and dangers that lurk in cyberspace and knowing how to avoid them.

Information literacy:
Knowing when information is needed and finding that information to solve the problem at hand. It includes maintaining a sceptical attitude when consuming information to identify fake news in this age of misinformation.

Reproduction literacy:
Digital reproduction literacy is the ability to integrate existing independent pieces of information to produce meaningful, authentic and creative work or interpretations.

Branching literacy:
Branching literacy refers to an understanding of the complexity of cyberspace. For many, this might develop quite naturally after years of learning how the digital world operates. It is the ability to navigate the internet and databases without getting 'lost' in cyberspace. In simple terms, it involves making a mental note of how you accessed a particular page, how to leave it, and how to open other tabs by choosing between visual options, etc.

News

Becoming DATA LITERATE in a data-driven world

By Phumelele Tshabalala

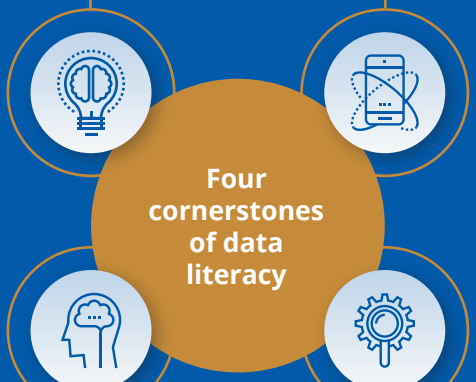
While one can safely assume that everyone with a digital identity is a digital citizen, one cannot assume that all digital citizens are data literate. The reason for this is that a digital identity essentially consists of any personal data existing online that can be traced back to you. The possession of an ID document or a birth certificate can make you a citizen of a country but does not automatically make you literate. In other words, being a citizen does not mean that you can read and write.

Data vs digital literacy

Gartner defines data literacy as 'the ability to read, write, and communicate data in context, including understanding data sources and constructs, analytical methods and techniques applied'. Data literacy should not be confused with digital literacy, which is the ability to identify and confidently, creatively and critically use technology to meet the demands and challenges of living, learning and working in a digital society. Digital literacy is concerned with the technology or tools we use (eg knowing the power of a device and having the ability to effectively use it to navigate your needs digitally, for instance, by conducting an online interview on your smartphone).

Understand: To start working with data, you must understand it. It can be presented in various forms, eg in a bar or pie chart. A user should be able to understand what is presented in a graph. What does the data tell us? Which insights can be derived from it?

Reason: The ability to reason with data is the most complex aspect of data literacy. Understanding, engaging with and analysing data is important, but one also needs to be able to speak the language of the data or reason with the data in a meaningful way. Reasoning can be communicated both verbally and visually (such as by using charts). The important thing is that one should be able to tell a story or convey a clear analysis of the data to an audience.



Engage: To engage effectively with data, people must be able to use it and know what the dataset contains. This includes knowing how the data is composed, understanding the type and origin of data, and knowing who uses it. This involves defining data and establishing the type of data fields and the value expected.

Analyse: This particular skills set is vital to becoming data literate. Understanding data and being able to engage with it assists the transition from creating information to creating insights. Information is processed, organised data presented in a given context.

How do you become data literate?

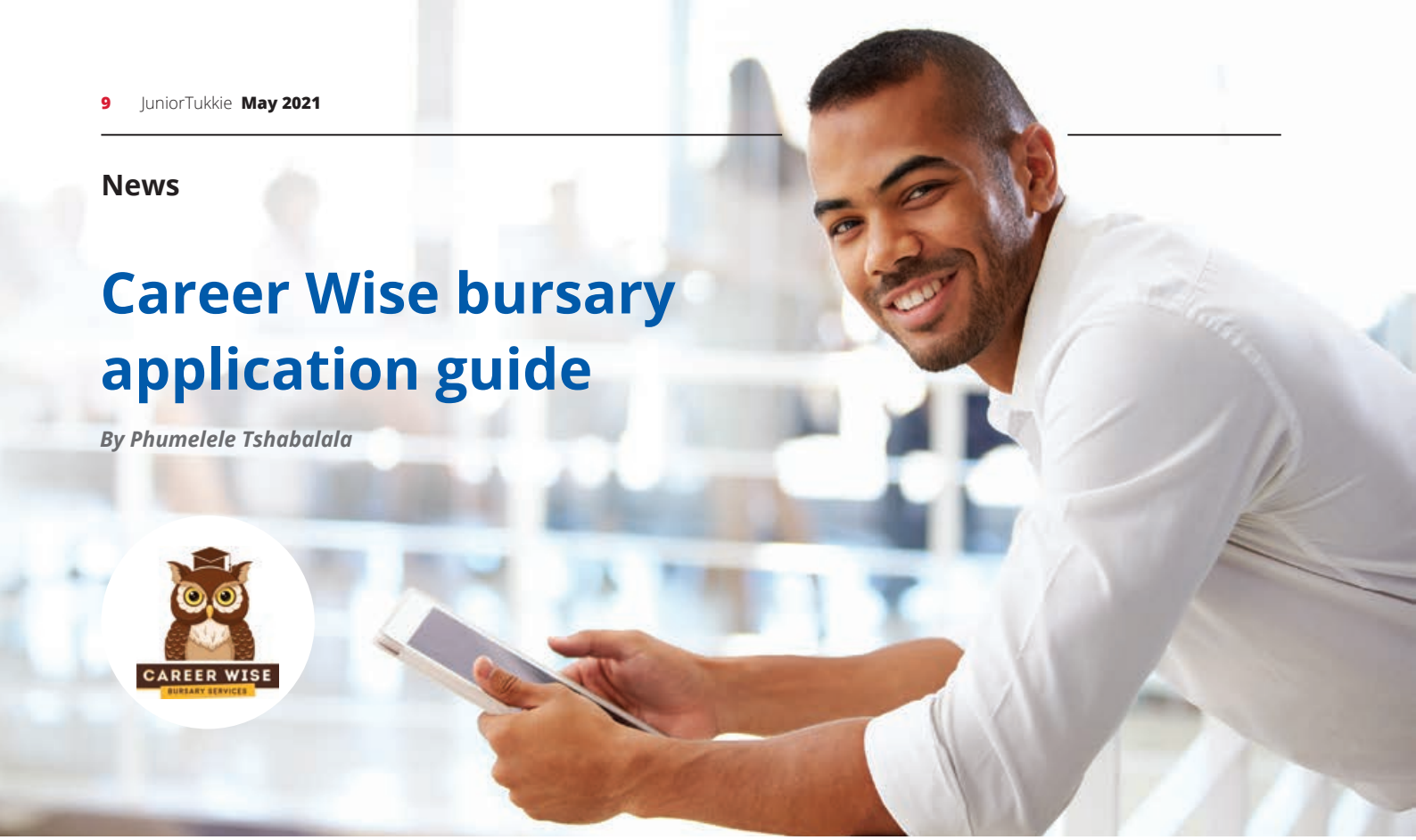
The digital world is fuelled by data, and your ability to interpret it will significantly impact your success in the 4th Industrial Revolution. You should take active steps to prepare yourself. The first step you can take is to audit your understanding and work your way through to your reasoning ability. Once you understand your shortcomings, you should take advantage of the internet, such as Google, to complete a free e-learning course on data literacy, such as the Data Literacy Project (https://thedataliteracyproject.org/) hosted by global data analytics leader Qlik. Once you have done some training, test your proficiency until you can demonstrate your competency by reading, writing, and communicating data in context.

Contact information
Tel +27 (0)86 100 7787 | **Email** info@careerwise.co.za | **Website** www.careerwise.co.za

News

Career Wise bursary application guide

By Phumelele Tshabalala



At Career Wise we administer a full range of bursary and scholarship offerings that cater to different financial circumstances and career preferences.

The requirements for each type of bursary or scholarship may vary. Our policies ensure that there is transparency and adequate support to ensure the students' success. Please note the following about our bursaries:

- Unless stated otherwise, the bursaries are available to South African citizens and permanent residents only.
- The bursaries are intended for studies at South African public institutions.

We also do recruitment for internship and graduate programmes on behalf of our sponsor clients.

How to apply

Visit the Career Wise website www.careerwise.co.za and navigate to the 'Applications' tab. Please read through the latest bursary adverts before proceeding with an online application. The adverts will indicate all relevant details, including the promotion code to be used.

1. See the latest bursary adverts for available funding.
2. Select 'Online application' or 'Download application form' (if applicable).
3. Follow the three-step application process and maintain your profile with your latest information.

How to follow up on your bursary application

- Log on to your application profile.
- Select the 'Profile overview' and make sure that you provide all the information required.
- You can update your profile overview by selecting 'Editing application profile'.
- Check your 'Application status' to see whether you have been considered for a bursary.

How much does it cost to apply?

Your application for a bursary with Career Wise is free of charge.

What do the bursaries or scholarships cover?

Most of the bursaries/scholarships administered by Career Wise are full bursaries or scholarships, which means they fully cover registration and tuition fees and include a book/cash allowance and residence and meal costs. If you are not accommodated at a residence, an allowance equivalent to the amount allowed for a university residence and meals is usually payable. Some bursaries may also include a computer allowance.

During a preliminary interview, you will be briefed regarding the exact conditions applicable to the bursary or scholarship for which you are being considered.

How will I be informed about the interview?

You will be contacted by a bursary administrator, who will provide you with all the details of the bursary or scholarship for which you are being considered via an email and a call to confirm receipt of email.

How will I know whether my application was successful?

We will send you a letter containing details of our offer. If you receive a final offer of a bursary or scholarship, we usually ask you to accept sooner rather than later to enable us to confirm numbers and consider other applicants if our offer is declined. Should you change your decision regarding your response to our offer, please inform us immediately so that we can consider other shortlisted candidates.

Contact information
Tel +27 (0)86 100 7787
Email info@careerwise.co.za
applications@careerwise.co.za
Website www.careerwise.co.za

News

Five intangible skills to develop in 2021

By Ferdie Heunis

The year 2020 will go down in history as a time when things that used to be normal became abnormal. However, the changes we were forced to adapt to can be seen positively as they allowed us to take stock of our lives and reconsider our priorities. We had time to think about whether making money, improving our social status and being part of the rat race was what we really wanted. Before 2020, the foundational aspects of society had almost become abnormal. However, I feel that the events of 2020 had a positive side as they made me aware of the intangible skills that we need to develop in 2021.

Ferdie Heunis

1

Intellectual curiosity

Your curiosity will allow you to become a problem solver. Take a couple of minutes every day to intentionally learn something new, for example, about an industry or something which you feel passionate about. If you do this repeatedly, you will soon find that you have become more eager to learn and better at solving problems.

2

Teachability

This is a tough one with which I used to struggle a lot.
I believe teachability is a heart issue. If you are reluctant to accept advice from others, you may be struggling with a bit of unhealthy pride. Become more teachable by being humble enough to listen to others and valuing their input.

3

Self-awareness

Self-awareness is your conscious understanding of your own character, feelings, motives and desires. Take a few minutes daily to evaluate your actions/interactions and ask yourself: Did my actions reflect my authentic character? Did I display pure motives?

4

Integrity

Let your YES be a yes, and your NO be a no. Integrity requires that we take a strong moral stand. We, therefore, have to be serious about making and keeping commitments (both public and private).

5

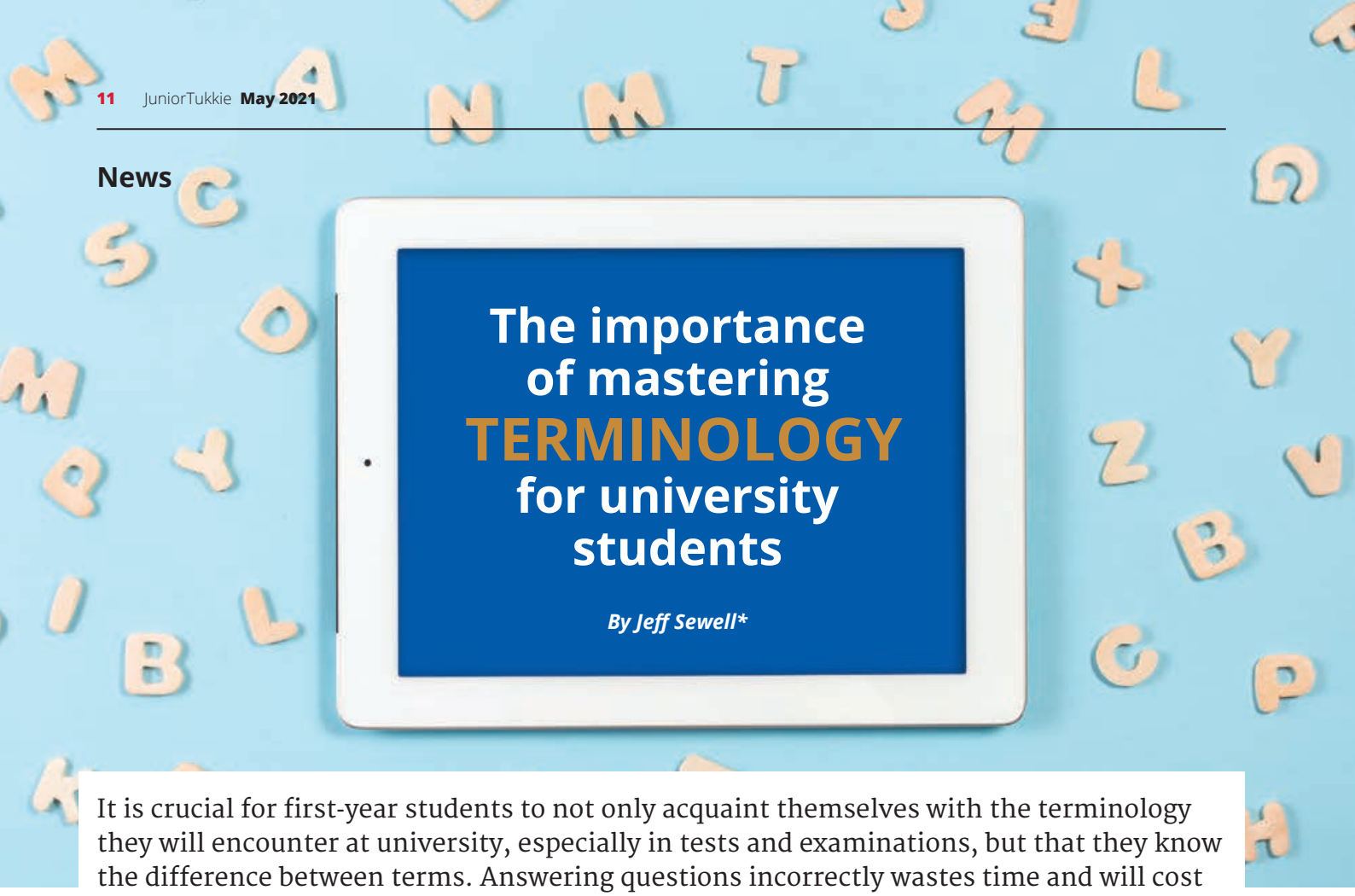
Empathy

Look at the people around you (home, workplace, etc.). Try to identify and name (to yourself) any emotion they may be experiencing during a difficult time. If you can learn to understand what others feel, you will be able to show more EMPATHY.

Contact information
Website www.roarrr.co.za

ROARRR
IDENTITY IS EVERYTHING

News



The importance of mastering TERMINOLOGY for university students

By Jeff Sewell*

It is crucial for first-year students to not only acquaint themselves with the terminology they will encounter at university, especially in tests and examinations, but that they know the difference between terms. Answering questions incorrectly wastes time and will cost you marks. The helpful guide below contains frequently-used terms and their definitions, followed by helpful practical examples.

VERB	MEANING
Account	*Account for:* state reasons for, report on *Give an account of:* narrate a series of events or transactions
Analyse	Identify components and the relationship among them; draw out and relate implications
Apply	Use, utilise, employ to a particular situation
Appreciate	Make a judgement about the value of
Assess	Make a judgment of value, quality, outcomes, results or size
Calculate	Ascertain/determine from given facts, figures or information
Clarify	Make clear or plain
Classify	Arrange or include in classes/categories
Compare	Show how things are similar or different
Construct	Make; build; put together items or arguments
Contrast	Show how things are different or opposite
Critically analyse/ evaluate	Add a degree or level of accuracy depth, knowledge and understanding, logic, questioning, reflection and quality to (analysis/evaluation)
Deduce	Draw conclusions
Define	State meaning and identify essential qualities
Demonstrate	Show by example
Describe	Provide characteristics and features
Discuss	Identify issues and provide points for and/or against

VERB	MEANING
Distinguish	Recognise or note/indicate as being distinct or different from; to note differences between
Evaluate	Make a judgement based on criteria; determine the value of
Examine	Inquire into
Explain	Relate cause and effect; make the relationships between things evident; provide why and/or how
Extract	Choose relevant and/or appropriate details
Extrapolate	Infer from what is known
Identify	Recognise and name
Interpret	Draw meaning from
Investigate	Plan, inquire into and draw conclusions about
Justify	Support an argument or conclusion
Outline	Sketch in general terms; indicate the main features of
Predict	Suggest what may happen based on available information
Propose	Put forward (for example a point of view, idea, argument, suggestion) for consideration or action
Recall	Present remembered ideas, facts or experiences
Recommend	Provide reasons in favour
Recount	Retell a series of events
Summarise	Express concisely the relevant details

* This glossary of terms was developed by Jeff Sewell, District Science Consultant (Parramatta-Blacktown). NSW Department of Education and Training Standards Authority (2002). www.boardofstudies.nsw.edu.au.

News

Scaffolds to assist students interpret the Stage 6 Glossary of key words

The Stage 6 Glossary of key words was published by the NSW Board of Studies in 1999 (within the document: The New Higher School Certificate: Assessment Support Document).

The Glossary's purpose is to help provide a common language and consistent meaning for what students are expected to be able to do as described in the Higher School Certificate syllabus outcomes, objectives, performance bands and examination questions. The scaffolds published here were developed by Jeff Sewell, District Science Consultant, Parramatta-Blacktown, and have been successful in helping students interpret key words to develop better responses for course work and assessment tasks that use them.

Currently, there are six scaffolds, for the following key words:

- Analyse
- Assess
- Compare
- Describe
- Discuss, explain and evaluate
- Justify

NOTE: In 2002, the NSW Board of Studies provided further advice about the use of the Glossary of key words. See 2002 HSC Update Newsletter 2 available at www.boardofstudies.nsw.edu.au

Analyse

Identify components and the relationships between them; draw out and relate implications

Component: Component: Component:	Relationship between components:

OR

Outline of an implication: Outline of other implications:	Relationship between implications:

Assess

Make a judgment of value, quality, outcomes, results or size

Pros (advantages): ▪ 1 ▪ 2 ▪ 3	**AND**	Cons (disadvantages): ▪ 1 ▪ 2 ▪ 3

Judgement:

Compare

Show how things are similar or different

Objects being compared:

How similar: ▪ 1 ▪ 2 ▪ 3	**AND/OR**	How different: ▪ 1 ▪ 2 ▪ 3

Describe

Provide characteristics and features

Object/thing being described:

Characteristics/features:
- 1
- 2
- 3

Discuss, explain and evaluate

Identify issues and provide points for and/or against

Issue identified:

Points for: ▪ 1 ▪ 2 ▪ 3	**AND/OR**	Points against: ▪ 1 ▪ 2 ▪ 3

Justify

Support an argument or conclusion

Argument/point of view/conclusion:

Points supporting the argument/point of view/conclusion:
- 1
- 2

News

UP's *Pre-University Academy* is a hub of learning and support in Mamelodi

By Anthea Pretorius

The Saturday programmes for Grade 8 to 12 learners include classes in Mathematics, Physical Sciences and Natural Sciences, creative writing, language and literacy skills, computer literacy and preparation for examinations. Learners receive extra help with their schoolwork and are prepared for studying at a university.

Learners attending the programmes have the opportunity to participate in several community engagement activities and activities organised by the Science Club and the Art Club. Committed Artists for Cultural Advancement, a non-profit organisation established by musicians from around Pretoria, allows them to explore their musical talent and personal creativity in a safe and supportive environment.

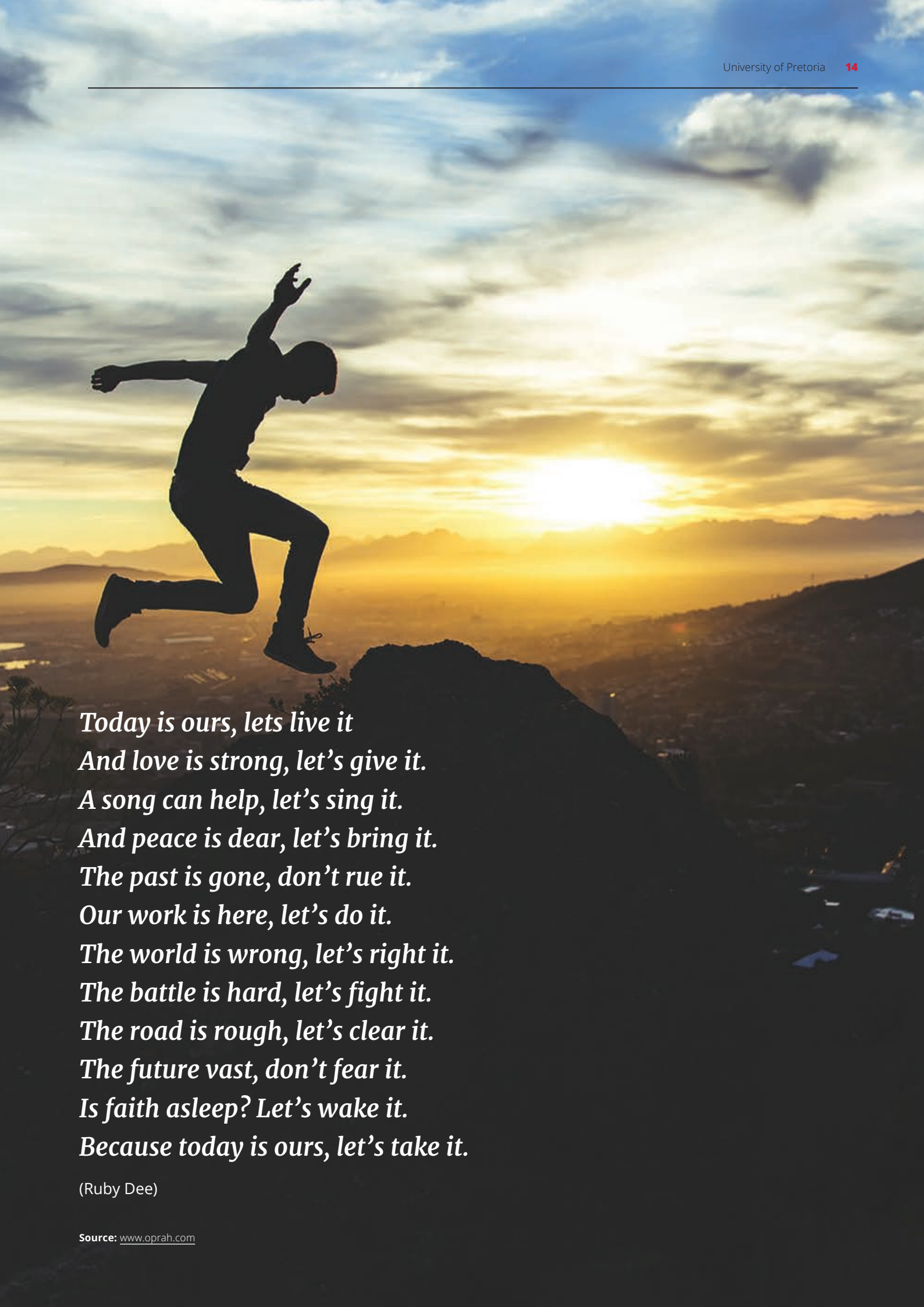
After initially catering for 500 learners, the Pre-University Academy (PUA) now has 30 000 learners, mainly from the 20 schools in Mamelodi and the surrounding areas, benefiting from its programmes. PUA Manager Moloko Malahlela explained: 'Our Saturday programmes aim to improve learners' academic performance. We also develop their critical thinking skills and independence. We help them make a seamless transition from school to university by familiarising them with the campus environment and informing them of what they can expect so that they feel at home when they arrive on campus.

The Itsotseng Psychology Clinic (run by the Department of Psychology at UP) makes sure that learners realise that their hopes and dreams are achievable. Counsellors offer counselling to parents and their children to prevent the latter from dropping out or giving up.

Watch a video on what UP's Pre-University Academy can offer here:

youtu.be/JJoDz727NlI

Source: www.up.ac.za/usr/news/post_2958271-the-guiding-hand-of-ups-pre-university-academy | Top graphic adapted from freepik.com.



Today is ours, lets live it
And love is strong, let's give it.
A song can help, let's sing it.
And peace is dear, let's bring it.
The past is gone, don't rue it.
Our work is here, let's do it.
The world is wrong, let's right it.
The battle is hard, let's fight it.
The road is rough, let's clear it.
The future vast, don't fear it.
Is faith asleep? Let's wake it.
Because today is ours, let's take it.

(Ruby Dee)

Source: www.oprah.com

News

Prof Ryan Blumenthal separates facts from fiction on lightning

In a *Research Matters* article, Prof Ryan Blumenthal writes,

‘There is a common misconception that most lightning victims are struck directly by a “bolt” of lightning from the sky, …where the victim is injected with millions of amps and billions of volts. The victim will not see it, hear it or even feel it. This is not always the case.’

Lightning is measured by ground flash density.

Prof Blumenthal explains, ‘This is the amount of lightning that strikes an imaginary piece of ground (one square kilometre) per year,’ explains Prof Blumenthal. ‘Giant’s Castle in the Drakensberg mountain range registers a lightning strike rate of 26 flashes per square kilometre each year. This means that one square kilometre of land in the Giant’s Castle region will be struck, on average, 26 times a year. Touch potential accounts for approximately 15 to 25% of casualties.

‘Side flashes occur where high voltage passes through a tall object such as a tree and then discharges into a person standing close or under the tree. This mechanism accounts for 20–30% of casualties.’

LIGHTNING FACTS

- At any moment, there are about 2 000 thunderstorms worldwide, producing about 100 lightning strikes per second, or eight million strikes each day.
- Worldwide, lightning kills up to 24 000 people each year; South Africa has one of the highest death rates in the world as a result of lightning strikes.
- In South Africa, the lightning season runs from September to April, with most thunderstorms occuring between 15:30 and 18:30.
- Published data suggests the death rate due to lightning strikes in South Africa varies from 1.5 to 8.8 per million people per year (compared to 0.3 to 2 lightning deaths per million people in the US). South Africa is estimated to lose 80 to 100 people per year due to lightning.
- Two of the safest places to shelter are inside a modern building or sitting inside a fully enclosed metallic car with a solid metal roof.

LIGHTNING DO’s

- Stay indoors
- Stay away from open doors and windows
- Get out of the water if you’re swimming, and off small boats
- Stay in your car if you are travelling – cars offer excellent protection from lightning
- Seek shelter in modern, well-grounded buildings
- If there is no shelter, avoid the highest object in the area
- If you feel an electric charge (if your hair stands on end) or the luminous glow of St Elmo’s fire is observed emanating off the top of your head or back of your neck, lightning might be about to strike you. Best to squat into the “lightning crouch” position.

Read the full article here: www.up.ac.za/research-matters/news/post_2956542-up-expert-details-the-true-terrifying-nature-of-lightning

News

What is an acoustic ecologist?

By Anthea Pretorius

Many people feel very uncomfortable with silence and will immediately fill it with sound, but after listening to a fascinating podcast featuring Gordon Hempton, interviewed by Krista Tippett, the founder of *On Being* (link below), I realised how essential silence is for our mental and physical wellbeing.

Gordon Hempton is an acoustic ecologist and the founder of the *One Square Inch of Silence Foundation*, which was recently broadened to become *Quiet Parks International.*

Gordon collects sounds from all over the world and explains: 'Silence is an endangered species on the verge of extinction. Quiet is not the absence of sound, but an absence of noise.' He has always been an attentive listener and can screen out everything unimportant when focusing on natural sounds—an ability that has changed his life.

We may not realise it, but our ears are awake all the time, even while we are asleep

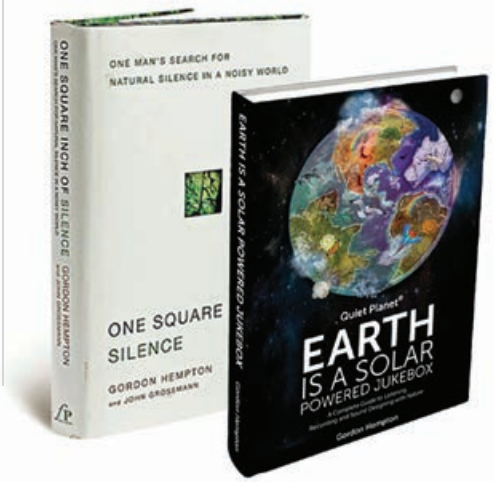
Gordon agrees that the modern world is polluted by noise but reminds us that 'the ability to see is not essential for survival. Although some animal species living in caves or at the bottom of oceans are blind, every higher vertebrate species can hear. Animals depend on hearing for their survival.

When you are in a quiet place, he explained, your listening horizon extends over miles in every direction. Natural silence is not a vacuum or an emptiness. This kind of silence is 'presence' and includes sound. True silence does not exist, not on planet Earth with its atmosphere and oceans. 'Silence is the experience of place, what it means to be in a place.'

Earth is a solar-powered jukebox

There is something Gordon calls 'the poetics of space', which feeds our souls. He suggests that you take your pre-schooler for a night walk and pay attention to everything you hear. A quiet place, he says, is 'the think tank of the soul'. Backpacking trips into wilderness areas attune your body to nature. Become aware of night sounds and wake up to a great experience in nature. Empty your mind of thoughts. When we are in a noisy place in an urban environment, we become isolated and exhibit antisocial behaviour because our intimacy level with others decreases. We are less in touch and do not open up. We are listening creatures, but our ability to listen is somehow destroyed or interfered with in noise-filled environments. Listening increases our sense of security, therefore quiet places generally tend to be secure and calm us.

Gordon has written two books, namely *One square inch of silence: One man's quest to preserve quiet*, co-authored with John Grossmann, and *Earth is a solar-powered jukebox: A complete guide to listening, recording, and sound designing with nature*. He has also produced more than 60 albums of vanishing natural soundscapes, for example, *Global Sunrise: The Musical Sounds of Dawn.* His podcast is called *Sound escapes.*



Source: https://onbeing.org/programs/gordon-hempton-silence-and-the-presence-of-everything

Engineering, Built Environment and Information Technology (EBIT)

...and the Oscar goes to—world-famous EBIT alumnus

By Estie Powell

Nicol Verheem obtained a degree in electrical and electronic engineering from the University of Pretoria and has since been honoured by the Academy of Motion Picture Arts and Sciences in the Scientific and Technical Awards (Sci-Tech) category.

Verheem's company invented the Teradek Bolt, a wireless radio transmitter that can transmit uncompressed video to a receiver over 3 km away with no delay. His innovative project started in 2010, when digital cinematography was relatively new and cinematographers were eager to use cameras in more flexible ways, increasingly making use of Steadicams, dollies, jib arms and cranes (plus, drones were taking off), but coaxial cables were holding things back. Teradek decided that this wasn't good enough.

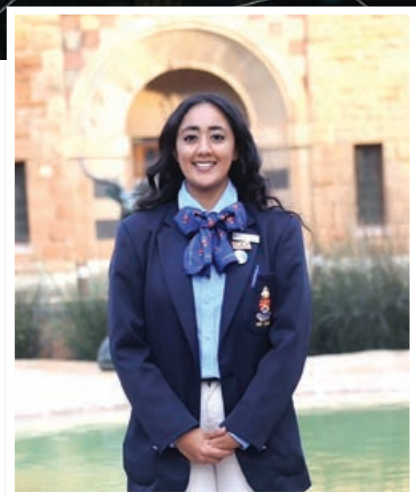
The team developed a miniature wireless transmitter, the Teradek Cube, which was small enough to mount on a digital single-lens reflex (DSLR) camera and presented a big opportunity in untethering the monitor from the camera. It was capable and sturdy, yet still affordable. However, it had a small but noticeable delay of about four frames. They then discovered Amimon's technology, which managed to send uncompressed video over a wireless signal without any delay, but the product was meant for living rooms rather than cinema production.

Teradek and Amimon worked closely together to refine the technology and create the Teradek Bolt. Over 100 000 systems have been sold, and many productions around the world have benefited from cameras being freed from their cables.

Oscar winner – Nichol Verheem

Uwaiza Abdool Sattar, a success story of student leadership

Looking at the mesmerising world and listening to the voices of the people around me made me wonder where I will eventually fit in and what my contribution will be.



Uwaiza Abdool Sattar

I have come a long way since mumbling my first few words, forcefully crawling towards my most wanted toy and taking my first steps. The life cycle starts slowly, but with effort, great heights can be achieved.

After completing school, I enrolled at the University of Pretoria to study information technology. Suddenly, I was surrounded by career-driven students walking haphazardly into lecture rooms, voices echoing in hallways, and students anxiously searching for information in the libraries.

I am a final-year BIT (Information Systems) student. This degree offers exciting opportunities in the new digital economy. I want to pursue my dream of becoming a systems analyst and driving the development and design of different systems that will improve the productivity of various businesses and organisations.

The programme is constantly changing as a result of continuous innovation and the consequent availability of new tools, resources and techniques.

As an EBIT student, I have been granted the opportunity to take on various leadership roles. In my second year, I had the privilege of serving as the Secretary of the JuniorTukkie Student Ambassadors Society and of EBIT House. This year, I am the Chairperson of EBIT House and the SRC Academics Representative. In filling these roles, I have gained team-building skills and learned the value of good human relations and fostering potential.

The Science Technology Engineering and Mathematics (STEM) programme promotes creativity and encourages leaders to take risks in applying their knowledge. This will assist in developing problem-solving analysis and encourage adaptation to different scenarios. Programmes like these increase students' confidence and encourage them to tackle problems with determination to become next-generation innovators.

Innovation is the gift that keeps on giving and is revolutionising the world. It is the result of continuous inspiring ideas, processes and developments and keeps everyone on the edge of their seats.

My dream for Africa is that its people feel valued and proud, standing hand-in-hand in unity despite their differences. We should accept our flaws, celebrate our successes and bring forth a remarkable generation. Africa has a rich cultural and ethnic diversity, a unique heritage and much more. I would like to contribute to ensuring a better life for all and the dissemination of knowledge that will equip people to make remarkable contributions. Everyone has the potential to make a difference, and today is the day to take the first step!

Engineering, Built Environment and Information Technology

Mechanical and Aeronautical Engineering opens its doors to the Massachusetts Institute of Technology (MIT)

By Gerhard Rencken

I grew up in Wartburg, a small agricultural village in the KwaZulu-Natal Midlands, where I attended Wartburg Kirchdorf School for my entire school career. I have always had a passion for understanding how and why things work the way they do, and constantly tried to improve existing systems. I realised that studying engineering would enable me to turn that passion into a career. I applied for admission to the University of Pretoria, whose engineering faculty is the best in the country.

The MIT exchange programme has existed for many years, and every year students in the second-year BEng (Mechanical Engineering) class are invited to submit applications for participation in the programme. The application process includes an interview with Professor Josua Meyer. I believe the base criterion is academic performance, but a few other factors also come into play. I was fortunate enough to qualify for participation in the exchange programme, which was an incredible opportunity to attend the best engineering faculty in the world and study alongside some of the best engineers of our generation.

The online environment that we were unexpectedly exposed to posed several challenges, and this also applied to our involvement with MIT. The time difference was probably the most difficult challenge. Working from South Africa, I often had classes after midnight and had to stay up by myself while everyone else in the house was asleep. This meant that I had to change my entire routine and sleep schedule. However, I learnt many valuable skills through the online environment, including developing a higher level of communication efficiency during limited contact time. My most valuable takeaway from the experience was that it changed my way of thinking and problem-solving and gave me the confidence to make decisions and suggestions.

I hope to follow a career in South Africa, ultimately working in the renewable/sustainable energy sector. Our country has incredible potential for sustainable energy production, and the current high demand for energy offers the ideal opportunity to further explore this potential. A steady, sustainable power supply could unlock the door to many more developments for our nation.

For all students who want to study mechanical and/or aeronautical engineering, my advice is: Immerse yourself in the subject, do your own research on topics, aim high and do not be satisfied with merely passing the next test. If the topics interest you, the learning will come naturally.

EBIT embraces e-learning as we enter Society 5.0

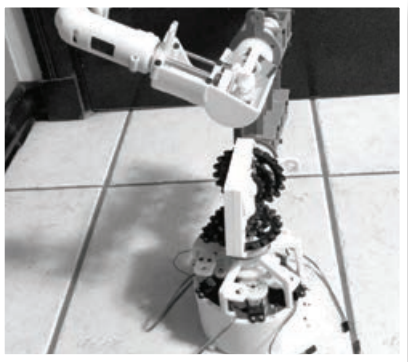
We live in exciting times that present us with numerous new innovations and opportunities. However, as a society, we also face many challenges. You are starting your studies in a time known as Society 5.0. This means that we are trying to answer both the present and future economic and societal challenges faced by humanity using all the available technological advances.

In 2020, the use of e-learning systems became highly pertinent during the worldwide COVID-19 lockdown periods, when teachers and students had to adapt to remote teaching and learning. EBIT makes use of a hybrid model of teaching and learning and focuses on student success through the use of all available digital resources. Although online learning has the potential to be challenging, the Faculty supports its students to increase overall module success rates and minimum-time completion rates, even amidst disruption.

Engineering, Built Environment and Information Technology

Introducing the kinematic robotic arm

Industrial robots are commonplace on workshop floors. They perform repetitive tasks where accuracy and repeatability are required. Existing models for robotic arms are based on one of two designs, serial or parallel, each of which has advantages and disadvantages associated with its use.



Robotic arm

An ideal system would be one that offers high accuracy, repeatability and dynamic performance at high speeds, along with low vibration, high system stiffness, agility, a low footprint-to-end effector reach ratio and a large operating workspace, while supporting prismatic and revolute joints.

Dr Sunveer Matadin worked with EBIT's Department of Mechanical and Aeronautical Engineering to develop a new invention that introduces a hybrid concept for a robotic arm that aims to leverage the benefits of serial and parallel kinematic machines, while minimising their disadvantages.

The hybrid system has two kinematic chains. The first one has a link design and the form of a serial kinematic machine. The motors that power these links are fixed and located at the base of the system, as with a parallel kinematic machine. Power is transmitted from the motors to their relevant links via drive trains composed of gear and shaft combinations.

The second kinematic chain is formed by the drive trains embedded in the links that form the body of the manipulator. The drive train configurations can be purely parallel link-embedded shafts, purely concentric link-embedded shafts or a combination of the two. The serial-parallel kinematic hybrid system offers an almost spherical working envelope.

Engineering, Built Environment and Information Technology

Top-down excellence

The Dean of EBIT has been appointed as Chair of the Global Engineering Deans Council (GEDC). Prof Sunil Maharaj is the first Dean from an African university to be appointed as the Chair-Elect of the GEDC. He will work alongside Prof Sirin Tekinay of the American University of Sharjah until he assumes the Chair position in November 2021.

In this role, Prof Maharaj will work closely with the International Federation of Engineering Education Societies, which links global organisations, professors, students, corporate entities, UN agencies and other multilateral global organisations, as well as leaders throughout the world.

The GEDC's vision is to enhance the capabilities of engineering deans to transform engineering schools in support of societies in a global economy. As a global network, it can leverage its collective strengths for the advancement of engineering education and research. The GEDC's network includes over 500 leaders and stakeholders representing over 40 countries from all continents.

In 2020, Prof Maharaj chaired the GEDC and World Engineering Education Forum's first virtual conference about disruptive engineering education amidst global challenges. Participants in the conference considered how to increase the diversity of people working in engineering, especially in terms of increasing the representation of black women. Although this is a challenge across the globe, there is a big opportunity for women interested in engineering.

Prof Maharaj believes that there is a need for universities in the developing world to innovate by constantly promoting disruptive engineering. South Africa is the only country in sub-Saharan Africa that is part of international accreditation bodies, including being a signatory to the Washington Accord. As such, the country's engineers are participating in the global space.

Representatives of the GEDC commend Prof Maharaj's deep commitment to strengthening the role of African universities.

Engineering, Built Environment and Information Technology

Chemical engineering is moving boundaries

By Reuben Swart

'When I think back to what I knew about chemical engineering when I decided it was the path I was going to follow, I realise that I had no idea what it was. I was in Grade 10, I enjoyed Chemistry, and Mathematics came easily to me. Watching shows like *MythBusters* and *Breaking bad* solidified my fascination about the role of engineers and the mad scientist I could one day be if I studied chemical engineering. The fact that chemical engineering (or process engineering, as it is commonly referred to in industry) ranks high among the most highly paid professions one can enter with an undergraduate degree, also influenced my decision.

So, what was chemical engineering like and what can I do with the degree? The first chemical engineering-specific module I had was CIR 113—the foundation of what chemical engineering is. I loved it. It taught us how to work with a variety of different units and develop our own style of problem-solving. I am currently busy with my PhD focusing on biochemical engineering, on my way to becoming that mad scientist I always dream of being, and I still find myself using those very skills I was taught in the first days of the degree. I have followed a route that not many of my fellow undergraduate students did—most went directly into the workplace. The academic route is definitely not for everyone; it takes dedication and focus, with far less income compared to going to work directly, but I have found it rewarding as I have honed skills that were merely introduced in the undergraduate degree.

Among my friends who went directly to work, the types of jobs they are currently doing is incredibly varied. Many followed the typical chemical engineering route and are working as process engineers for Sasol or similar companies. Some are working on massive chemical plants designing pumps and chemical reactors, while others found a love for coding, which has become a large part of the degree, with many of the final-year modules relying heavily on it. The latter group have found themselves in start-up artificial intelligence companies and large financial firms.'

'There is almost no limit to the fields that chemical engineers can find themselves in. We are taught creative problem-solving and how to learn on the fly, which many industries find attractive. It is by no means an easy degree, but nothing worthwhile comes easily.'

'An attitude of wisdom means acting on the best information you have while doubting what you know.'

(Bob Sutton)

Why thinking like a scientist is good for you

By Dr Jill Suttie

In an article entitled 'Why thinking like a scientist is good for you', published by Greater Good, Dr Jill Suttie reported on an interview with organisational psychologist Dr Adam Grant, who made the following statement: 'In a changing world you have to be willing and able to change your mind; to be flexible in your thinking; to be open to learning; and to be able to adapt and change, rather than stubbornly cling to your ideas and opinions. This skill is crucial not only for facing crises like the pandemic but also for navigating complex social issues and making good decisions.' During the interview, various questions were asked, to which Dr Grant gave the following answers:

What is cognitive entrenchment?

'It is when you have so much knowledge in an area that you start to take for granted assumptions that need to be questioned. Sometimes the strategies we have used for years do not apply, yet we resist because we have internalised a certain way of doing things. We become comfortable with the way we have always done things. Our beliefs and opinions are influenced by the people in our social circles.'

What is a scientific mindset?

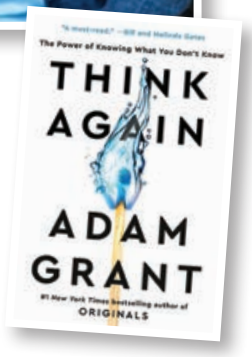
'When we are in preacher mode, we are convinced we are right; when we are in prosecutor mode, we are trying to prove someone else wrong; and when we are in politician mode, we are trying to win the approval of our audience.

Thinking like a scientist means that you favour humility over pride and curiosity over conviction.

- True humility means that you are grounded and recognise your strengths and weaknesses. You realise that you are fallible.
- You believe in yourself but doubt your current knowledge or skills.
- You know that there are things you do not know and are eager to discover new things.
- You do not become too attached to your opinions.
- You do not allow your ideas to become your identity.
- You look for reasons why you might be wrong, not only for reasons why you believe you are right.
- You surround yourself with people who can challenge your processes, not only with those who agree with your conclusions.
- You admit that you may be wrong and that your knowledge may be incomplete.
- You acknowledge that new evidence could influence you to change your mind.
- You acknowledge your stubbornness or inclination to go into 'logic mode' and bombard people with facts and data.

Dr Grant's closing remark was: 'If you can embrace the joy of being wrong, then you have the opportunity to anchor your identity more in being someone eager to discover new things than in being someone who already knows everything. Too many of us become trapped in mental prisons of our own making. If we could commit ourselves to rethinking, we might have a slightly more open-minded society.'

Dr Adam Grant



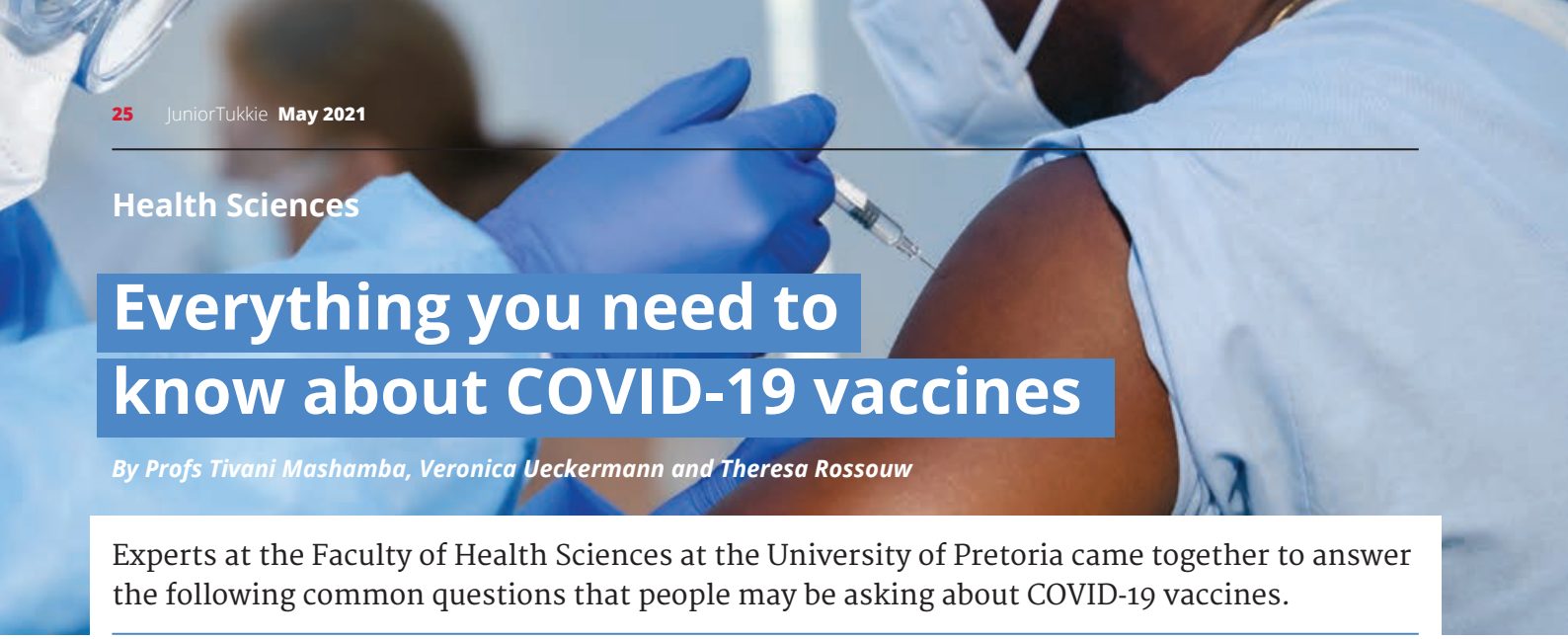
Read Adam Grant's book titled Think again: The power of knowing what you don't know will be published by Viking in 2021.

'No one enjoys being wrong, but I have learned that being wrong means I've learned something.

If I find out that I was right, there's no new knowledge or discovery. It frees me to keep learning.'

(Danny Kahneman)

Source: https://greatergood.berkeley.edu/article/item/why_thinking_like_a_scientist_is_good_for_you?utm_source=Greater+Good+Science+Center&utm_campaign=a9ef7c3218-EMAIL_CAMPAIGN_GG_Newsletter_March_25_2021&utm_medium=email&utm_term=0_5ae73e326e-a9ef7c3218-74636615



Health Sciences

Everything you need to know about COVID-19 vaccines

By Profs Tivani Mashamba, Veronica Ueckermann and Theresa Rossouw

Experts at the Faculty of Health Sciences at the University of Pretoria came together to answer the following common questions that people may be asking about COVID-19 vaccines.

Why should we be vaccinated, and what are the benefits of agreeing to be vaccinated against COVID-19?

The age-old cliché, prevention is better than cure, is very appropriate in the context of COVID-19 as we do not yet have a definitive cure. COVID-19 can have severe and life-threatening complications, and vaccination can save lives—not only our own, but also the lives of others.

Is the vaccine safe?

Yes, the vaccines have gone through all the usual clinical testing steps, namely Phase 1, 2 and 3 trials undertaken to establish their safety and efficacy and the optimal dose. These phases were conducted more rapidly than usual, often in parallel. Thousands of participants were involved in the studies and were closely monitored. It should also be borne in mind that scientists gained extensive experience from the effects of the first Severe Acute Respiratory Syndrome (SARS) epidemic and Middle East Respiratory Syndrome (MERS).

What is the acceptable percentage of efficacy required to consider a vaccine adequate?

According to the World Health Organisation, the minimum percentage is 50%.

Do any of the vaccines have side effects? If so, what are they?

Allergic reactions are rare, but there may be some redness and tenderness at the injection site for a few days. The most common side effects experienced by people who have been vaccinated are flu-like symptoms, such as body aches, headache or fever, which do not mean they have an infection but is a sign that their bodies are mounting an immune response—a good thing. A rare form of blood clots has been described after the Johnson & Johnson and AstraZeneca vaccines, but the risk is estimated to be 1 in a million.

Is it safe for people with co-morbidities to take the vaccine?

Yes, several co-morbidities, such as high blood pressure, heart disease, lung disease and obesity, increase the risk of dying from COVID-19. Therefore, the vaccine trials specifically enrolled people with co-morbidities to test the safety of the vaccines in those populations.

Can a COVID-19 vaccine cause infection with the virus?

No. Since the vaccine contains only a tiny portion of the virus and not the entire virus, it cannot give you COVID-19.

Who should avoid vaccination?

The vaccine is not registered for children. Therefore children, pregnant women and anyone who has previously had an allergic reaction to a Messenger Ribonucleic Acid (mRNA) vaccine should not receive such a Coronavirus Disease (COVID) vaccine, as the Pfizer vaccine.

Do you have to continue wearing a mask after receiving the vaccine?

Yes. Although vaccines significantly reduce people's chances of getting COVID-19 and decrease the likelihood of severe illness or death, immunity is not immediate or necessarily complete.

Should I get the COVID-19 vaccine even if I have already had COVID-19?

Yes. While you should have some natural immunity after being infected with the virus, you need to be vaccinated to avoid possible future COVID-19 infection, this is not long lasting and may not protect against new variants.

Is the vaccine administered in two doses? What will happen if you skip the second dose?

If you do not receive the second dose, the efficacy of the vaccine will be significantly reduced, but this only applies to some vaccines. According to a recent publication, the Oxford vaccine, for instance, has only 76% efficacy after the first dose, but efficacy increases after the second dose.

Don't procrastinate—vaccinate!

Note: Prof Tivani Mashamba-Thompson is the Deputy Dean of Research and Postgraduate Studies in the Faculty of Health Sciences, while Prof Veronica Ueckermann is the Acting Head of Infectious Diseases and Head of the COVID-19 Response Team and Prof Theresa Rossouw is a Clinician Scientist and Professor in the Department of Immunology.

Health Sciences

UP researchers discover new compounds with the potential to eliminate malaria

By Prof Lyn-Marie Birkholtz

A team of researchers at the University of Pretoria (UP) has discovered potent new chemical compounds that show potential as candidates for both the treatment and elimination of malaria.

Prof Lyn-Marie Birkholtz, Professor in Biochemistry based in the Faculty of Natural and Agricultural Sciences and affiliated to the UP Institute for Sustainable Malaria Control (UP ISMC), and the incumbent of the South African Research Chair in Sustainable Malaria Control, was part of a team that shared this discovery. She explained: 'The breakthrough involves identifying unique compounds that can kill several stages of the malaria-causing parasite and can block the transmission of the parasite between mosquitoes.'

The deadly malaria parasite *Plasmodium falciparum* occurs in South Africa and is transmitted to humans by female *Anopheles* mosquitoes. Since only chemical drugs effectively kill these parasites, new anti-malarial drugs are urgently needed to address the growing concern regarding anti-malarial drug resistance.

Prof Birkholtz described the parasite as a 'shape shifter' as it can take on multiple forms once it has entered the human body. Some of these forms cause disease, and others allow the parasite to be transmitted back to mosquitoes to continue the life cycle. She added: 'To eliminate malaria, we must have the necessary tools to kill all the different forms of the parasite. We will then be able to cure patients of the disease and block the malaria transmission cycle, which is as important. Once this becomes possible, we will be able to eliminate malaria.'

To this end, the team searched for new chemical compounds to which the parasite has no resistance and discovered some compounds that kill the disease-causing form and others that block the parasite from infecting mosquitoes in the lab.

The two potent compounds target processes essential to the parasite's survival: one is a clinical candidate against tuberculosis that blocks cell membrane synthesis, while the other is an anti-cancer candidate that targets epigenetic mechanisms.

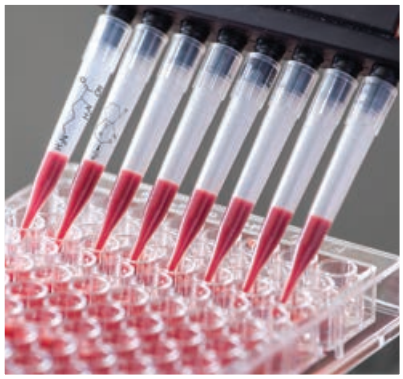
'This is the first time that these compounds were shown to have activity against malaria parasites, and since they are not toxic to humans, they show potential to be developed as antimalarials for both the treatment and elimination of the disease,' said Prof Birkholtz.

The team's discovery was made possible by using an open-source chemical compound set called the Pandemic Response Box, developed by the Swiss-based Medicines for Malaria Venture (MMV) and Drugs for Neglected Diseases Initiative (DNDi). This box contains compounds that can be used for drug repurposing/repositioning, a process by which drugs that have activity against a specific disease (eg cancer) can be reused for another condition (eg malaria).

Prof Lyn-Marie Birkholtz is a Professor in Biochemistry and the incumbent of the South African Research Chair in Sustainable Malaria Control, a transdisciplinary institute focusing on integrated innovations towards malaria elimination in South Africa. Professor Tiaan de Jager, Director of the UP ISMC and Dean of the Faculty of Health Sciences at UP, said: 'A discovery of this kind addresses Africa-centred societal challenges and attests to the leading expertise in antimalarial drug discovery at UP and in South Africa.'

Prof Birkholtz's team led the transmission-blocking drug discovery effort in partnership with the South African Malaria Drug Discovery Consortium (SAMDD), which included two other South African research chairs, namely the Chair in Drug Discovery at the Drug Discovery and Development Centre, H3D at the University of Cape Town, held by Prof Kelly Chibale, and the Chair in Medical Entomology at the WITS Institute for Research on Malaria at the University of the Witwatersrand, held by Prof Lizette Koekemoer, as well as scientists from the CSIR and international partners from the USA and Spain. The work has benefited from sustained funding received from the MMV and the Medical Research Council's Strategic Health Innovation Programme (SHIP).

Prof Lyn-Marie Birkholtz in the laboratory



Chemical compounds are screened

Economic and Management Sciences

EMS students *soar to new heights*

Students in the Faculty of Economic and Management Sciences (EMS) have proven that the solid foundation laid during their studies can ensure success despite any challenges that come their way. They managed to meet and exceed the demands placed on them during the 2020 academic year and quickly adapted to an ever-changing world. One way the Faculty trains a well-rounded new generation of business leaders, entrepreneurs, managers, and government officials who can maintain an innovative outlook in their respective working environments is by emphasising digital literacy.

Auditing students meet Alice, the robot auditor

Students from the Department of Auditing were introduced to Alice—the robot auditor used to provide assurance on various activities and transactions within the Bidvest group, which has multiple entities across the world and more than 130 000 employees.

According to Prof Kato Plant, Head of the Department of Auditing, students at the University of Pretoria will take part in a hackathon assignment that will require them to develop automated control activities that Alice must perform. 'The aim is to develop students' digital-savvy so that they can effectively identify IT risks and recommend effective IT controls within a complex business environment,' she said.

The original developers of Alice refer to her as 'the real-time overseer of the future... who provides on-time peace of mind to organisations'.

She has a background in data science and applies machine learning and artificial intelligence to do her job. Alice can use large sets of data and information to perform various functions; for example, she can search through salary payments for valid employees and provide an exception report to management of payments made to fictitious or invalid employees.

While it took auditors several weeks to perform a similar function in the past, it can now be performed by Alice in a few seconds. Alice has a résumé, so for more information, please visit www.bidvestalice.com/resume.

Budding entrepreneurs benefit from a free online youth entrepreneurship development programme

In partnership with UNICEF, Future Africa and UP Enterprises, the Faculty launched a very successful online entrepreneurship programme for the youth of South Africa. The programme was designed and facilitated by Prof Alex Antonites and Drs Muriel Serfontein-Jordaan and Dawie Bornman from the Department of Business Management.

The MY Business Series Programme is built for an entrepreneur at 'MY own pace, in MY own space, focusing on MY own'. It is a dynamic, high-impact technology-driven small business capacitation intervention that equips undergraduate students with the entrepreneurial and business skills required for successful functioning in a digital world.

This course assists those who have always dreamed of working for themselves. Prof Antonites stated that it is not an 'off-the-shelf' offering but customised to serve the student's personal needs. 'A huge portion of our population receive a low income, work long hours and often experience very little work satisfaction. Others are unemployed and battle to find work. This course serves exactly those. Starting and owning your own business is the answer to many socio-economic issues in Southern Africa,' he explained.

He added that the approach is practical, opportunity-driven, and flexible (no textbooks, no boring cases). 'We use highly skilled, equipped and internationally exposed lecturers in the field of entrepreneurship who will assist continuously by dealing with students' specific questions to establish a unique learning experience towards starting a performance-oriented new business. The learning experience is technology-driven and offers the opportunity to constantly engage with other learners during this course and even more after completing it.'

Economic and Management Sciences

Students from the award-winning department give back

The Department of Human Resource Management was named the Academic Industrial and Organisational Psychology (IOP) Department of the Year by the Society for Industrial and Organisational Psychology South Africa (SIOPSA).

This achievement was announced by Dr Marissa Brouwers, the 2019/20 SIOPSA President, during the SIOPSA Conference hosted virtually at the end of 2020. 'This is an academic IOP department that publishes in prestigious journals, has a world-class academic curriculum, gives a lot of practical exposure and is involved with the community. Many students speak very highly of the staff,' she said and added that after reviewing the numerous nominations received, UP stood out as the winner.

A prime example of the practical exposure students receive is a module focused on community outreach and service completed by the Industrial Psychology honours group in the Department. 'Under normal circumstances, the goal is to teach students to reach out, serve, and help in communities. Often the feedback we receive from students is that, in their attempt to influence others and make a difference in their lives, their own lives and perceptions were changed,' said Madele Klingenberg, a lecturer in the Department.

Human Resource Management students

When the COVID-19 regulations came into effect, the students did not allow the limitations to stop them. Instead, according to Klingenberg, they rapidly adapted their various project plans, and the outcome was exceptional. 'Where our focus was usually on making a difference in groups, they focused on rather making an impact on an individual level. One student wrote CVs for roadside beggars, others helped at a shelter for women, and a few assisted a non-profit organisation with changing from manual to digital processes.'

Stanley Mabuka

Economics student named first runner-up in Budget Speech Competition

Stanley Mabuka, a master's student in Economics at UP, has been named the first runner-up in the postgraduate category of the 2020 Nedbank Old Mutual Budget Speech Competition.

Mabuka admits that he was unaware of the competition until he saw a LinkedIn post ten days before the submission date. Upon learning that winners would have an opportunity to interact with seasoned economists, industry experts and fellow students from other universities, he immediately started working on his essay submission. 'Preparing for participation required discipline and hard work as the demands of my heavyweight course left me with very little time to spare,' he said.

He received news of his achievement during a virtual award ceremony when he had the opportunity to interact with Dr David Masondo, the Deputy Minister of Finance and Nedbank and Old Mutual executives. 'The competition was enriching and rewarding. I found it worthwhile because it confirmed that I could become a future leader, which I aspire to. Things that stood out for me were the media training sessions, hot seat panel interviews and collaborative simulations with other bright students,' he added.

Asked to share the secret behind his success in the competition with other students, he said: 'Discipline and hard work! There is no substitute for hard work.'

EMS graduates

UP retains Number 1 spot in chartered accounting professional exam

Recently released results confirm that the University of Pretoria has retained its number one spot in the South African Institute of Chartered Accountants (SAICA) Initial Test of Competence (ITC). UP took the first position in the November 2020 ITC and first position in the combined ITC results for 2020, with an impressive 97% pass rate for the latter.

The ITC is the first of two qualifying exams written by prospective chartered accountants countrywide. This latest achievement sees UP maintaining a four-year streak as the university with the highest combined pass rate for this professional exam.

'We congratulate our students and the CA Programme staff for once again making us proud!' said Prof Johan Oberholster, CA Programme Coordinator and Deputy Dean for Teaching and Learning in the Faculty of Economic and Management Sciences.'

Prof Oberholster explained that the June 2020 ITC was deferred to November 2020 due to COVID-19 lockdown regulations, and UP students excelled despite writing the challenging exam during the ongoing pandemic.

'This set of performance statistics follow on the results of the January 2020 ITC, when UP not only took the first position in South Africa but also had an unprecedented seven out of the ten top students,' he added.

Economic and Management Sciences

Consider the BCom (Marketing Management) programme!

COMMUNICATION
STRATEGY
RESEARCH
PRICING
BRANDING

CUSTOMER SERVICE
SOCIAL MEDIA
TARGET MARKETS
NEW PRODUCT DEVELOPMENTS
RETAIL MARKETING

How do I become a marketer?

Apply for the sought-after BCom (Marketing Management) programme at the University of Pretoria.

Gain practical experience with our industry partners!
You will have the opportunity to do practical projects with brands such as Coca-Cola, Appletiser, Bridgestone SA, Discovery Health, Bosch SA and the Gautrain Management Agency. Our industry partners provide real challenges for which students find solutions, which may include:

- The development of integrated marketing communication (IMC) campaigns;
- Sales promotions;
- Social media marketing campaigns;
- Market and consumer analysis; and
- Marketing analytics.

Skills you will acquire in this programme include the ability:

- To communicate a marketing vision and marketing ideas;
- To develop an integrated marketing communication strategy; and
- To plan and implement marketing strategies.

Economic and Management Sciences

What kind of a marketer can I become?

4

I love thinking out of the box.

CUSTOMER SERVICE MANAGER

I love people.

MARKET RESEARCHER

I love being curious.

ACCOUNT MANAGER

CONTENT MARKETER

MARKETING STRATEGIST

PROMOTER/ SALES EXECUTIVE

DIGITAL SPECIALIST

PUBLIC RELATIONS OFFICER

I love building relationships.

I love writing.

I love technology.

SOCIAL MEDIA MANAGER

Admission requirements

Programmes	Minimum requirements for NSC and IEB for 2022		
	Achievement level		APS
	English Home Language or English First Additional Language	Mathematics	
BCom (Marketing Management) [3 years] Closing dates: SA – 30 September Non-SA – 31 August	5	4	30

Note: Accounting is not a subject requirement for any of the BCom and BAdmin programmes.

Submit your online application here: www.up.ac.za/apply

Contact information
Phuti Tshivhase | **Tel** +27 (0)12 420 5236 | **Email** phuti.tshivhase@up.ac.za | **Website** www.up.ac.za/marketing

'The reward of the young scientist is the emotional thrill of being the first person in the history of the world to see something or to understand something. Nothing can compare with that experience.'

(Cecilia Payne-Gaposchkin)

Natural and Agricultural Sciences

University of Pretoria focuses on solution-driven training and research in agriculture

The Faculty of Natural and Agricultural Sciences is a leader in the field of agricultural and food system research and works in a variety of disciplines to address challenges in modern society. This is achieved through targeted research and appropriate training focused on the latest technology and innovation. An interdisciplinary approach is one of the keys to finding solutions to complex problems such as the sustainability of food production and food security. These solutions are urgently needed amid climate change which is putting significant pressure on scarce resources such as water and land.

Natural and Agricultural Sciences

BScAgric (Plant Pathology)

The BScAgric (Plant Pathology) programme entails the study and control of plant diseases.

The ideal candidate is a creative thinker who wants to explore and understand problems, why and how they arose, and to find solutions. Finding the culprit (ie the pathogen) that caused disease or even death (of plants) is very much like being a detective working at a crime scene to figure out what happened. Like veterinary scientists and medical doctors, plant pathologists also work with patients but with the difference that they cannot communicate with the plant. They therefore have to rely on observation, experience and intuitive knowledge to figure out what is wrong and to find a solution.

A student who does well in this programme is often one who is curious, creative, passionate driven and ambitious to explore new challenges.

Agricultural scientists often work in the field or in plant nurseries, farms, pack houses, processing plants, markets or retail. They may also be involved in the local or international food trade. They are multifaceted thinkers who enjoy solving problems, are curious about nature and want to provide food for the table by ensuring healthy plants, crop protection, high yields and reduced waste and losses.

What makes this programme unique?

The programme covers both basic and applied research and ensures safe food and food security for all.

Which companies employ our graduates?

Our graduates are employed at:

- National Department of Agriculture
- Agricultural Research Council
- Agrochemical companies
- Seed and plant production companies
- Undercover crop production endeavours, eg vertical farming, greenhouses and hydroponics
- Tissue culture laboratories
- Diagnostic laboratories
- Biological control companies
- Nurseries and garden centres
- Lawn and landscape maintenance firms
- Agricultural cooperatives
- Private agricultural estates, farms and big corporate estates
- Work with agricultural departments in provinces with many small-scale farmers
- The SA Bureau of Standards (SABS) and Council for Scientific and Industrial Research Council (CSIR)
- Exporting or importing companies
- Fresh Produce Markets and Retailers
- National and International certification bodies such as auditors, assessors or technical experts in good agricultural practices or food safety
- United Nations, Food and Agricultural Organisation, World Health Organisation, World Trade Organisation or International Standards Organisations
- Researchers and lecturers at Colleges, Technical University or Universities

What career opportunities exist for graduates?

Consultant plant pathologists often collaborate with economists, soil scientists, horticulturists, entomologists and farmers, big corporates, pesticide companies or retailers. They not only advise, but also influence governments, industry and the general public regarding critical matters such as trade, phytosanitary and sanitary matters, and the right to food.

Lecturers and researchers at universities and technical colleges provide quality creative education and share their skills and experiences with students to prepare them for careers in the flower industry, turf grass or horticultural sectors, crop production, viticulture, agronomy, soil sciences and entomology, as well as agricultural economics. They are classical transdisciplinary thinkers who can solve mega problems and are innovative in finding practical solutions for farmers and others in the agricultural sector.

Agricultural scientists and researchers at various companies and academic institutions research many different aspects of plant health, crop protection, food security and food safety.

Programme	Minimum requirements for NSC and IEB for 2022			
	Achievement level			APS
	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
BScAgric (Plant Pathology) [4 years] Closing dates: SA – 30 September, Non-SA – 31 August	5	5	5	**32**

Natural and Agricultural Sciences

Plant pathologists are excellent problem solvers

By Martie Meyer

We interview plant pathologist, Dr Mahlane Godfrey Kgatle, from the Department of Plant and Soil Sciences, who is also a postdoctoral fellow at FABI.

Dr Mahlane Godfrey Kgatle

What is plant pathology?

'Plants are important to us in many ways: they provide timber for shelter (forestry), medicine, cosmetics and food. Like animals and humans, plants can also suffer from diseases caused by a wide range of microorganisms or pathogens, such as fungi, bacteria and viruses. Plant pathology is the scientific study of diseases caused in plants by infectious microorganisms (pathogens) and environmental conditions (physiological factors). Plant pathology also has a direct impact on food security.'

What did you study to become a plant pathologist?

'My core modules during my undergraduate and honours studies were Microbiology, Botany, Genetics, Biochemistry, Zoology and Plant Pathology. My master's and PhD research focused mainly on the initiation, design and conducting of experiments that focus on plant-pathogen interactions, as well as the analysis, interpretation and publication of the results that revealed how plants are able to either resist disease or are affected by it.'

Describe a typical day in the life of a plant pathologist.

'My current responsibilities include research, diagnostics and extension. My research focuses on engagement with fellow scientists, agricultural organisations such as Grain SA and the Oilseeds Advisory Committee, and local farmers to identify crop problems, prescribe suitable solutions and give technical advice based on my research findings by communicating complex scientific concepts in layman's terms to ordinary South Africans from various cultural groups.

Research is essential to remain informed on what other scientists around the world are doing and to build knowledge and facilitate understanding of plant-pathogen interactions. In brief, my day starts with meetings with fellow academics and industry representatives, followed by disease identification and pathogen description of samples received from farmers and industry.'

Do you specialise in a specific aspect of plant pathology?

'As a plant pathologist I am familiar with disease epidemiology, diagnostics and management. However, as a fellow, my field of specialisation is the diagnosis and description of diseases.'

Which skills does a plant pathologist need?

'A plant pathologist should be able to do research, analyse and interpret data, and should have good communication skills.'

In which fields/industries are plant pathologists employed?

'Plant pathology requires innovative problem-solving technologies to ensure product integrity and safety from seed to plate. Infested seed (seed pathology) can play a role in the transmission of disease pathogens. Plant pathologists can teach at universities or do research at institutes, agrochemical and seed companies, retail, exporting and importing companies, the nursery industry, co-operatives and the food industry.'

Do you think your talent as a chess player contributed to your pursuit of science?

'Certainly! I believe that chess and other games that develop problem-solving skills should be promoted at schools and workplaces. Chess is an excellent way to learn problem-solving skills, and I recommend it to all would-be plant pathologists.'

What advice would you give to a prospective student?

'Expand your skills set and network. Seek out every opportunity to develop your communication skills and increasing your scientific knowledge. There are no silly questions, so make friends with your lecturers and ask all the questions you need answered. Have fun, enjoy the ride and make it one you will be proud to look back on!'

Natural and Agricultural Sciences

BSc (Food Science)

This programme focuses on the chemical composition, structure and nutritional value of food. The interaction of food components during processing, preservation and storage is studied by making use of chemistry, physics, biological and mathematical principles. Candidates who are likely to excel are those who enjoy science and are keen on understanding food production from farm to fork.

What makes this programme unique?

Candidates study a product that is used daily by all people and therefore prepare themselves to play a role in feeding the nation. A graduate with a BSc (Food Science) degree is eligible for registration as a natural scientist with the South African Council of Natural Scientific Professions (SACNASP).

Which companies employ our graduates?

Our graduates are employed by all major food production companies eg Nestlé, RCL Foods, In2Foods, Unilever and the Rhodes Food Group; by major food retailers eg Shoprite and Checkers, Woolworths, Pick n Pay; by flavour and additive producing companies eg SAAFFI and Cell-Chem; and laboratories that specialise in analysing food in South Africa and all over the world.

What career opportunities exist for graduates?

- Food and Nutrition Analysts
- Safety Auditors
- Food Risk Investigators
- Product and Process Development Managers
- Quality and Safety Assurance Managers
- Food Structure Designers
- Food Chemists
- Technical Sales and Marketing Advisors
- Brewers
- Sensory Scientists
- Packaging and Shelf-life Specialists
- Food Microbiologists

Programme	Minimum requirements for NSC and IEB for 2022			
	Achievement level			APS
	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
BSc (Food Science) [3 years] Closing dates: SA – 30 September, Non-SA – 31 August	5	5	5	**32**

Sensory scientists never stop learning

By Martie Meyer

There are various scarce skills in the natural and agricultural sciences and one of these is the focus of sensory scientist, Prof Riëtte de Kock of the Department of Consumer and Food Sciences.

Prof Riëtte de Kock

What should you study at UP to become a sensory scientist?

'The first step is to obtain a BSc degree in Food Science, Culinary Science or Nutrition, or a BConsumer Science (Retail Management) qualification from UP.'

What does a sensory scientist's job entail?

'Sensory scientists investigate how the properties of food products are perceived by consumers. We study what consumers see, hear, feel, taste and smell when they handle and consume products. We systematically evaluate and describe the sensory properties of food items. Consumers participate in food evaluation so that we can better understand what they like and dislike.'

Sensory scientists are problem solvers. They establish which aspects of the taste, smell, texture, sound or appearance of products need to be investigated and why it is necessary. Sometimes they use a sensory laboratory, at other times the home or even a sports field may be better suited to testing sensory problems.

What is the role of sensory science in food science as a discipline?

'The nutritional value of uneaten food is zero. Food waste is a major problem in modern society. Food products may contain excellent nutrients, but if the way in which they are presented is unappealing to consumers, they will not be of any value. The way foods look, feel and taste evoke emotional responses. Sensory scientists determine the shelf life of products, work in food product development teams and they positively contribute to enhancing the food experience for consumers.'

What skills does a sensory scientist need?

'You need to be curious about what you see, smell, hear, taste and feel, and about the factors that influence these experiences. You also need to enjoy working with people, have high ethical standards, a keen interest in science and psychology, and be a team player. Plus you should be able to think innovatively and enjoy working with statistics.

I followed my senses into this career and I remain fascinated by what my senses tell me about food. I do not like routine and this field allows me to solve different problems every day. Sensory science involves so many different aspects and I am constantly learning.'

Who employs sensory scientists?

'Sensory scientists work in companies that develop and manufacture food, cosmetics, personal care products and tech products. They also find employment at packaging manufacturers, ingredient suppliers, market research agencies and retailers. In the future consumers will be able to engage with the aroma, taste and texture of products in the digital space. I encourage everyone to develop a sensory language to describe what you see, hear, smell, taste and feel.

I am excited about an international research project (innofoodafrica.eu) where we are investigating how the sensory properties of products made from sorghum, finger millet, teff, amaranth, faba beans, orange-fleshed sweet potatoes, Bambara groundnuts and cowpeas influence consumers' choices in South Africa, Kenya, Ethiopia and Uganda. Studies have also been undertaken to improve the sensory properties of gluten-free bread and novel low-fat mayonnaise products are also providing valuable insights.'

We regularly recruit consumers for our UP Consumer Database.

Should you be interested in participating in food evaluation projects, please sign up at bit.ly/UPConsumers.

Humanities

Why a human-centred shift matters for those studying Social Work

By Antoinette Lombard, Elmien Claassens and Gerna Wessels (Department of Social Work and Criminology)

Humans are resilient and have adapted to sudden and unexpected events such as COVID-19. And, as is characteristic of our work, the Department of Social Work and Criminology responded quickly and shifted our academic course work and practical community work to virtual platforms.

At the time, the forced shift seemed like an ideal opportunity for students and lecturers to explore the possibilities of available digital tools. Looking back, however, a different story emerges. The nature of our work means we must train in person within the lived environments of the communities we serve—this tactile imperative is something a virtual setting simply cannot replace.

Clearly, there are limits to what a digital environment can afford, and our department specifically needed to find a balance between technology and advancing human well-being. To do so, we had to remind ourselves what it means to be human!

We learned that connectivity means different things to different people on an online platform. We allowed students to switch off their video cameras to save on data costs and to stabilise our classes' Internet connection. Unfortunately, this meant that communication was one-sided, with lecturers missing essential visual cues indicating whether students were engaged.

Moreover, hearing without seeing people's expressions and body language does not help students learn how to observe and respond to people's emotions. Advanced technology certainly allows students to access their study material and participate in class. But while virtual class discussions do develop a solid knowledge base, students were unable to apply this knowledge and respond to real-life situations. We also found that the digital platform affected the students' well-being. Their anxiety about online learning and their sudden isolation contributed to their mental distress.

It was only when lecturers adopted a more human approach to the digital shift by using low-tech platforms such as WhatsApp text messages and WhatsApp video calls that students experienced a sense of community and comradery. It enabled them to share their fears and experiences, even sharing their hesitance to show their classmates where they lived and their difficulties in managing background noises in their environment. But by sharing their lived experiences, our students learned that no one's homes are perfect and that background noises are a regular part of life—even for their lecturers! This is something our criminology students decided to share in their Jerusalema dance video production.

Our students, who are generally more digitally literate than their lecturers, were exceedingly patient with their 'elders' and even shared jokes as they helped our staff navigate the peculiarities of various virtual platforms. They learned to tap into their natural empathic abilities and taught themselves a lesson that takes most people a lifetime to learn—what it means to be human!

In this human-centred context, challenges create opportunities. As with all other things in life, we choose our reality and, in this case, what we learn from our online experience. Our students learned more about themselves by nurturing their human relationships with their peers and lecturers who lived in different parts of the country. These relationships also helped our students learn to trust one another, which in turn helped bolster their own self-confidence and willingness to embrace new experiences.

The switch to digital alternatives taught us, as a department, how to balance technology's advantages with its limits. Our students, for instance, trained as tele-counsellors; however, to return to their practice placements within a community, they still need to meet and engage with their clients in person. After all, our social work students are acutely aware that they must use their skills to help society respond to situations such as COVID-19.

Digital tools and virtual platforms in social work are here to stay. In our experience, digital tools cannot entirely replace what students learn from real-life situations. Humans need to connect to one another in real, live environments.

We, as humans, drive technology. And we, in the Department of Social Work and Criminology, choose to use low-tech tools to teach our students about real-life situations and prepare them for the humans that await them!

Contact information
Email elmien.claassens@up.ac.za

Humanities

Sven Spangenberg keeps his options open

By Anthea Pretorius

Sven Spangenberg, who completed Grade 12 at the *Afrikaanse Hoër Seunskool* in Pretoria in 2019, is currently a second-year BA student majoring in psychology and philosophy. Sven has always aspired to become a psychologist, but he is keeping his options open. He enjoys being part of the academic world and is impressed by the many modules offered at UP.

Sven Spangenberg

He dreams of a career as a lecturer doing research and publishing his findings, travelling the world and presenting papers at conferences. The thought of being surrounded by like-minded people with whom he can converse, debate, collaborate and share his knowledge thrills him.

Sven's motto is a Latin phrase, *Amor fati*, which means 'Love of one's fate'.

Finding what you are passionate about and going ahead to do it will give your life meaning and purpose, even if it involves a measure of suffering and loss.

In a recent Maroela Media article[1], Sven makes the following points:

- Information is shared at the speed of light, and opinions about such information spread even faster.
- A 2018 MIT (Massachusetts Institute of Technology) study[2] asserts that fake news on Twitter spreads six times faster than actual news. What is the reason for this?
- Many people believe that they possess specific knowledge and want others to know that they have attained some kind of 'enlightenment'. The platforms that have been created on the internet to make it easy for people to share this knowledge also created a trap that entices everyone with an opinion to make their views universally known.
- The tweets of celebrities (with millions of 'followers') cause catastrophic fake news snowball effects. Unfortunately, the masses believe that what they have read is the truth and will make no effort to obtain expert opinions on particular issues.
- The sad reality is that fake news is nothing but lies and can be very harmful.
- In his book titled The death of expertise, Tom Nichols writes: 'The resulting flood of information, always of varying quality and sometimes of uncertain sanity, creates a veneer of knowledge that actually leaves people worse off than if they knew nothing at all.'
- We, therefore, have a situation where we have access to vast quantities of knowledge, but the quality of the knowledge is not always good.

The culture of 'tribalism'

- The majority of people who express their opinions in favour of or opposition to a cultural movement are often unable to give solid reasons for the opinions they hold. They only raise their voice because they feel that it is the right thing to do in a particular situation. That is why there is nothing more uncertain than the judgement of the masses.
- Within a couple of months, everyone will forget about the issue and move on to the new social/cultural movement and/or smear campaign.
- The paradox here is that what makes it possible for our freedom of speech and thought to flourish could also result in us losing that freedom.
- Therefore, it would perhaps be wise to refrain from making all our opinions known on social platforms as it could eventually cause us to lose the right to do so.

Contact information
Email svenronen2001@gmail.com

PHILOSOPHY, POLITICS AND ECONOMICS	Mathematics	English Home Language or English First Additional Language	APS
BSocSci (Philosophy, Politics and Economics) [3 years] Closing dates: SA – 30 September Non-SA – 31 August	5	5	32
The NBT is not required for BSocSci (Philosophy, Politics and Economics). To retain admission, you must obtain an APS of at least 32 in the NSC. Students interested in the BSocSci(PPE) programme not complying with the 5 in Mathematics for the programme, but with an APS of 32, a 4 in Mathematics and a 5 in English, may be admitted into another degree for first year. If they register for STK 113 and 123 in their first year of study, and they pass each of these with 60%, they will however then have the option to apply for an internal transfer to the BSocSci(PPE) in their second year of study. **Careers:** You will be eligible for a career in economic or political policy-making, journalism or the diplomatic service.			

1 https://maroelamedia.co.za/debat/meningsvormers/jongstemme-moenie-al-jou-menings-aan-die-groot-klok-hang-nie/

2 https://news.mit.edu/2018/study-twitter-false-news-travels-faster-true-stories-0308

Humanities

UP IS THE #1 DESIGN EDUCATION INSTITUTION IN AFRICA

by Kyle Rath, Information Design Programme
Makone Maja, Student Entrepreneurship Office: Faculty of Humanities

The University of Pretoria is now ranked the number-one education institution in design by the Loeries.

We interviewed Kyle Rath, lecturer in the Department of Information Design in the School of the Arts, who reflects on what this win means for him and his students, design as a career path, and the importance of design during the COVID-19 pandemic.

Q: A lot of people don't know about the Loeries, and you've alluded to it being like winning an Oscar. Why should people care about the Loeries, and what does this say about the BA (Information Design) programme?

It's perhaps not so much about why we should care about the Loeries, but why we should care about design specifically, and rewarding design achievement. Take a second to look around you. Everything you see has, to some degree, been designed. Design is not about creating exciting graphics (although that is the fun bit). It is, at its core, a fundamental understanding of human behaviour; how to engage each other and promote better communication. In a nutshell, in whatever form, design is a process of problem-solving, not only for brands, but for our communities, both local and abroad. It is a tool for commenting politically, bringing awareness and compassion to social concerns and evoking empathy.

Q: Given that the world went completely virtual in 2020 (even just for a brief moment), how has COVID-19 amplified information design and its importance?

In short, it evaluated our ability to problem-solve. This is the central skill of a competent designer. We've had to communicate over virtual interfaces (Zoom, for example), which are in fact designed mechanisms. Without design, most communication tools wouldn't exist. It is not just about how the app is coded; it's how users interface with it personally and meaningfully.

Design is also able to capture data and express it in intelligible ways. Think back to a graph or graphic concerning COVID-19 that startled you, interested you or gave you a different understanding of a particular aspect of the pandemic. Design is at play here.

Q: Please comment on the role of the Internet in making education accessible during the lockdowns.

First off, we've had to be quite resourceful in continuing a practice-based degree online. We had to introduce several new ways of teaching that are not merely 'conveying information' but that stimulate participation, practice-based learning, group thinking and many of the other touch points that we've refined over years through our in-person-based, one-on-one design curricula. In short, we had to change a lot in a minimal amount of time. We excelled; design is about problem-solving. Moreover, we are quite proud of how we've managed to share our work digitally to the public.

The division has the following social media pages:

- Information Design
- @upinfodesign
- Visual Arts Department

During COVID-19, we managed to stream our yearly exhibition on Instagram (@upinfodesign) and Behance (tinyurl.com/idgallery) at no fee—enjoy!

Moreover, this year, we aim to start an Information Design podcast where you'll be able to engage with topics surrounding design thinking, design trends, popular culture, design discourse and so on, featuring a range of guests, from students to academics and industry leaders.

Humanities


UX/UI | TYPOGRAPHY | BRANDING
PACKAGING
Emotional Intelligence
QAN


ILLUSTRATION | EDITORIAL |
BRANDING | EDUCATION
BALLS UP


ILLUSTRATION | ANIMATION |


AFROFUTURISM
MOTION GRAPHICS | EDITORIAL
PACKAGING | CI & BRANDING


HOW ARE
YOU TODAY?
MOTION GRAPHICS | SET DESIGN
UX/UI | CI DESIGN


UX/UI | PACKAGING | BRANDING

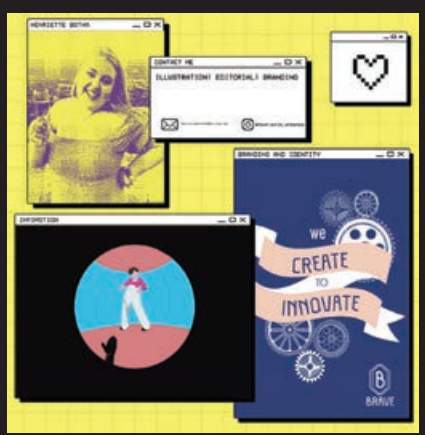

BRANDING | GRAPHIC DESIGN |
MARKETING & STRATEGY


9 OUT OF 10
UX/UI | EDITORIAL | BRANDING


UX/UI | EDITORIAL | PHOTOGRAPHY


MOTION GRAPHICS | ILLUSTRATION
IDENTITY & BRANDING | UX/UI
brave


HOLIDAY
SET DESIGN | ILLUSTRATION
PHOTOGRAPHY


ILLUSTRATION| EDITORIAL| BRANDING
we
CREATE
TO
INNOVATE
BRAVE

Theology and Religion

A benediction by Pope Francis

You can have flaws, be anxious, and even be angry, but do not forget that your life is the greatest enterprise in the world. Only you can stop it from going bust. Many appreciate you, admire you and love you.

Remember that to be happy is not to have a sky without a storm, a road without accidents, work without fatigue, relationships without disappointments.

To be happy is to find strength in forgiveness, hope in battles, security in the stage of fear, love in discord. It is not only to enjoy the smile, but also to reflect on the sadness. It is not only to celebrate the successes, but to learn lessons from the failures. It is not only to feel happy with the applause, but to be happy in anonymity.

Being happy is not a fatality of destiny, but an achievement for those who can travel within themselves. To be happy is to stop feeling like a victim and become your destiny's author. It is to cross deserts, yet to be able to find an oasis in the depths of our soul. It is to thank God for every morning, for the miracle of life.

Being happy is not being afraid of your own feelings. It's to be able to talk about you. It is having the courage to hear a "no". It is confidence in the face of criticism, even when unjustified. It is to kiss your children, pamper your parents, to live poetic moments with friends, even when they hurt us.

To be happy is to let live the creature that lives in each of us, free, joyful and simple. It is to have maturity to be able to say: "I made mistakes". It is to have the courage to say "I am sorry". It is to have the sensitivity to say, "I need you". It is to have the ability to say "I love you".

May your life become a garden of opportunities for happiness; that in spring may it be a lover of joy; in winter a lover of wisdom; and when you make a mistake, start all over again. For only then will you be in love with life. You will find that to be happy is not to have a perfect life. But use the tears to irrigate tolerance.

Use your losses to train patience. Use your mistakes to sculptor serenity. Use pain to plaster pleasure. Use obstacles to open windows of intelligence.

Never give up. Never give up on people who love you. Never give up on happiness, for life is an incredible show.

Theology and Religion

Learn how to transform your community

By Nicola Smith

We all know that South African communities are unequal. While some are resource-rich, have good infrastructure, and access sources of livelihood and wellbeing, others are resource-poor and lack suitable and secure housing, good schools, reliable health infrastructure, water and sanitation, and food security.

The poverty, exclusion and violence experienced by some communities should not be seen as inevitable since proof exists that some communities have succeeded in organising their limited resources and assets, mobilising their people and brokering investment from outside to slowly (re)build the infrastructure that is lacking, thus giving people access to good opportunities and helping to set them free.

The National Department of Social Development is committed to making community development a profession. In the Faculty of Theology and Religion at the University of Pretoria, we are now rolling out a community development trajectory that will contribute credits to a community development qualification.

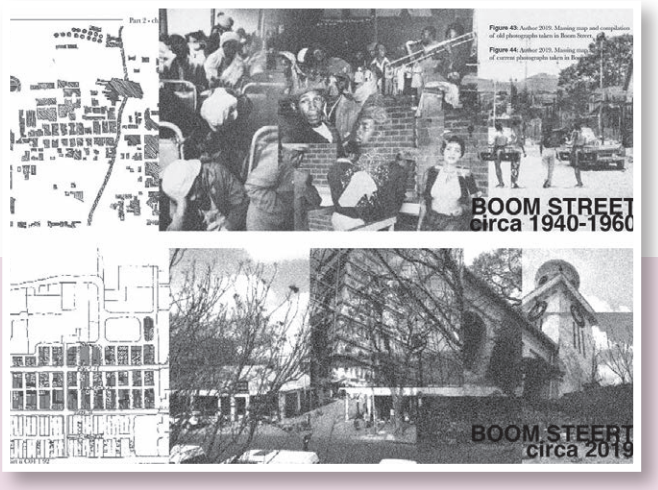
To obtain the maximum number of credits towards this qualification, students will need to make sure that they register for the right modules. They will still need to take the usual modules required for a qualification in theology but will also be equipped for a career dedicated to helping people to improve their lives and homes and transform their communities.

The teaching and learning approach adopted by the Faculty of Theology and Religion fuses theory, community analysis, hands-on practice, spirituality, engaged research, and personal formation through modules like Introduction to Community Development, Urban and Community Immersions, Critical Urban Readings, Alternative Urban Imaginaries and Action Research.

If you have ever wanted to give back by supporting others, to find meaning in your work and feel that your life has a purpose, a career in community development would be your best choice and a course offered by the Faculty of Theology and Religion at the University of Pretoria will help you to realise your dream!

Contact information for the Centre for Faith and Community

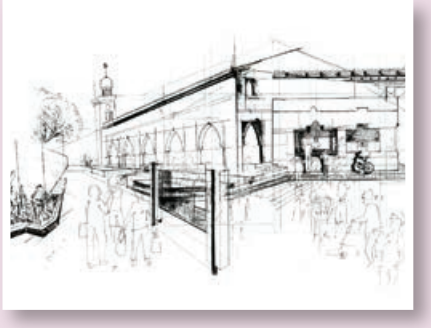
Tel	+27 (0)12 420 4952
Email	hesmarie.bosman@up.ac.za
Address	Theology Building, Room 1-15, Hatfield Campus



Boom Street (then and now)

Courtyard between school and clinic

Integrating boundaries



Internal courtyard

Recreational courtyard

Education

Introducing Paris Nzima —a young man with big dreams

By Anthea Pretorius

Few things are more inspiring than a young person from an impoverished background who has big dreams and succeeds in accomplishing them despite many setbacks.

Paris Nzima

It is my privilege to introduce you to Paris Nzima, who matriculated at the Bondzeni High School in Bushbuck Ridge (Mpumalanga). He is the first person in his family to attend university, and his parents and siblings are very proud of him.

In 2020, Paris completed a one-year programme that earned him a Higher Certificate in Sports Science. Of this year, Paris says: 'This programme taught me so much about sports and how important it is to focus and practise. It also taught me how to apply my knowledge in the field of work. I enjoyed the year and worked very hard to obtain high marks. I also did a Level 3 course in first aid and went a step further by adding an optional course in entrepreneurship (presented by UP Enterprises).

'The results obtained for my Higher Certificate in Sports Science enabled me to enrol for the BEd (Senior Phase and Further Education and Training Teaching) degree programme in 2021. I am very excited about this opportunity as I enjoy teaching and dream of changing the lives of many young South Africans in positive ways through my example. I am still young but have realised that you might fail unless you are positive and expect to be successful. Spend your time wisely and avoid friends with a negative attitude who drag you down. Hobbies and socialising are important, but unless you prioritise your studies, your academic performance will suffer.'

Paris starts building cars

In February 2016, boys from a UK school visited Paris' school, and he was allowed to showcase his talent in the use of computers, which included the invention of a weather balloon that could capture images of the earth. In 2017, he entered the Electric Vehicle Challenge and had to repair and modify a second-hand eV tricycle. He led the race, but due to technical problems, he did not win. In November of the same year, a race organiser offered him a part-time job as a welder, which earned him R6 000. He bought a better phone, a laptop computer and a second-hand quad bike.

In May 2018, a donor who believed in him gave him a welding machine, and he did a few jobs in Bushbuck Ridge, which enabled him to buy the industrial equipment needed to build his own cars and change his family's financial circumstances. Paris said: 'I have always believed in my dreams, and I knew I could be successful. My motto in life is: Build it if you can't afford to buy it.'

The SA Electric Vehicle (eV) Challenge

From 2017 to 2019, Paris participated in the annual eV Challenge, which takes place at the Mbombela Stadium in Nelspruit. About this, he said,' I built a tricycle powered by electricity. Participating in this challenge boosted my confidence, strengthened my determination, and confirmed that I have a talent. The support from the organisers was fantastic! They advised me to prioritise my education over everything else. During this challenge, I realised that I wanted to contribute to the development of cars powered by green energy even though I do not have an engineering qualification. My inspiration is Elon Musk, who also does not have an engineering degree but owns the most innovative vehicle-manufacturing company in the world.'

About the tricycle he built for the eV Challenge, Paris related the following:' I needed steel and electric motors and my ability to draw, design, paint and weld came in handy. My tricycle, which I named Pareon GT in remembrance of my late brother, was powered by a 36v drone motor in a precisely engineered CVT transmission and obtaining the materials I needed was a huge challenge. I hoped to reach a speed of 45 km/h on the track. I am grateful for the help received from the organisers.'

A dream for the future?

Paris has a dream job: to be the CEO of his dreams! He is inspired by entrepreneurs and philanthropic leaders and once he has qualified, Paris wants to work as an educator in the South African automotive industry or be employed by a non-profit organisation.

'Grade 9 to 12 learners, discover your talents. Study diligently and consistently. Balance your time and your activities well. You have the potential to change lives forever. Literacy skills are very important. Choose your friends carefully. Watch out for anything that might threaten your academic success. My motto in life is: If you can dream it, you can achieve it. To get something you have never had, you have to do something you have never done before.'

'I love learning and teaching. I value my God-given talents. I feel extraordinarily blessed and see myself as the answer to my family's struggle for survival. I enjoy building and fixing things, and despite having had no exposure to or training in any field of engineering, I have built vehicles by persevering and figuring out how things work.'

Paris Nzima's contact details
Mobile +27 (0)76 858 6037 or
+27 (0)82 665 9887
Email u20727552@tuks.co.za

Watch LJ van Zyl's two interviews with Paris Nzima on the cars he has built at: https://drive.google.com/file/d/18e18vIhg9MPg1rgqtAcRflQtLXXGJGq1/view?usp=sharing https://drive.google.com/file/d/1i0SuSFFdtxTPXUfVWB1abfa6hxiA__r0/view?usp=sharing

Education

What the Higher Certificate in Sports Science Education offers you

- The Higher Certificate in Sports Science Education is a South African Qualifications Authority (SAQA) National Qualifications Framework (NQF) Level 5 qualification.
- The programme provides a basis for developing knowledge and skills to improve athlete performance by way of physical assessment, exercise and conditioning prescription, and research.
- The programme develops coaches who can function successfully in an interdisciplinary environment by using the latest techniques and research to improve athletes and sports teams' performance.
- This certificate incorporates lectures, tutorials and practical sessions, and students are exposed to different sporting codes while working with athletes with varying skill levels.
- This is a blended programme that combines distance education and contact sessions.
- It has two components: sports practised on the field and during practical sessions, which include coaching, voluntary classes and contact with tutors. Students are required to complete six modules, after which they can choose to continue their studies in BEd and qualify as Physical Education teachers.

Interesting facts about the Higher Certificate in Sports Science Education

- All the Federation coaching courses are accredited. Students registered for the Higher Certificate will also complete the referee and adjudication courses, which will give them additional qualifications that will enable them to earn money at sporting events.
- This programme provides a basis for developing the knowledge and skills needed to improve athlete performance through physical assessment, exercise and conditioning prescription, and research.
- It aims to develop coaches who can function successfully in an interdisciplinary environment in order to improve the performance of athletes and sports teams by using the latest techniques and research. It strives towards achieving internationally recognised academic excellence but with local relevance.
- The programme creates an ideal learning environment incorporating lectures, tutorials, practical sessions and problem-solving.
- Students are taught and trained by excellent leaders in the field of sports science and coaching.
- Students are afforded the opportunity to work with various sporting codes and athletes of various skill levels.
- Upon successful completion of the programme, students may choose to further their studies and may apply for admission to the BEd degree programme, provided they comply with the requirements stipulated by the Faculty of Education.
- Graduates who have been awarded this Certificate can earn a minimum of R100 per hour at events.

The minimum admission requirements for the two programmes are as indicated below:

Programmes	Minimum requirements for NSC and IEB for 2022	
	Achievement level	APS
	English Home Language or English First Additional Language	
BEd (Senior Phase and Further Education and Training Teaching) [Grades 7 to 12] [4 years] Closing dates: SA – 30 September, Non-SA – 31 August Applications can be closed earlier if the institutional targets are met. An additional subject requirement for elective modules in **Economic and Management Sciences** is Mathematics, passed with an achievement level of 4 (50%–59%) in the final NSC/IEB examination. Additional subject requirements for elective modules in **Physical Sciences or Life Sciences** are Physical Sciences, passed with an achievement level of 5 (60%–69%), and Mathematics passed with an achievement level of 5 (60%–69%) in the final NSC/IEB examination.	4	28
Careers: Teachers and training officials in primary or secondary schools		
Higher Certificate in Sports Science Education [1 year] Closing dates: SA – 30 September, Non-SA – 31 August Applications can be closed earlier if the institutional targets are met.	4	20
Selection process: ▪ Applicants who indicate the Higher Certificate in Sports Science Education as their first- or second-choice will be considered. ▪ All applicants will be considered by the Student Administration of the Faculty based on the academic admission requirements. ▪ Applicants who meet the academic requirements will then be further considered for the different sports codes in deliberation with TuksSport, according to their sports achievements. ▪ Students who have been nominated by an official sports club of the University will enjoy preference for selection. ▪ Applicants who only obtained an Admission to Diploma study's endorsement at the end of the final school-year, may be considered for admission to the BEd (Senior Phase and Further Education and Training Teaching) degree (09133031), with specialisation in the elective combination of Human Movement Studies and Sport Management, if they complete the Higher Certificate in Sports Science Education successfully with a cumulative weighted average of at least 60% (excluding JRC 150 Sports Practical). **Careers:** Sports coaching, sports and exercise industry		

Faculty of Education contact information
Email monicca.makena@up.ac.za/thandi.mngomezulu@up.ac.za/letta.nyoni@up.ac.za | **Website** www.up.ac.za/education

Education

A tribute to educationist Sir Kenneth Robinson, who was determined to unleash children's creativity

By Anthea Pretorius

Sir Kenneth Robinson passed away from cancer on 21 August 2020. He was born to an impoverished family in Liverpool on 4 March 1950 and was diagnosed with polio at the age of four. He spent eight months in hospital and walked with a limp for the rest of his life.

Sir Kenneth Robinson (London, 2005) (Photograph by Graeme Robertson/The Guardian)

He obtained a Bachelor of Education degree from Bretton Hall College, which specialised in the arts. Transformed by that experience, he completed a doctorate in Drama and Theatre in Education at London University.

He will be remembered for his memorable Technology, Entertainment and Design (TED) talk entitled 'Do schools kill creativity?', which has been viewed by 380 million people in 160 countries. (See the link below.)

Robinson argued that children do not grow into artistic creativity but are educated out of it by school systems that prioritise academic achievement and conformity—instead of liberating imagination and initiative. He was not opposed to a national curriculum but merely proposed one with different priorities and parity of esteem between core subjects and artistic ones, such as dance.

He said,' I believe our only hope for the future is to adopt a new concept of human ecology, one in which we start to reconstitute our conception of the richness of human capacity.

Our education system has mined our minds in the way we strip-mined the earth for a particular commodity.'

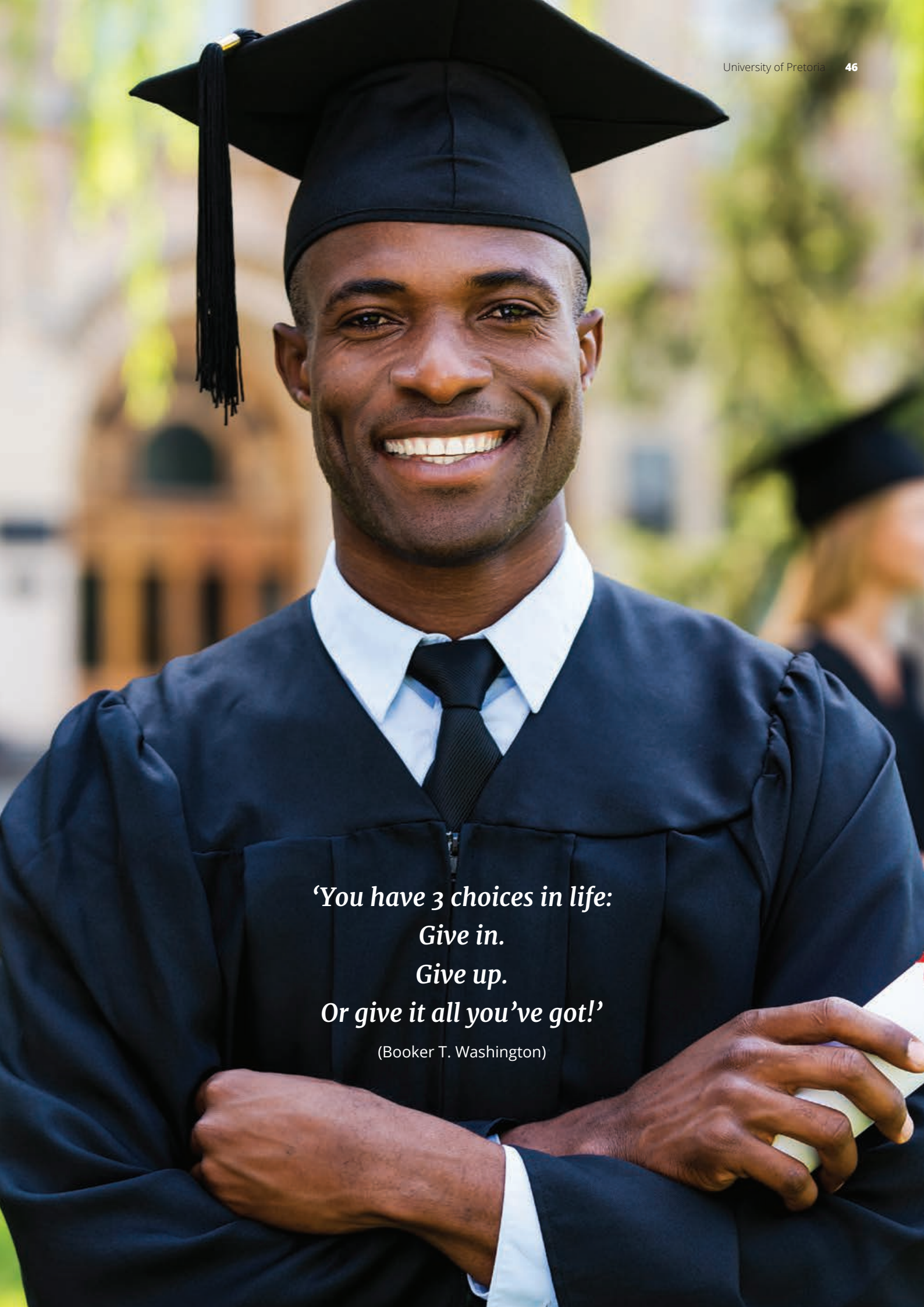
- He was a professor at Warwick University from 1989 to 2001.
- In January 2001, he joined the J Paul Getty Trust in Los Angeles as Senior Advisor.
- He was the author of several books, including Learning through drama (1977), Out of our minds: Learning to be creative (2001), Finding your element (2014) and Creative schools (2015).
- He founded Artswork, a national youth arts development agency.
- He was the founder and co-editor of the Arts Express Magazine.

Sir Ken was married to Marie-Therese Watts in 1982, and they had two children, James and Kate. He was knighted in 2003. The couple returned to live in London last year to be near Kate and her baby, Adeline.

Read the obituary written by Stephen Bates here:
www.theguardian.com/education/2020/aug/26/sir-ken-robinson-obituary

Watch Sir Ken Robinson's memorable TED talk on creativity here: youtu.be/LHJGo_g7Its

Watch a moving tribute by his daughter Kate here: youtu.be/nkKiQu-Sih8



'You have 3 choices in life:
Give in.
Give up.
Or give it all you've got!'

(Booker T. Washington)

Veterinary Science

UP vets save the lives of two dogs using a ground-breaking technique at the Onderstepoort Veterinary Academic Hospital

By Dr Adriaan Kitshoff

Two University of Pretoria (UP) veterinary surgeons have performed life-saving heart surgery on two dogs using a ground-breaking technique. This is a first in the 100-year history of the Faculty of Veterinary Science in Onderstepoort and an exciting way to start the next century of veterinary service to the country.

Dr Adriaan Kitshoff and Dr Ross Elliott, who are specialist veterinary small-animal surgeons working in Small Animal Surgery in the Department of Companion Animal Clinical Studies, saved the lives of seven-month-old French Bulldog Daisy and six-month-old Cocker Spaniel Tallen. Daisy is a service dog that can sense when her owner, who has fibromyalgia, is in pain and sleeps on her as a means of comfort.

The vets used a ground-breaking approach that entails dilating the opening of a heart valve with a balloon. 'This procedure was previously limited to hospitals overseas with surgeons or internists with a special interest in cardiology. It is only hospitals that have the equipment that can perform the surgery,' they said.

They explained that both their patients have pulmonic valvular stenosis, an abnormally shaped or fused heart valve that is situated between the heart and the artery leading to the lungs. 'Both these patients had valves where a component had fused together. These valves are supposed to allow the blood to flow in one direction, meaning that there are times when they are closed and times when they are open, and these times are determined by whether the heart contracts or not.'

In the case of valves that are fused, the valve can't open properly when the blood should leave the heart (during contraction) and does not close properly (when the heart relaxes). 'This created a scenario that is similar to you filling your lungs with air and blowing out through your mouth with your lips pursed. The force of the heart trying to squeeze out blood through a small opening places tremendous strain on the heart muscle.'

The aim of the delicate surgery for both dogs was to increase the size of the opening by dilating the valve. For this, a long balloon-tipped catheter was placed in one of the neck veins. Through fluoroscopy ('real-time X-rays'), the balloon was guided through two of the heart chambers and through the small opening in the valve. As the balloon was inflated, the opening was stretched (balloon valvuloplasty).

The vets explained that the anatomy of a dog's heart is similar to that of a human's, also consisting of four chambers and four valves. 'This is probably the reason why most of the clinical trials for heart transplants were performed on dogs, which set the stage for Dr Chris Barnard's first successful human heart transplant in 1967.'

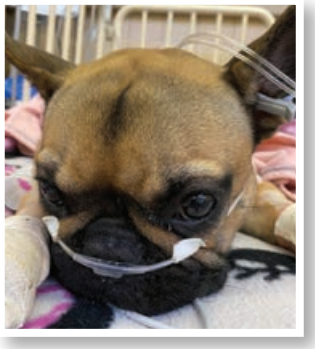
The implications of the successful procedure are that 'we can offer a service not previously offered by Onderstepoort Veterinary Academic Hospital (OVAH). This might lead to other minimally invasive heart surgeries in the future. It also provides us with the opportunity to extend the life of special pets like these.'

Both dogs are doing well after the operation but need follow-up heart scans every three months, as in 15% of such cases the stretched opening of the valve can start to narrow again, in which case the procedure can be repeated. The surgery was a team effort, which included anaesthetist's Dr Justin Grace and Dr Abdur Kadwa, theatre nurse Sister Adele Rossouw and theatre assistant, Mike Shabangu.

Dr Adriaan Kitshoff performing fluoroscopy to assess the location of a guide wire used during the balloon catheter placement

Dr Ross Elliott and Sister Adele Rossouw doing a dissection of the neck vein for insertion of the balloon catheter

Specialist surgeon's Dr Adriaan Kitshoff and Dr Ross Elliott with Tallen and Daisy



Post-operative Daisy during her stay in the intensive care unit of the Onderstepoort Veterinary Academic Hospital

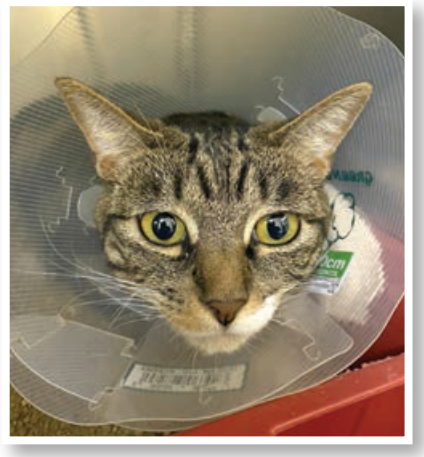
Veterinary Science

UP vets' partial knee replacement surgery on Theophylline, the cat, another first for South Africa

By Dr Elge Bester

Specialist veterinary surgeons at the Onderstepoort Veterinary Academic Hospital (OVAH) in the University of Pretoria's Faculty of Veterinary Science recently conducted South Africa's first partial knee replacement on a cat. They used a custom-made artificial groove for the kneecap to glide in, saving the cat from having her right leg amputated.

Dr Elge Bester and Dr Adriaan Kitshoff performing surgery on Theophylline's leg



Theophylline in the intensive care unit of the OVAH after surgery

Performed by Dr Elge Bester and Dr Adriaan Kitshoff from the faculty's Department of Companion Animal Clinical Studies, this procedure is not only a first for the 100-year-old-faculty and the hospital, but for the country as well.

Their patient, Theophylline, a domestic short-haired cat, was rescued from a parking lot drain as a young kitten and quickly warmed the hearts of her rescuers. She was given the name Theophylline, which is the name of a drug (bronchodilator) that is used to relieve symptoms including wheezing, tightness of the chest and shortness of breath related to diseases such as asthma.

However, when Theophylline was six months old, during the COVID-19 lockdown, she fell from the window of a second-storey building. 'This resulted in a very severe and complicated fracture of her right femur involving the knee joint. This fracture carried a poor prognosis for return to full function and likely meant Theophylline would need to rely on only three legs going forward,' said Dr Kitshoff. This would have affected her quality of life as cats use their hindlegs to propel themselves when jumping.

According to Dr Bester, 'Theophylline's amazing owners were willing to try everything and were extremely committed to getting her back on her feet. They wanted, most of all, to allow her to be a normal, active kitten and to be able to continue going on "missions" and playing with her big brother, Felix.'

This started a three-month journey for Theophylline to get back on all four of her limbs with confidence and without pain and discomfort. She underwent multiple surgeries to try and reconstruct her femur and knee joint. The first included the insertion of numerous pins at various angles to ensure that the alignment and length of the femur were maintained.

'After the femur healed from the first surgery, Theophylline unfortunately developed a lateral patella luxation (when the kneecap/patella moves out of the groove of the knee joint),' said Dr Bester. A subsequent surgery to correct this was unsuccessful and did not help Theophylline to be more comfortable when walking, running and playing. The quest to help her regain normal, pain-free mobility of her leg continued.

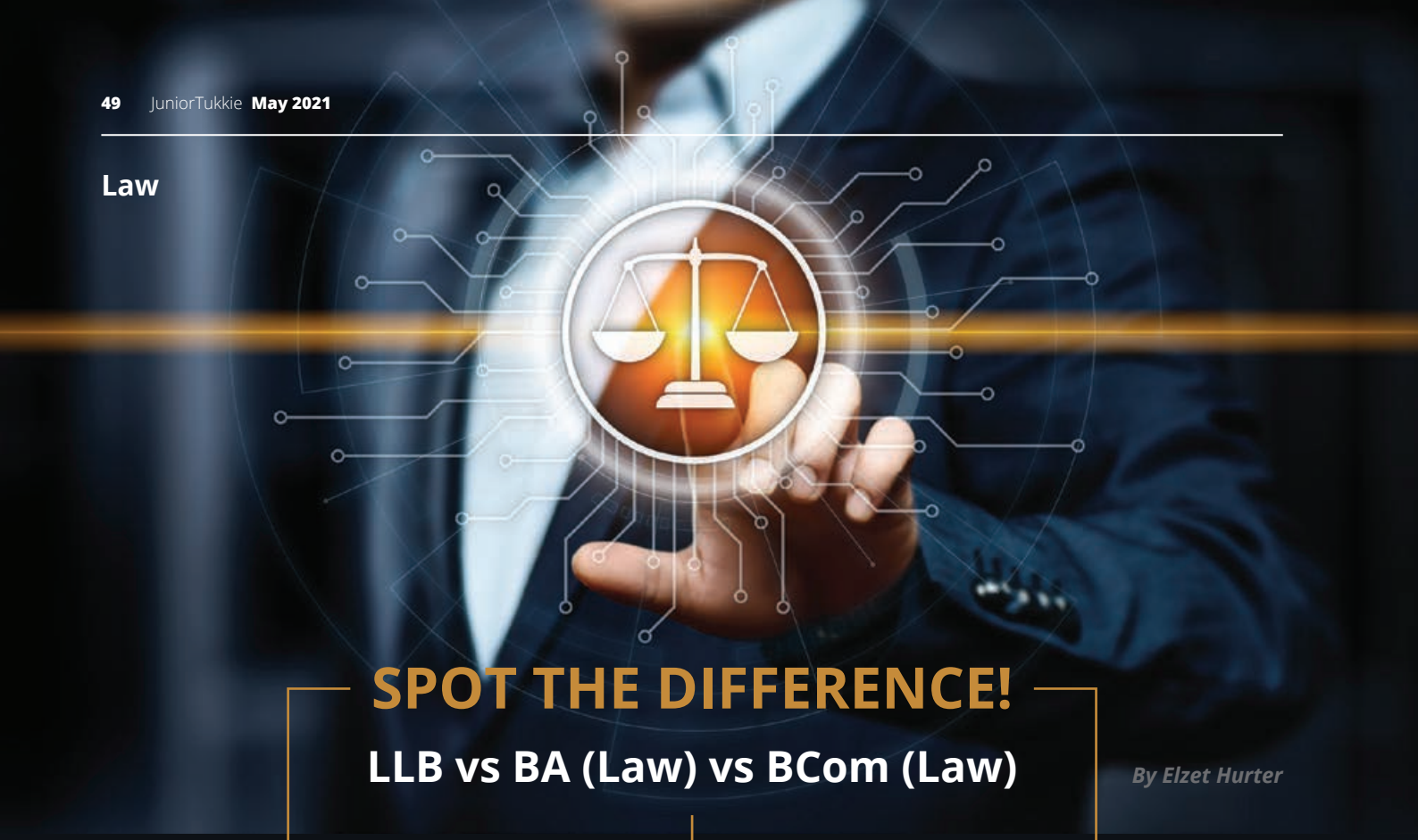
The two surgeons matched the determination of her family in finding a solution and spent a great deal of energy and time investigating various options for little Theophylline. They concluded that a complex procedure called patellar groove replacement could potentially be used. Saspine Pty Ltd (which manufactures mostly implants and instrumentation for neurosurgery) and StratCure Pty Ltd (the distributor) immediately agreed on custom-making an artificial groove for the kneecap to glide in, which would be the first of its kind to be implanted into a cat in South Africa. They used polyethylene, a medical-grade plastic which is used for the manufacturing of joint replacement components for humans.

Dr Kitshoff and Dr Bester placed the new implant into Theophylline's right femur. This allowed her to finally flex and extend her knee without pain and without abnormal movement of the kneecap. Following surgery, Theophylline has recovered well, bearing weight normally on her right hindleg and showing full range of bending motion of her right knee. She is also back at home with her family. Dr Kitshoff and Dr Bester said: 'Hopefully, we'll be able to help patients with similar conditions to have a better-quality and pain-free life.'

Director of the OVAH Dr Paul van Dam said: 'This outcome has delighted all those involved and demonstrated that sometimes the odds can be beaten—especially if you have a compliant patient, extremely dedicated owners and the expertise of a skilled veterinary team.'

For more information, visit www.up.ac.za/faculty-of-veterinary-science.

Law



SPOT THE DIFFERENCE!

LLB vs BA (Law) vs BCom (Law)

By Elzet Hurter

Faculty of Law	Faculty of Humanities	Faculty of Economic and Management Sciences
An LLB degree equips students with an in-depth understanding of the law and to apply the law in the competent and effective provision of legal services to the community.	A BA (Law) degree provides a qualification with knowledge of the South African legal system, Private law, Constitutional law, Customary law, aspects of the Arts and Social Sciences, and languages and language structure.	A BCom (Law) degree provides a qualification with knowledge of the South African legal system, Private law, Mercantile law, Labour law, Customary law and aspects of Economic and Management Sciences.
The minimum period of study for the degree is four years, or reduced to two years, after attainment of a BCom (Law) or BA (Law) degree.	The minimum period of study for the BA (Law) degree is three years full-time.	The minimum period of study for the BCom (Law) degree is three years full-time.
The successful completion of an LLB may grant entry to postgraduate studies. An LLB degree is the minimum qualification required to gain access to the organised legal profession in South Africa.	Recognised law modules completed in the BA (Law) degree may count towards module credits in a subsequent degree.	Recognised law modules completed in the BCom (Law) degree may count towards module credits in a subsequent degree.

Contact information | **Email** lawadmin@up.ac.za | **Website** www.up.ac.za/law

Law

How to choose between a BA (Law), BCom (Law) or straightforward four-year LLB degree?

As explained here, there are **three direct routes** to a recognised legal qualification and eventual admission as an attorney or advocate in South Africa with an LLB degree behind your name, given the *status quo* in South Africa in 2019 and excluding forthcoming amendments to the Legal Practice Act, 28 of 2014:

1 Faculty of Law | An LLB degree = One degree: 4 YEARS minimum

Admission requirements: APS = 32 | English 5 (60–69%)

2 Faculty of Humanities | A BA (Law) degree 3 YEARS + Followed by an LLB degree 2 YEARS = Two degrees: 5 YEARS minimum

Admission requirements: APS = 30 | English 5 (60–69%)

3 Faculty of Economic and Management Sciences | A BCom (Law) degree 3 YEARS + Followed by an LLB degree 2 YEARS = Two degrees: 5 YEARS minimum

Admission requirements: APS = 32 | English 5 (60–69%) | Pure Maths 5 (60–69%)

OR Any prior recognised degree + Followed by an LLB degree 4 YEARS minimum

Hereafter, should you qualify, you could consider pursuing a **master's degree** in law (optional).

Master's programmes are presented as follows:

- Coursework: evening classes, examinations and a mini-research dissertation; or
- Correspondence: comprehensive master's dissertation.

The duration of a master's degree at UP is minimum one year.

If you are interested in a career in **patent law,** you should first pursue a science degree (Bachelor of Science (BSc) or Bachelor of Engineering (BEng)) degree, and/or followed by an honours degree in BSc or BEng, followed by an LLB degree, or vice versa. Here you are looking at a minimum period of seven years of studying. However, this will prepare you for the Patent Examination Board, as required in Section 21 of the Patents Act, 57 of 1978, as amended, for a career as a patent attorney. However, it is important to note that admission as a patent advocate or attorney is subject to passing the Bar Examination for pupils or the Competency-based Examination for Admission as an Attorney too. Should you be interested in this field of law, you may find more relevant information on the websites of patent attorneys, the South African Institute of Intellectual Property Law (SAIIPL) and the World Intellectual Property Organisation (WIPO).

If you would like more information such as the minimum requirements and career opportunities, do visit the various faculties' websites: **www.up.ac.za/law** | **https://www.up.ac.za/faculty-of-humanities** | **www.up.ac.za/ems**

Updated November 2019

BA (Law)
(3 years minimum)

Undergraduate LLB
(minimum 2 years)

Other degree

Undergraduate LLB degree
(minimum 4 years)

BCom (Law)
(3 years minimum)

Undergraduate LLB
(minimum 2 years)

Possible postgraduate (master's and/or doctoral) studies as the start of post LLB specialisation—not compulsory

Specialisation in practice: **'Tricks of the trade'**

Attorneys' profession*

Legal Practice Council (LPC)
Legal Practice Act, 28 of 2014

Application for interviews with practising principal attorneys, followed by selection

Other forms of selection, such as psychometric assessment, could be included in selection processes

Appointed as candidate legal practitioner for practical vocational training (pvt)—'candidate attorney'

Serving 24 months uninterrupted as candidate legal practitioner for pvt (Regulation 6) including a ± five-week programme or structured coursework (150 notional hours)
or
Serving 12 months pvt including a six month after hours programme of structured coursework (400 notional hours)
or
Serving 12 months pvt in a six month (400 notional hours) programme if structured coursework was completed prior to the registration of pvt contract
Compulsory community service—not finalised yet

Salary range: ±R4 500 to R45 000

Competency-based examinations (CBEs) for admission as an attorney (LPA, 2014: Section 26(1)(d), Rules 21.1 and 21.2)

Annually during ± February and August

Permitted to write after satisfactorily serving a period of six months of pvt ('clerkship') or satisfactory attendance at an approved School for Legal Practice

Admission as an Attorney in the High Court

May appear in all lower courts with immediate effect

May apply for a certificate of right of appearance in the High Court after three years of practice

Section 85(1)(b) of the LPA provides that every legal practitioner (attorneys and advocates taking direct instructions from the public) is obliged to be in possession of a Fidelity Fund Certificate and who, for the first time, practices as such, must complete a legal practice management course approved by the LPC. Once operational, the LPC will make rules relating to the management course to be completed (Section 95(1)(zL) of the LPA).

Practice as a 'non-trust account' advocate
No trust account, may not hold money of clients, not required for accounts to be audited annually and will not hold a Legal Practitioner's Fund Certificate (LPFFC)

May only receive instructions from an attorney—may not be briefed directly by members of the public

Attorneys

BRIEF

Non-trust account advocates

Advocates' profession*

Legal Practice Council (LPC)
Legal Practice Act, 28 of 2014

Application for an interview with a practising advocate, followed by selection

Appointed as candidate legal practitioner for practical vocational training (pvt)—'pupil'

Serving 12 months uninterrupted as candidate legal practitioner for pvt (Regulation 7)

Complete a programme of structured coursework of 400 notional hours over a period of six months before or during this period

Compulsory community service—not finalised yet

No salary.
LPC must still determine reasonable compensation—currently under debate

Competency-based examinations for admission as an advocate (LPA, 2014: Section 26(1)(d)

Permitted to write after serving a period of six months of pupillage (Rule 21.5)

Note: The LPC is currently finalising the structure of this examination

Admission as an Advocate in the High Court

May appear in all courts with immediate effect

Section 85(1)(b) of the LPA provides that every legal practitioner (attorneys and advocates taking direct instructions from the public) is obliged to be in possession of a Fidelity Fund Certificate and who, for the first time, practices as such, must complete a legal practice management course approved by the LPC. Once operational, the LPC will make rules relating to the management course to be completed (Section 95(1)(zL) of the LPA).

Practice as a 'trust account' advocate with a trust account. May hold money of clients, but must first obtain a Legal Practitioner's Fidelity Fund Certificate (LPFFC)

Must have trust account audited annually for the reissue of the LPFFC

May receive instructions directly from members of the public—intervention of an attorney is not necessary

Legal practice (dual practice is not permitted)

Note: Postgraduate specialisation (master's and/or doctoral studies) may be pursued at any time after completion of an LLB degree, subject to admission requirements, namely before commencement of practical vocational training (pvt), during pvt, after pvt, and in fact, shortly or many years after graduation and in practice. As always, continuing education, professional development and lifelong learning are key components for success and thus highly recommended for all legal practitioners.

*Updated November 2019

Career opportunities in the **LEGAL profession** with at least an **LLB degree:**

Admission as an attorney or advocate is highly recommended before pursuing careers outside the organised profession!

1 Officer of the Court

- Attorney
- Advocate
- Court Orderly
- **National Prosecuting Authority**
- Public Prosecutor
- State Advocate

2 Court Administration

- Court Manager
- Clerk of the Court
- Registrar
- Maintenance Officer
- Maintenance Investigator
- Maintenance Clerk
- Interpreter
- Stenographer
- Judge's Clerk

3 Justice and Constitutional Development

- Office of the Chief State Law Adviser
- State Attorney
- Legal Administration Officer
- Master of the High Court
- Office of the Family Advocate

4 Judiciary

Magistrate: Adjudicates criminal and civil cases in court. They have power to acquit, convict and sentence the accused if found guilty of committing an offence or pass judgments in civil matters.

Judge: Presides over criminal, civil and constitutional matters in the High Courts, Supreme Court of Appeal and the Constitutional Court.

5 Other areas

- **Law Reform Commission**
- **NGOs**
- **Legal Advisers**
- **South African Police Service**
- **Military**
- **Correctional Services**

6 Legal Academics

Law lecturers at the various universities or colleges:

- Lecturer
- Senior Lecturer
- Associate Professor
- Professor
- Head of a Department or Law School
- Deputy Dean
- Dean

7 Legal Aid and Advice

- Legal Aid Board
- Legal Resources Centre/Justice Centres
- Lawyers for Human Rights
- Clinics and Para-legals operating in Community Advice Centres
- University Law Clinics
- Para-legal Advice Offices

See http://www.justice.gov.za/brochure/careers-in-justice.html

Updated November 2019

TuksSport

TuksSport Director wants UP student-athletes to make an impactful difference

By Wilhelm De Swardt | Photographer: Reg Caldecott

Many years ago, as a small boy in Ladysmith, Steven Ball, loved sports and took any opportunity given to dive into a swimming pool. Over the years he participated in many sports and this stood him in good stead for his new appointment as the Director of TuksSport and as acting CEO of the High Performance Centre (hpc).

Ball has not forgotten where it all started for him. If he can achieve one goal at TuksSport, it will be for every student-athlete to realise that opportunity is everywhere. The key is to develop the vision to see it and to make the most of it.

'If only 1% of all our athletes and students at UP can step up. It does not mean they all need to be track and field champions; they may excel in the financial world, in law, in medicine or a medical field, or they may excel in one of the engineering fields, but if they are taking the lead to make South Africa a prosperous country, they are making a difference. That is what we want at Tuks.'

Realising what our calling in life is

'For me,' Ball says, 'it was when my dad took me and fellow swimmers to Pietermaritzburg where they were tested by a former fitness coach for the Springboks, Sharks and Dolphins. The testing was intense, but I walked away from that experience so inspired! On the way home I told my dad that this is what I am going to do with my life: I am going to work with performance athletes and I have. That is where my journey to my current position started.'

Building a sound academic foundation

In 1997 at the age of 17, Ball enrolled at the University of Pretoria to study BA (Human Movement Science). Then he completed the BHons (Human Movement Science), specialising in biokinetics and followed that up with a Management Advancement Program at the University of the Witwatersrand Business School. Ball then registered for his master's degree, which was an MPhil (Business Management in Responsible Leadership). Since then he has obtained various other international, high-performance coaching-related qualifications.

TuksSport

He started his career at TuksSport and the Institute for Sport Research in 2001 as an intern biokineticist/ sport scientist. He was involved in the hpc, in Canoeing SA and TuksAquatics, before he was appointed as Deputy Director of TuksSport in 2012 and he became responsible for Coaching and Performance Management.

The core of success lies in building good relationships.

Steven acknowledges, 'I realise that when it comes to coaching one will never have all the answers, but sound, warm, sincere and meaningful relationships with athletes are crucial and they make the biggest difference. If everyone is on the same page, the battle is half won.'

Highlights of Steven Ball's career

'One highlight was accompanying the South African swimmers during the 2002 Manchester Commonwealth Games and also going with them when they participated in the 2003 World Championships.

It was also exciting to help Tuks's William Diering, Lise-Mari Retief and Suzaan van Biljon prepare for the 2008 Beijing Olympic Games. All three of them finished 10th. The same year Suzaan won a gold medal in the 200m breaststroke at the World Short Course Championships (25m pool).'

2017 was a flagship year for TuksSport and hpc. Ball fondly remembers, saying, 'It was a year we will never forget in the history of TuksSport. Tuks won seven of the nine Varsity Sport and Cup Tournaments and nine USSA Tournaments. Newspaper headlines screamed: *Where winning is an addiction* and *What makes TuksSport tick?* '

The Stripe Generation

The sporting successes at TuksSport and hpc is legendary not only in SA, but abroad too. Ball accredits this to the culture of playing for the 'Stripe'.

'Wearing the Stripe comes with responsibility. No matter what the sporting code, athletes all participate to win. No opponent is going to just roll over and quit. Tuks-athletes are particularly competitive!

We talk about earning your stripes. We also want athletes to respect their badges. They put in long hours where no one is watching. We want our athletes to, even after they have graduated and moved on to their chosen careers, to leave their sport club and TuksSport and the upcoming Stripe Generation in a better, stronger position. We raise the bar all the time.'

As Director, Ball sometimes feels that there are not enough hours in a day to accomplish what he would like to, but he firmly believes that, 'when you are at home, be at home. Forget your work problems and be fully present for your loved-ones.' Ball is serious about keeping healthy. 'The fitter I am, the longer the time I get to spend with my family is going to be. That is important to me.'

Steven Ball is also head of a Residence, so above his own two daughters, he is also 'dad' to 640 students.

'Wayne Goldsmith once said that when you wake up in the morning, working in a high-performance sport environment without a sense of anxiety about what needs to be done and the responsibility thereof, it is time to think about quitting.'

Steven Ball aims to do exactly that, because it is true.

TuksSport

TuksSport Switchboard:
+27 (0)12 420 6060
(07:30-18:00, Monday-Friday)

TuksSport

Tuks archer, Johan Wilsenach, has a life he never imagined

By Wilhelm De Swardt | Photographer: Reg Caldecott

Johan Wilsenach touched a bow for the first time when he was five and it changed his life. And has continued to do so in ways he never imagined.

All boys engage in the game of cowboys and Indians and they run around with a bow and arrow. The Indians were always the heroes. When he pretended to be Robin Hood, Johan found he hardly ever missed and would lead his band of knights to win more 'wars'.

When he was seven, Wilsenach got his first real bow - a compound bow - and he started practising and competing. He shot at targets all the time. That is what got his adrenaline pumping.

At the age of ten Wilsenach competed in Argentina. Three years later, he made a decision to switch from competing with a compound bow to competing with a recurve bow.

'There is something controlled, yet relaxing about pulling back a bowstring, and feeling the bow in your hands; about pitting yourself against a target. 'I love the sound the arrow makes when it is released. There is a smoothness to it that is hard to explain. Frankly I cannot imagine a life without archery. This sport has become part of my DNA.'.

Johan Wilsenach is a student in BScAgric (Animal Science) at UP and he says, 'My goal is to compete in the recurve competition at the Olympic Games. Johan participated in the South African Championships from 2 to 4 April 2021 in Johannesburg. He won the junior men's recurve competition and hopes to represent South Africa at the World Student Games and the World Championships in Australia. The Tuks archer is under no illusions about what it takes to become one of the best archers in the world. 'Training is everything. The number of arrows you shoot, determines how good you are. World record-holders in this sport, shoot up to 1000 arrows a day.

I have found that the more I shoot, the better my technique becomes, and I become stronger and more confident. I also work on improving my thought process, my breathing and my mental focus.'

Johan Wilsenach

TuksSport

Young sprinter impresses against SA's best

By Wilhelm De Swardt | Photographer: Reg Caldecott

Benjamin Richardson

At 1.90 metres, Benjamin Richardson is tall, but he is also genuinely very fast. In April, during the South African Age Group Championships, the TuksSport High School learner won the under 20 men's 100m (10.41s) and 200m races (20.97s).

This 18-year-old Athletics Foundation Trust sponsored athlete is also a double South African champion.

He proved it during the Gauteng North Championships when he won the 100 metres in 10.31s and the 200 metres in 20.65s.

At the South African Senior Championships held at Tuks, Richardson showed his fearlessness in taking on the 'big guns'. He finished second in the 200m-final. The legendary Wayde van Niekerk won.

The first time he raced Van Niekerk was in the 200m semi-finals. He came third but was delighted, saying, 'I was not scared to race against Wayde. I decided that I would try to win, but I also wanted to enjoy the race. Being able to compete against Wayde was an honour, and it inspired me because I saw where I could be in the future. I know it will take hard work, but I am willing to tackle the challenge head-on.'

The 200 metres is Richardson's favourite event. 'I am not always the fastest out of the starting blocks, but I catch up after approximately 50 metres.'

When it comes to role models, Richardson is his own man. 'I take note of what is happening in the arena of international athletics and sprinting. I do not, however, try and emulate any other athlete. In the end, it's about what I can do and how hungry I am to achieve my goals.'

The TuksSport High School athletes, sponsored by the Athletics Foundation Trust, won five gold medals, two silver medals and six bronze medals at the SA Age Groups Champs.

- Viwe Jingqi won two gold medals. She was victorious in the women's under 18 100m (12.12s) and 200m (24.24s). Sanele Zixunge was victorious in the under 18 men's 3000m.
- Olwethu Mncibi (under 16 boys—5km walk) and Karabelo Motlhabedi (under 18 boys—800m) won silver medals.
- Mpho Moleofsa (under 18 boys—800m), Rivers Williams (under 18 boys—10km), Thato Matlala (under 18 boys—400m), Sisanda Ntuli (under 16 boys —1500m-steeplechase), Reaobaka Matshitshe (under 16 girls—200m) and Maphule Makgotha (under 20 women's—10km walk) won bronze medals.

Benjamin Richardson (on the right)

TuksSport

Contact information

TuksSport High School
TuksSport High School is an independent school for boys and girls from Grade 8 to 12. This specialised school allows current and potential high-performance athletes to train and travel internationally while remaining in school. TuksSport High School offers learner athletes a unique opportunity to live out their passion for sport in a distinctive and supportive sporting milieu created by the hpc and the University of Pretoria.

Stephanie Hibbert
Tel +27 (0)12 484 1792
Email stephanie.hibbert@hpc.co.za

Regina Malope
Tel +27 (0)12 484 1780
Email regina.malope@hpc.co.za

Di Reid-Ross
Tel +27 (0)12 484 1786
Email di.reid-ross@hpc.co.za

TuksSport

Van den Bergh is even more motivated to excel in the 100m-hurdles after contracting COVID-19

By Wilhelm De Swardt | Photographer: Reg Caldecott

The year 2021 has been eventful for the former African youth 100m-hurdles champion, Kayla van den Bergh.

In January, Van den Bergh left to study and train at the University of North Colorado. Things did not work out as she had hoped. Sprinters and cold weather don't do well together. When she arrived, the temperature was -20°. Van den Bergh found it challenging to adapt to the American way of training. It felt insouciant. The grass is not always greener on the other side.

Van den Bergh wants to compete at the World Student Games as well as in the World Junior Championships. To her, it means putting in long hard hours. Then Van den Bergh contracted COVID-19 while in the USA. She became very ill.

'I battled to breathe. At one stage, I could hardly get out of bed to shower. My biggest fear was that I would need to go to a hospital. I did not want to be on a ventilator as I heard it carried the risk of damaging one's lungs. This is something no athlete can afford. Being all on my own in a little room far from family and friends drained me emotionally.'

Van den Bergh is very relieved to be back in South Africa and she has made a full recovery. She is not sure as to when she will start racing again. She injured her hamstring recently.

The 19-year old is, however, looking forward to a race against Tuks' Rikenette Steenkamp, South Africa's national 100m outdoors and 60m-indoor hurdles record holder for the first time.

Rikenette has been my role model for years. To me, a real champion is someone who remains humble no matter what their achievements might be. Rikenette always talks to young athletes and offers them advice. She never quits. I am striving to be the same.'

Van den Bergh relishes a good duel on the track. 'Every race has its challenges.

'Every race has its challenges. That is what makes athletics exciting! I don't mind losing as long as I learn from my mistakes. The goal should always be to improve.'

That is what makes athletics exciting! I don't mind losing as long as I learn from my mistakes. The goal should always be to improve.'

Van den Bergh won a gold medal at the African Youth Championships and she was fifth during the 2018 Youth Olympics. Currently her best time is 13.84s, but she believes she can better this time. Speed seems to be a family thing. When her dad, Riaan, played fullback for the Bulls, he was no slouch when he had the ball in hand. Mom, Yvonne, was a 400m-hurdler in her younger days, while her younger brother, Christiaan, is a champion hurdler.

TuksSport

Sixteen-year-old Tuks swimmer with his 'never say die' attitude has qualified to compete in the Tokyo Olympic Games

By Wilhelm De Swardt | Photographer: Reg Caldecott

The Tuks swimmer, Pieter Coetzee, who has dominated the backstroke events during the last two years, is reaping the reward for his hard work.

During the 2019 South African Championships, Coetzee who was 14 years old, finished third in the 50m-backstroke and fourth in the 100m-backstroke. The same year he won the 100m-breaststroke at the South African Short Course Championships (25m pool) and was second in the 50m-event. During the African Junior Championships in Tunisia, he won five gold medals. At the World Junior Championships in Budapest, the Tuks swimmer set personal best times in each of the backstroke events.

And now, at the age of sixteen, Coetzee has qualified in the 100m-backstroke for the Tokyo Olympic Games!

He might be the youngest South African male swimmer to represent South Africa at the Olympics. Chad le Clos and Cameron van der Burgh were 20 when they did so.

In the first week of April, Coetzee became the poster boy of determination. His challenge was to swim a time of 53.85s in the 100m-backstroke; and a time of 1:57.50 in the 200m-backstroke.

His battle with the stopwatch over 100 metres became one of the dramas of the championships.

During the 100m-heats, he swam 54.11s, a mere 0.26s slower than he needed to qualify. His time in the final was 54.25s. During a 100-metre time trial, he swam 53.92s, missing out by 0.07s. Many a swimmer might have decided to quit, but Coetzee's dream propelled him. It turned out be be fourth time lucky. In the men's 4x100m medley relay, he swam 53.62s!

An elated Coetzee said, 'It was, without a doubt, one of the biggest highlights of my swimming career. My coach, Rocco Meiring, believed I could qualify for the Games and I did. My next challenge is to qualify in the 200m-backstroke. My most recent winning time is 1:58.33, a mere 0.83s off the qualifying Olympic standard. I am better at the 100m-backstroke, but my times are constantly improving over the 200m.'

Football legend Cristiano Ronaldo, one of Coetzee's hero's once said,

'If you don't believe you are the best, then you will never achieve all that you are capable of.'

I am striving to do the same," Coetzee explained.

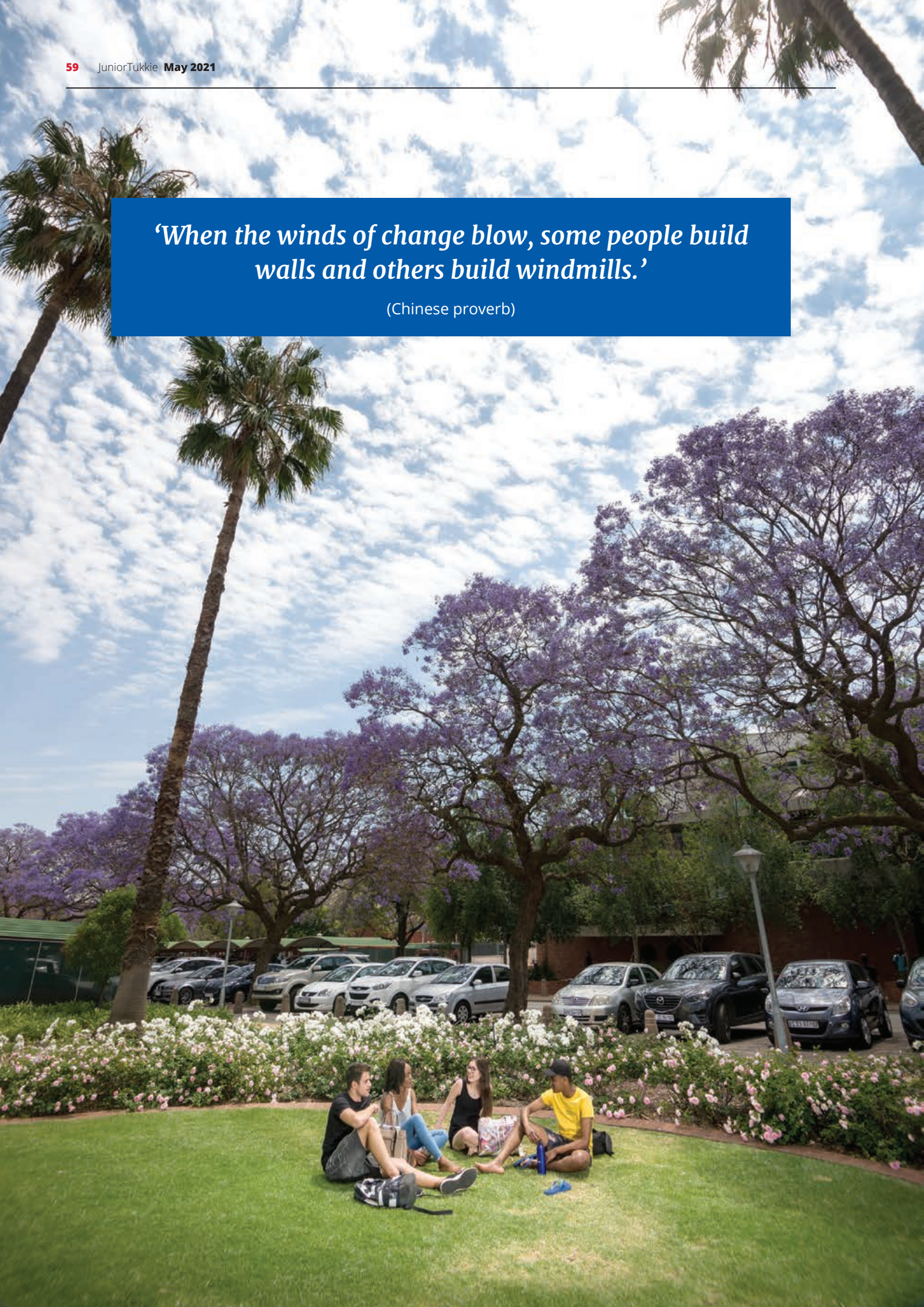
Coetzee also admires South Africa's top backstroke swimmer. Christopher Reid, who holds the South African 100m-backstroke record of 53.12s and who is a student in America.

Note: Swimmers, Tatjana Schoenmaker (100m and 200m breaststroke) and Kaylene Corbett (200m-breaststroke) also qualified for the Tokyo Games.

Pieter Coetzee

'When the winds of change blow, some people build walls and others build windmills.'

(Chinese proverb)



UP residences

Do you know where life is?

By Princess Mhlanga

Tuks Bophelong is a vibrant and multicultural residence, for male and female students on the Prinshof Campus. This lavish self-catering residence, situated on Olympus Hill, opposite the Prinshof Medical Campus and Steve Biko Academic Hospital, opened its doors in January 2015 and is known for its cultural history and excellent academic and sports achievements.

'Legae-gae' is the perfect home away from home for 296 residents in single and private rooms across five blocks. WiFi and LAN cables have been installed in all the rooms for convenience. The residence brings students in the health sciences who come from different backgrounds into one big family. The grab-and-go cafeteria, situated near our great Unity Hall, has a flat-screen television with DStv. With its study centre, computer labs and laundry facilities, the residence provides a comfortable home environment.

We are proud of our colours, turquoise, charcoal, black, grey and white, making us stand out. Our emblem is the famous Pegasus image with its wings spread out, surrounded by a charcoal and grey laurel wreath.

The students in the Tuks Bophelong residence adhere to principles such as respect, unity in diversity, inclusivity, empathy and compassion. The residence has a House Committee consisting of 10 residents who were voted into office by the residents. They serve as the communication channel between students, TuksRes and the University Management. We have house parents who live in the residence with us. They supervise activities and provide academic and psychosocial support. Our house parents are PhD graduates employed in management and have extensive experience in management and caregiving.

The residence is actively involved in many outreach programmes, such as RAG (Reach Out and Give), and internal projects aimed at providing pads, food and clothing for distribution among residents in need. A new project for 2021 was the School Shoebox project, during which residents were asked to donate school shoes to school-going children in need.

Residents participate in various sports codes, including soccer, netball, yoga, tennis, hockey and athletics, and we are well represented on the sports fields. In previous years our male and female soccer teams have won numerous league titles. Our Sports House Committee also hosts online games, such as chess and soccer matches.

The residence has a Wellbeing Committee, generally referred to as *'#Woke - about Well-Being'* of students, which hosts discussion sessions in the residence on various sensitive topics that affect most students. It is part of Wokudonsa, a TuksRes initiative that promotes students' wellbeing in residences.

Tuks Bophelong looks forward to meeting new talent, which will add to this beautiful home's dynamic values. We look forward to assisting and inspiring you to develop to your full potential and achieve success during your time with us.

Our motto is *'Ubi est vita'*, 'Where there is life', and Tuks Bophelong is where you need to be to have a life.

Tuks Bophelong House Committee 2020

Contact information
Tel +27 (0)12 420 3592 | **Instagram** @tuks_bophelong
Website www.up.ac.za/student-accommodation/article/2865385/tuks-bophelong-residence

UP residences

College makes history: 106 years and counting

By Ayden Van As

In 1909, the then Minister of Education proposed the construction of student hostels on college and university grounds, and in 1912 a grant of R24 000 was approved to build the first such hostel in South Africa. Work on the first hostel at the University of Pretoria (previously known as the Transvaal University College) started in 1914, and in 1915 this hostel was ready to receive its first residents.

This first residence generally referred to as the 'Hostel at the College', eventually became Kollegetehuis—a name that was recently changed to College. Very few residences have flourished as College has in its more than 100 years of existence. The strength of this residence lies in its core values of respect and brotherhood. Respect for oneself and others plays a vital role in developing the unrivalled sense of brotherhood evident at College and inspires College men to become the best men they can be.

The rich history of College is preserved in its museum, where many newspaper articles, items of clothing from the past and mementoes are kept safe to be viewed by new and old College men. College residents take immense pride in their traditions, the most notable of which is the wearing of togas. In 1930, the University ruled that all students should wear suits to class, but since many students could not afford suits, College men decided to wear their bedsheets to class to demonstrate their objection to this rule. Nowadays, this tradition is maintained by first-year students dressing in togas for their annual concert.

In the 1980s, when College residents were moved to a new building on the Hillcrest Campus, they took a few of the larger rocks from the foundations of Old College and placed them near the entrance to the new building. It is a tradition that first-year students are not allowed to touch the rocks, which are known as 'Die klippe' (Afrikaans for the rocks). Second-year students are expected to take care of these rocks by repainting them every year and guarding them against being touched or stolen. Other exciting features of College include the King Court and the Victory Arch of Trajanus.

College is also one of the few residences that declared themselves republics. This happened in 1982 when the leadership decided to draw up a constitution to prevent the House Committee members from making significant changes to the residence without majority approval. Due to the residence's status as a republic, members of the leadership are referred to by different names: The Head of Residence of College is the Appeal Judge; the House Committee is the Executive Council, and the Chairperson of the Executive Council is the State President of the Republic.

College has at least one mascot for each corridor in the residence. These mascots, known as sarges, have been obtained from various places over the years. The most popular of them, Sarge Social, is used as the logo because of College's reputation as the most social residence at UP.

This article only touches on some of the rich history of College. If you see any students on campus, who can be identified by their clothing as College men, be sure to ask them for stories about College, which they will undoubtedly be keen to share.

Seniors spending time on 'Die klippe'

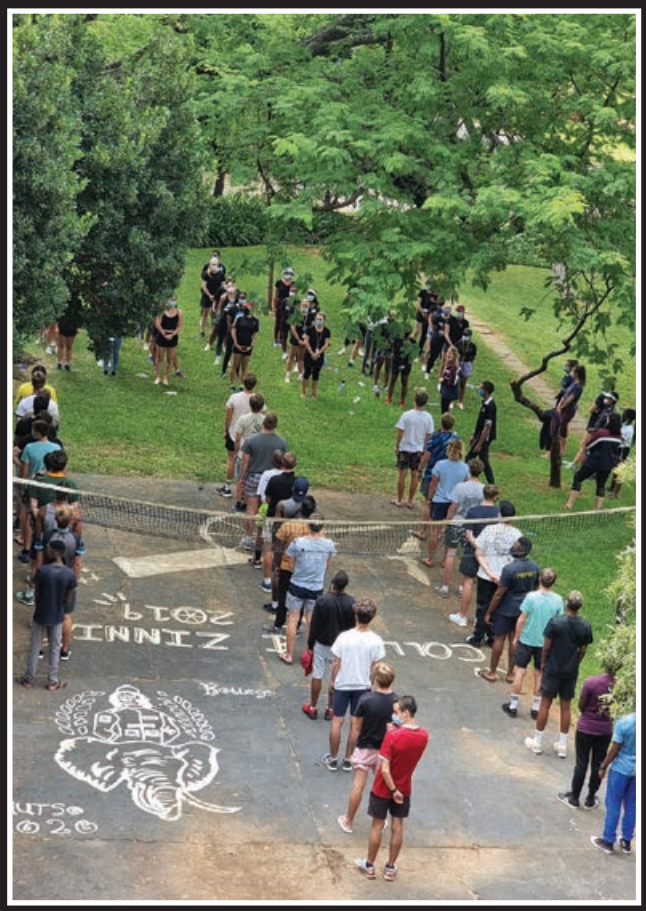
The Museum of College

Contact information
E-mail collegeres1@gmail.com | @college_res | @college_res | @CollegeResidence
Website www.up.ac.za/student-accommodation/article/2865337/college-residence

UP residences

The Executive Council of 2021 at the Victory Arch

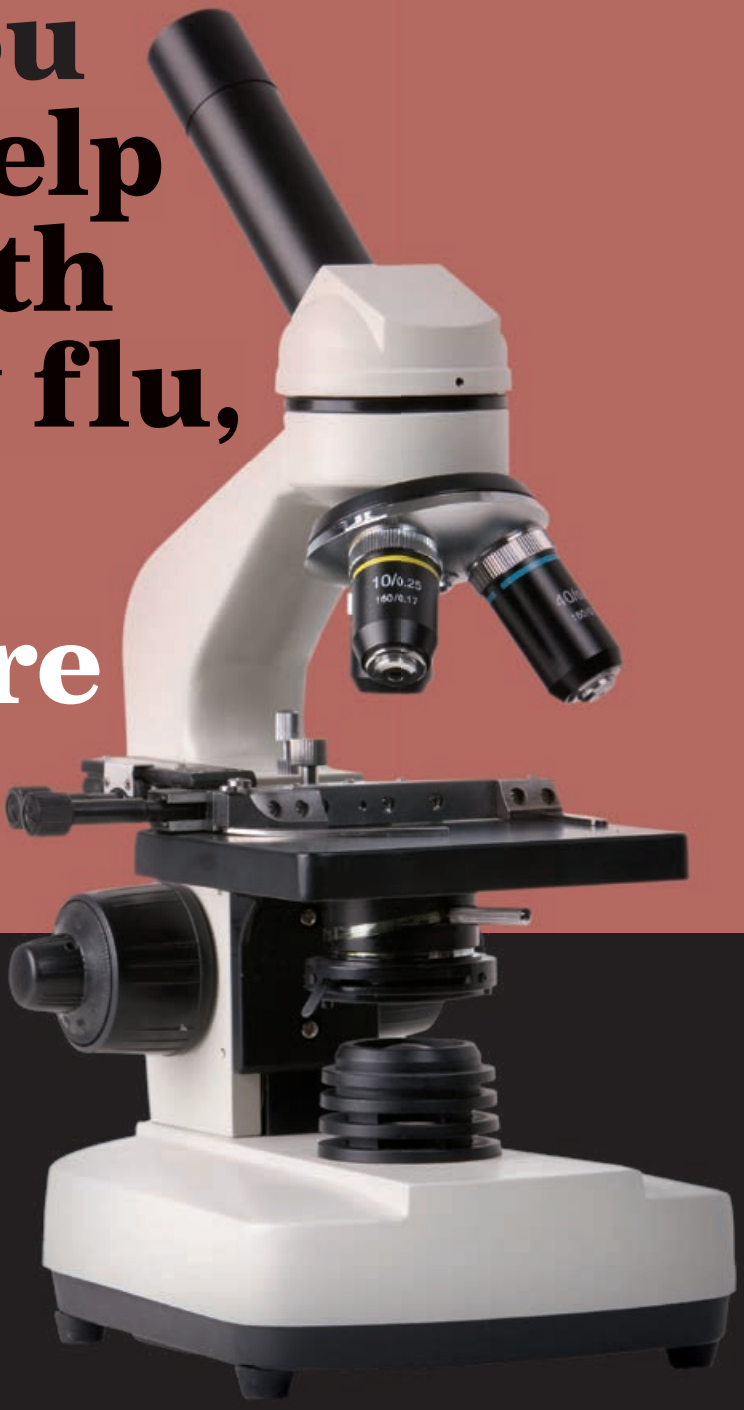
First-year students of 2021 dressed in their togas



First-year students preparing for a social event on King Court

Whether you want to help people with the daily flu,

or one day find the cure for all flus,



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