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**JT**  
JuniorTukkie

April 2019  
[www.up.ac.za/juniortukkie](http://www.up.ac.za/juniortukkie)



Out of the Ordinary®  
 **Investec**

# Content



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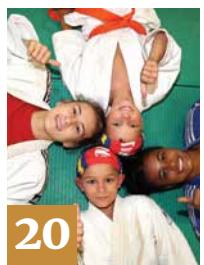
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## Editorials



### JuniorTukkie helps you to invest in your future

Investing is a lifelong process. In alignment with JuniorTukkie's theme for 2019: 'Invest in your future', I wish to encourage every learner, student and adult – regardless of your age – to start investing in your future. The sooner you start, the better off you'll be in the long run.

The discipline and skills you will learn while balancing your investments in time will benefit you for the rest of your life. Not all investments involve money –you can also make an investment by effectively managing your time, taking good care of your health, improving your social skills and devoting quality time to your studies. Also do not forget to spend time investing in your dreams—since you pass through this life only once, it is vital that you make the most of your journey. Life provides an endless array of positives, but it also presents challenges, hard times and failures; therefore it should be no surprise to learn that there is no guarantee that all investments will be successful. The result of failure is spiritual growth, mental understanding, emotional maturity and physical strengthening. Do

not allow failures to get you down – stand up, try again and never give up! Failures can teach us invaluable lessons that can be used to refine our approach and achieve our dreams.

Dreams without action will remain just that: dreams. The effective management of a dream list can contribute to successful investment. A dream list can be successful only if you dream big and put your dreams into action. Write down what you hope to achieve and invest time in planning and setting dates.

The JuniorTukkie programme includes initiatives that not only enrich prospective students' lives, but also teach them how to invest quality time and effort in their communities. This year, JuniorTukkie

is celebrating 15 years of exceptional growth and success. During this time we invested quality time preparing many learners to make the big leap from high school to university by equipping them with the skills and emotional intelligence needed to cope with the challenges often faced by first-year students.

The JuniorTukkie journey is an amazing example of successful investment in thousands of learners' lives and has produced many success stories. Be assured that there are many more chapters still to be written!

**Dr Petrus Lombard**  
Project Manager: JuniorTukkie



### Your future starts now

As we navigate our way through the first half of another year, I wish to emphasise the need for each generation to achieve greater heights than those who went before them. In order to do this, you need to invest in your future. People tend to talk about the future as something distant, but in fact your future starts now. Many people are guilty of procrastination, which is a costly habit as time lost can never be regained. We need to consider carefully how best to invest our time in activities that will pay dividends in the near future.

When I occasionally address university students or high school learners, I am often asked how I became so comfortable with public speaking. The answer is simple: 'Do your time.' As a high school learner, I was very shy, but then I started regularly practising speaking in front of a mirror and even recording myself. Those many hours of practising, which increased my public speaking confidence and ability, were part of my investment in my future as public speaking is of vital importance in my current role at Investec.

Today my advice to you is to use your time well and to make sure that you invest in yourself through academic endeavours or the acquisition of practical skills that will stand you in good stead in the future. Learning and development are ongoing processes. You are never

too young or too old to learn. In a constantly changing world, you should always seek ways of enhancing your knowledge, for example by registering for additional courses, to avoid the risk of being left behind. Remain informed by reading widely. This will not only improve your vocabulary, but will broaden your world-view by exposing you to different ways of thinking and solving problems.

Any investment in your future involves making choices. While we cannot choose to start over, we can ensure a beautiful ending by starting to make wise choices today. Make the difficult choices now. For example, you may have to choose whether to do the right thing or nothing, or whether to just meet expectations or exceed them. Some choices are more demanding than others, but as painful as some of them may be, please do

not delay the pain. Face the pain now. Pain and making sacrifices are part of the investment journey. My personal experience has been that the greater the pain experienced when having to make difficult choices, the greater the chances of better returns in the future.

Make sure that you learn something from every positive conversation and interaction you have with people—be like a sponge that absorbs useful knowledge. By making small changes and investing in yourself in positive ways today, you can ultimately create a brighter future for yourself. Happy investing!

*Yours in social development*

**Setlogane Manchidi**  
Head: Investec Corporate  
Social Investment

## Editorials

# Invest in your future

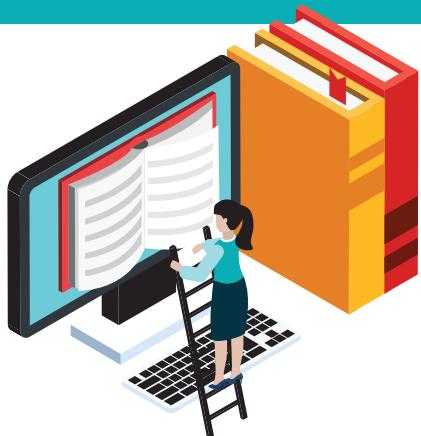
By Anthea Pretorius

The University of Pretoria is your gateway to the world. The global village needs students who are critical thinkers, big dreamers and champions of change while aiming for academic excellence. Having only a smattering of knowledge is inadequate learning. At the University we aim to deepen and broaden our students' understanding and help them to achieve new heights.

The UP tribe consists of vibrant students who are active, connected, supported and in touch with the world. They discover their potential, reinvent themselves and make every day matter. They inspire and help us to shape what we do and what we are becoming.

We want all UP students to derive the maximum benefit from their time at university by expanding their skills and experience, volunteering, participating in internships, and engaging with the community. Go where your curiosity leads you. If you strive, you will thrive. Together we can make it happen!

The theme of this edition of the JT is 'Invest in yourself'. In my editorial, I am going to leave a trail of 'breadcrumbs' in the form of thought-provoking ideas. Take from them what is useful to you right now.



Self-advocacy is the ability you acquire, as you mature, to know your strengths and weaknesses. It means that you take charge of yourself, your thoughts, your attitudes and your decisions, and that you are prepared to accept the consequences of both good and bad choices.

Do not underestimate the demands that a university education will make on your time, attention and energy. Be punctual, attend all classes and remember that you need to manage your study demands. Reward yourself when you do well and achieve what you had set out to accomplish!

Self-advocacy is also about striving to live a balanced life. Working independently is something you will learn over time. Your

## 1

### The importance of self-advocacy

support network is critically important—never be afraid to ask for help.

Self-advocacy implies that you must learn to speak for yourself, set boundaries, be self-disciplined and stand up for your rights, but always do so courteously.

Self-advocacy also means that you understand that every right comes with a responsibility. When you commit to something, make a promise or give your word that you will take it seriously. This approach also says something about the values you uphold.

Develop self-advocacy by improving your communication skills and practising tactful assertiveness. Be an active listener and an active participant in class.

The choices you make at university will affect your life and your profession. Think carefully about what you do and share. We all make bad choices at times. Own up, apologise and move on. This is how you learn to become independent and develop confidence in your decision-making abilities.

In my life I sometimes found it difficult to stay on track. I discovered that when I become distracted or preoccupied I

start to drift and have to quickly refocus my attention, or else all those wasted minutes, hours and days catch up with me.

The world convinces us that we can simultaneously pay attention to many things, giving each just a fraction of our attention, without affecting our journey towards our destination, but this is *simply not true*. We rationalise poor decisions and deceive ourselves; we justify, defend, or attempt to explain away the reality that we are compromising and making more and more allowances, until one day we suddenly realise how far we have drifted off course.

The only remedy lies in disciplined choices and changed patterns of behaviour that help us to avoid ditches and drama, and bumps and bruises. If you find yourself drifting, change course today.

Attending a university is not only about obtaining a qualification—it is also about developing every gift and talent you have been blessed with, developing your personality as you engage with others, exploiting your intellectual abilities, deepening your value system and expanding your integrity.

## Editorials

### 2

### Seven sound learning values

The world is full of wise people from whom we can learn. I found James Robson's learning values to be most helpful, and so might you. (Read the full article on <https://sarahclarkson.com>).



Be informed. Dispel ignorance. Aim to know what you know in great depth and intricacy. Read. Question. Wrestle with deep thoughts. Form your own beliefs. Expand your consciousness. Grow your selfhood.

Be humble. Realise that you can see only in part. Acknowledge that your point of view is limited. Question, challenge and expand your ideas. Consider concepts from differing cultures and histories. Expand your worldview. Avoid the pitfalls of pride and arrogance.

Critical thinking. You have a fine mind. Use it to discern between good and bad, true and false; find the most beneficial route. Ask for evidence, read vigorously and think with rigour. Consider the plethora of choices, opinions and beliefs; study diligently; think with care; keep a cool mind and a peaceful heart.

Analytical and logical thinking. Practice this discipline in order to get to the pith of matters. Do not assume or presume anything. Discern what is at stake. Aim to lay open the heart of a matter by asking the kind of questions that will lead you to intellectual clarity.

Take independent ownership of your own learning.

Integrate learning. Our contemplations should find meaningful, embodied expression. To hold knowledge apart, in an isolated box in our minds, is to make it meaningless. Apply knowledge to your life and the legacy you want to build.

Be faithful. A rigorous training gives mental acuity.

### 3

### Aim for the resilience of bamboo

Farmers who plant bamboo need a lot of patience. Once they have planted the seeds in fertile soil, it takes a full **five years** of watering, fertilising and diligent weeding before they see whether their care and maintenance have paid off. In the years in between, they do not see a single sign of life, despite their daily efforts.

#### Bamboo farming is not an overnight success type of business

The experienced bamboo farmer is tenacious. He will continue to care for the planted seeds, day in and day out, even when discouraged or when his efforts seem to be futile.

When, after five years of labour, a bamboo shoot at last appears, it grows a staggering three feet in 24 hours and up to 80 feet in six weeks. Some types of bamboo can ultimately reach heights of over a hundred feet.

However, this amazing growth is possible only because during the preceding five years the hidden root system had grown exponentially in order to be strong enough to support the potential future growth of the bamboo.

Without this substantial foundation, the bamboo would topple and fall.

#### Relating the bamboo to you and to your studies

Many students become frustrated when they are unable to master things quickly, to instantly grasp complex concepts, laboratory techniques or medical procedures, or as sportsmen and -women who need to practise for thousands of hours to master their sporting code. Many give up.

You may feel like a buried or abandoned bamboo seed, but give yourself time to sprout! Practise your art. Put in the hours needed to gain the necessary experience. Learn. Learn. Learn. Practise daily. Every effort inevitably results in an improvement on what you were able to do yesterday and your results will prove this over time.

A mindset of dogged determination will help you to maintain momentum, but will also aid you in making incremental improvements and changes that will ultimately add up and make a real difference in terms of your academic achievements and mastery of skills.

#### Patience and persistence equate to growth and success

Do your bit every day as you strive to achieve your goals and realise your dreams. You are building a strong

character; you are overcoming adversity and a range of challenges; your muscles of tenacity are strengthening and if you refuse to quit you will graduate and display the beauty of your growth knowing that you have earned it.

Your struggle is linked to your capacity for success, your potential, and ultimately to your destiny. Obtaining a qualification is Phase 1. Become a lifelong learner and tackle each subsequent life phase with the same gumption.

We live in a quick-fix society where too many people desire instant gratification—they become frustrated when they have to wait for service and demand instant solutions. There is no instant gratification when you study for a degree. Giving yourself time to develop in remarkable ways while studying and obtaining a qualification with distinction will require dedication, tenacity and self-discipline, but you will reap the rewards for the rest of your life.

Keep watering and fertilising your dreams, week after week, month after month and year after year. Make today matter! When you step onto the stage to receive your degree, you will know that the effort was worthwhile!

## Editorials

### 4 How 'choice architecture' supports willpower and helps us to cultivate good habits

Many of us will confess that despite our good intentions to cultivate good habits, our willpower sometimes fails us, we become tired and grumpy or simply lazy, and then we slide into a slump.

James Clear<sup>1</sup> reports on a study undertaken at Massachusetts General Hospital in Boston by Dr Anne Thorndike, who wanted to help staff and visitors develop healthier eating habits. What she and her colleagues did was to change the 'choice architecture' of the manner in which food and beverage options were displayed in the cafeteria. Changes in behaviour and buying

choices immediately became evident. Dr Thorndike published an article on this study in the *American Journal of Public Health*.

James Clear refers to the willpower muscle and states that '... willpower is not something you have or don't have; ...it is a resource that can be used up and restored'. A classic example is college students during finals week, when they use all their willpower to study and everything else collapses as a result. Willpower and motivation are finite resources. When your willpower is depleted, your decisions are more likely

to be influenced by your environment: if you are feeling drained, stressed or overwhelmed, it is unlikely that you will make the effort to cook a healthy meal or fit in a workout. You are more likely to relax and eat whatever is easily available. Organise the food in your refrigerator, pantry and kitchen so that healthier foods are most visible and place unhealthy foods on the lower shelves.

If you design your environment to make the default choice a better one, it is more likely that you will make a good choice now and have more willpower leftover for later.

### 5 A story that may change the way you think

In 1960, two men made a \$50 bet that had remarkable results. The first man was Bennett Cerf, the founder of the publishing company Random House, and the second was Theo Geisel, who we know as Dr Seuss.

Cerf challenged Seuss to write an entertaining children's book using only 50 different words. Seuss won the bet. His book, *Green Eggs and Ham*, has sold more than 200 million copies.



#### There are hidden principles in this story that affect my life and yours:

- No one has unlimited resources.
- We all deal with a range of constraints, limitations or challenges of differing complexity. These constraints may include physical/mental abilities and familial challenges, and may involve, for example, time, money, distance, doubt, fear, culture, race, language, sexual orientation and religious constraints.
- We may use constraints as excuses, as reasons for quitting and avoiding responsibility. In the process, we rob ourselves of attainable, achievable and rewarding destinies.
- Do not allow your constraints to limit, cripple or silence you, or to hold you back. Stop making excuses.
- Be disciplined with regard to your time schedule. If you have 20 minutes to exercise, make them count.
- See constraints as opportunities to use what you **do** have and to find creative ways of overcoming them, and use the power of constraints to make better choices.
- Feel the power when you discover solutions and taste success. Let that encourage you to be more adventurous.
- Every choice moves you closer to, or further away from realising your dreams. What will you say yes or no to this year? What is worthy of your consideration, energy and efforts?

Dr Seuss had 50 words to tell a story and ultimately his story had a massive impact.

#### What is your canvas?

A gymnastics mat, a javelin, the long-jump pit or the racetrack? A blank page? A wheelchair? A stutter? A camera? A laboratory experiment? A passion for dance? A revolutionary idea?

### 6 Unorthodox habits that can contribute to your success

Believing in yourself is important and so is persistence, patience, self-discipline and sheer hard work, but Nicolas Cole in his article '5 unorthodox habits all successful people have'<sup>2</sup>, discusses these traits and writes the following:

- 1. Humour.** The ability to laugh and lighten a room is contagious. If people feel comfortable enough around you to laugh, they invariably will be willing to trust you and open up to you.
- 2. Humility.** Know the difference between confidence and arrogance. Humility cannot be faked and arrogance is off-putting.
- 3. Articulateness.** People who have learnt how to communicate well orally and in writing possess a great gift. Articulate people are listened to and believed. They inspire others.
- 4. Study.** The truly successful will tell you that they spend a considerable amount of time studying their craft. They say no to many pleasant activities. They opt out of social media and work in silence. They constantly push themselves. They never become complacent. They live disciplined lives.
- 5. Listening.** Successful people are very good listeners. They never fiddle with their phones when in the company of others. They make others feel heard. They pay attention. They have mastered distractions and they know how to cut through the noise.

1 Read the article 'How to stick with good habits even when your willpower is gone' by James Clear on [www.jamesclear.com](http://www.jamesclear.com). Read: The Willpower Instinct by Kelly McGonigal and Willpower by Roy Baumeister and John Tierney.

2 <https://www.theladders.com/career-advice/5-unorthodox-habits-all-successful-people-have/amp>

## Editorials



### 7 What is perfection?

I believe perfection is a natural quest for MORE. Perfection isn't about everything going the way you want it, but rather being comfortable with the way things are, while you work on making them better.

Perfection is not about never making a mistake, but rather using mistakes to learn how to BE MORE. In doing so, use both challenges and opportunities as your guide and course corrector. In every challenge, opportunity, lesson, and course correction simply look at how you are becoming more.

(Terri Maxwell, CEO of Succeed On Purpose)<sup>3</sup>

### 8 The delicate act of learning to say no

Most people will admit that saying 'no' to others is difficult, and the fear of rejection or criticism makes it even harder. So much emotion lies in this tiny word. 'No' holds the power to hurt or to help. Successful and accomplished people will tell you that the ability to say 'no' is of critical importance.

By saying 'no', we invariably disappoint someone. We cannot please everyone all the time. How often have you said 'yes' to avoid conflict, to preserve the peace, or because you felt obligated or pressurised? Did you feel resentful as a result?

Some people will say 'yes' without thinking, and lie when they discover that they have agreed to commitments they cannot honour. They deliberately

avoid those they had committed to or try to get out of awkward situations by telling further lies. This invariably leads to feelings of shame or guilt and others may say this person is unreliable.

Being compliant from time to time is good, but learning to say 'no' firmly when we know that it is the right thing to do is critical. It means that we are being honest with ourselves and are able to set boundaries that protect us, and our time.

When you say 'yes' to someone, do so for the right reasons and deliver on your commitment. When you honestly say, 'I wish I could, but no, I can't', say it kindly and respectfully—and refuse to feel guilty afterwards. Do not let fear of rejection trap you. Most people respect those who can say 'no' kindly but firmly.

### 9 The difference charm makes to our world

In a world that is becoming increasingly rude, outspoken, cruel, vicious and unkind, charm is a scarce attribute. Most people want to be perceived as cool and competent, respected and taken seriously.

Is it really possible to tell what first impression we create, or how we are perceived by others?

Some people are naturally socially optimistic and self-assured, others are not. A facial expression of uncertainty and anxiety may be interpreted as suspicion, distrust or intolerance, and if we are unaware of it the consequences can be unfortunate.

#### Hosting a party

When you host a party, you spare no effort to make all your guests feel welcome.

You come across as welcoming and enthusiastic when you greet your guests at the door. You introduce them to other like-minded people to get the conversation going. You enable your guests to bond and connect. You make sure that they have refreshments. You are aware of their needs and comfort. Your body language, facial expressions and words convey warmth and enable

your guests to relax, be themselves and enjoy the evening.

According to Mathew Hertenstein, author of *The Tell*<sup>4</sup>, science indicates that the following three things add to charm: (a) offering sincere compliments; (b) being vulnerable; and (c) requesting advice. For some reason this deepens human bonds, humanises us and takes conversations to a deeper level.

People need to know that we are listening to them. This means that we do not fiddle with our phones, look over our shoulders or think about something witty to toss into the conversation.

How can you make it clear that you are listening and are really interested in what a person has to say? Active listening is characterised by constructive, thoughtful responses, such as eye contact and nodding.

Truthful and authentic affirmations and sincere engagement, curiosity, supportive non-verbal responses, questions (that do not come across as interrogation or being too inquisitive), a request for details, a warm smile, a light touch and laughter all convey active listening and fulfil the universal need we all have for self-verification.



Do not pick fights and insist on being right. Avoid being blunt, unkind or rude. Most people will judge us by how we made them feel and we all **want to feel understood**.

**You have many little gifts and virtues, but there is no need of parading them, for conceit spoils the finest genius. There is not much danger that real talent or goodness will be overlooked long, and the great charm of all power is modesty.**

(Louisa May Alcott)

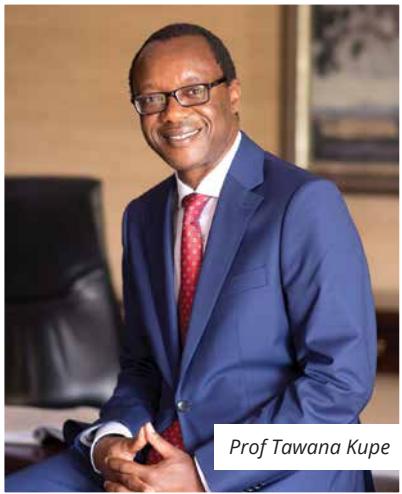
3 Website: <https://www.succeedonpurpose.com>

4 Book: "The Tell: The Little Clues That Reveal Big Truths about Who We Are" by Matthew Hertenstein

## News

# **'I will ensure that UP remains responsive and relevant,'**

**says Prof Tawana Kupe, new UP Vice-Chancellor and Principal**



Prof Tawana Kupe

'I envision a university that is more inclusive and diverse, but remains focused on academic excellence as we go into the next phase and strive for excellence, relevance, impact, and financial sustainability.'

'Our research must continue to address the issues that are most pressing to the communities in our country and on our continent. These include achieving food security and addressing climate change, unemployment and poverty, inequality and violence.'

'Students come to university not only to gain an excellent qualification, but also to grow into well-rounded citizens who serve their communities.'

'South Africa's high unemployment figures, particularly among its youth, worries me. We need to grow our enrolment figures to ensure that more applicants can be accommodated. By 2025 UP will expand enrolment to 75 000.'

**Read the full article here:** [https://www.up.ac.za/news/post\\_2745403-i-will-ensure-that-up-remains-responsive-and-relevant](https://www.up.ac.za/news/post_2745403-i-will-ensure-that-up-remains-responsive-and-relevant)

## Afrikaanse Hoër Meisieskool pupils welcome new Vice-Chancellor and Principal

By Xolani Mathibela

A delegation from the Afrikaanse Hoër Meisieskool became the first pupils from a neighbouring school to pay a courtesy call on new University of Pretoria Vice-Chancellor and Principal, Prof Tawana Kupe. On 17 January 2019, the pupils visited Prof Kupe in his office to present him with a gift and a poem to wish him well in his new role at the University.

The Afrikaanse Hoër Meisieskool Pretoria produced some of the best results in the 2018 NSC Examination, continuing an uninterrupted run of a hundred percent pass rate for the 34th consecutive year. 'It is very inspiring to have been visited by young academics, because these are our future UP students. The Afrikaanse Hoër Meisieskool has a very strong relationship with the University, a relationship I will be sure to strengthen going forward,' Prof Kupe said during the visit.

Pupil Lindy Grobbelaar said she was excited to meet the new Vice-Chancellor. 'I really admire the fact that he has a PhD and uses it to benefit the lives of all university students. I definitely see myself studying at UP after matric, because there are so many opportunities at UP for one to be advanced in life.'



From left: Mareli van der Merwe, Lindy Grobbelaar, Prof Tawana Kupe, Remi Beukes, Delia Moller, Hanje Stroobos and Tineke Wilcocks

## News

# Cambridge Assessment International Education offered by the Alma Mater International School

By James Moir (Principal: Alma Mater High School)

This year Alma Mater is twenty years old and the school has only ever taught the Cambridge Curriculum. As a school we value the support we receive from Cambridge; it is clear why they have been around for more than 800 years! Although this is a curriculum that is accepted by most universities around the world, I believe it is still relatively unknown in South Africa.

Every year when we do entrance interviews with prospective learners, especially if they are from South Africa, we find that learners and parents alike have very limited understanding of the Cambridge curriculum.

One of the main differences is that we view Grade 9 and 10 as a phase in which learners complete the IGCSE (International General Certificate in Secondary Education) qualification over two years.

**This qualification is presented in  
145 countries  
in more than  
4 800 schools  
worldwide.**

Some universities, like Manitoba in Canada, will accept students with IGCSE's into their foundation programmes. In the USA eight IGCSE subjects are equal to an

American School Leaving Certificate. In South Africa SAQA deems it to be equal to Grade 11.

In the next phase our students have a choice between completing either the AS Levels in Grades 11 and 12, or they can complete their A Levels. In effect a learner can leave at the end of their Grade 12 year with a Post Matric qualification. According to Higher Education South Africa, four AS Level subjects (minimum mark a D) and one IGCSE subject (minimum mark a C) from the correct groupings are equivalent to an NSC Matric with exemption. Please note that this is a minimum requirement and that for specialist fields like medicine most South African universities would want at least six AS Level subjects.

Although we have learners who are studying at some of the best universities around the world, the University of Pretoria remains a popular choice with our learners.

In South Africa it has become extremely important for schools to achieve a 100% matric pass rate. Private and public schools tout this statistic in their marketing. It is a worthy goal to achieve, but we need to be careful that it is not achieved at any cost. At Alma Mater our goal is to achieve a 100% pass rate for the first year at university. Then we know at least two very important things: Firstly, our career advice has been spot on, and secondly, we have achieved the academic depth in our teaching that the universities require.



James Moir

As school managers we all know that we need to prepare our learners for an interconnected global world, sometimes referred to as 21st century skills. These skills are part and parcel of the Cambridge Curriculum. A Cambridge subject that is very close to my heart is Global Perspectives. We live in a time where there is a tremendous need for greater cultural awareness. It needs to form an integral part of any teaching programme. It is interesting to note that cultural variety teaches learners to solve problems more creatively.

Today there is such a wide range of educational ideas and approaches that at times any educator may feel overwhelmed. Cambridge does not shy away from these challenges and constantly develops materials to assist teachers and managers. The material fosters learner attributes such as confidence, responsibility, reflection, innovation and engagement. These attributes form the typical skill set of learners who achieve top results; they have mastered much more than just academic content.

A famous academic once said that 'the future is present in the fabric of society today.' As a school then we cannot go wrong pursuing diversity and within an international context to prepare our learners for any university in the world.



## News

# Ready . . . steady . . . go!

By Dr Pieter Clase

1

## Grade 9

Decide on a safe subject choice for Grade 10

- Complete the career interest questionnaire ([www.gostudy.net](http://www.gostudy.net) > Questionnaire).
- Involve your parents and decide on a field that you would like to work in (eg sciences, humanities, law, etc).
- Make a safe Grade 10 subject choice ([www.up.ac.za/juniortukkie](http://www.up.ac.za/juniortukkie) > JT projects > Grade 10 subject choice).

2

## Grade 10 to 11

Explore specific career options

- Research different careers ([www.gostudy.net](http://www.gostudy.net) > Occupations).
- Start job shadowing (enquire about job opportunities, specialisation fields, salaries, challenges, international recognition).
- Study towards the highest possible Grade 11 end examination results as you will apply early in Grade 12 for tertiary studies with these results.

3

## Grade 12

Decide on a career and study option and apply for studies

- Choose your preferred study programme(s) ([www.up.ac.za](http://www.up.ac.za) > What to study).
- Ensure that your Grade 11 end examination results meet the minimum admission requirements for your preferred study programme.
- Compare institutions and admission requirements.
- Familiarise yourself with tuition and residence fees ([www.up.ac.za/fees-and-funding](http://www.up.ac.za/fees-and-funding)).
- Familiarise yourself with the UP Special Package Offer for top achievers ([www.up.ac.za/fees-and-funding](http://www.up.ac.za/fees-and-funding)).
- Apply for a study programme and residence placement at UP ([www.up.ac.za/apply](http://www.up.ac.za/apply)) with your Grade 11 end examination results. For more information on residences, go to [www.up.ac.za/tuksres](http://www.up.ac.za/tuksres).
- Familiarise yourself with selection processes ([www.up.ac.za](http://www.up.ac.za) > Faculties).
- Write the National Benchmark Test ([www.up.ac.za/online-application](http://www.up.ac.za/online-application) > NBT).
- Apply for funding (if applicable) ([www.up.ac.za/fees-and-funding](http://www.up.ac.za/fees-and-funding)).
- Monitor the progress of your application ([www1.up.ac.za](http://www1.up.ac.za)).
- Accept or decline your conditional admission ([www1.up.ac.za](http://www1.up.ac.za)).
- Complete your student contract online, print it, sign and deliver it by hand or send by registered mail to the University of Pretoria.

## News

# DESA scoops various awards at MACE Congress

By Martie Kilian

The Department of Enrolment and Student Administration (DESA) at the University of Pretoria entered some of its projects into the 2018 Marketing, Advancement and Communication in Education (MACE) Competition. MACE supports practitioners in marketing, communication and advancement in the higher education, private education, as well as the technical vocational and educational training sectors in southern Africa, by providing high quality development programmes, facilitating transformation and networking partnerships, as well as promoting best practice.

### DESA projects received awards in the following categories:

- **JuniorTukkie initiative:** Gold Excellence Award in the category for Student Recruitment Campaigns
- **#ChooseUP Information Event:** Bronze Excellence Award in the category for Issue Management Campaigns
- **UP Study Contract Drive:** Bronze Excellence Award in the category for Issue Management Campaigns

### Other UP projects that received awards:

- **UP Annual review 2016:** Bronze Excellence Award in the category for Printed and Digital Annual Reports
- **UP Virtual Campus:** Silver Excellence Award in the category for Media (Websites)
- **UP Academic Achievers' Awards 2018:** Bronze Excellence Award in the category for Media Events (Single and Multi-day)
- **"For his contribution to Science: Stephen Hawking (1942 to 2018)":** Gold Excellence Award in the category for Skills (Writing for the Web)
- **VC Welcomes First-year students to UP video script:** Bronze Excellence Award in the category for Skills (Writing Scripts)
- **UP 110th birthday message from the Vice-Chancellor:** Bronze Excellence Award in the category for Skills (Writing for the Web)
- **Circle of Being brochure for the Principal's Concert 2018:** Silver Excellence Award in the category for Skills (Design for Printed Media)
- **Ready for Work Campaign:** Silver Excellence Award in the category for General Campaigns
- **Research Matters:** UP-City of Tshwane COSUP: Bronze Excellence Award in the category for Community and Social Responsibility Campaigns



The UP team celebrates twelve awards at the 2018 MACE conference

## News

# CareerXplora helps you to invest in your future

By Mmakgosi Chaane and Tyrol Venturini



CareerXplora, like the Junior Tukkie project, is an exciting initiative powered by Investec. Brainwave Careers (NPC), in proud partnership with Investec, is empowering learners to reach their full potential by assisting them to discover what their talents are and where they are most likely to succeed in the world of work.

This innovative mobile career helpline was designed to enable real-time chats between learners and CareerXplora facilitators (Mondays to Wednesdays from 15:00 to 18:00 and Thursdays from 15:00 to 20:00).

**The newly updated and upgraded CareerXplora Progressive Web App (PWA) now also offers more than 55 career quizzes and a variety of built-in school, career, tertiary study, tertiary funding and job content links (accessible at any time), which are all customised for use by learners at minimal data cost.**

You are the master and creator of your own destiny, the captain of your own ship. You are the only person who has control over the direction in which your ship is sailing. What are you doing today that will ensure a brighter future? Many learners have the misconception that their career path planning starts when they submit their final Grade 11 results to provisionally apply for tertiary study. This, however, is not true, as your career path planning starts when you choose your subjects at the end of Grade 9. You do not want to apply for admission to a study programme at a tertiary institution only to find out too late that you did not choose the school subjects needed for that qualification.

Most learners want to study accounting, law, engineering or medicine, which lead to careers associated with status, money and power. However, before you make a decision about future career options, you need to dig deeper and do thorough introspection. Ask yourself these poignant questions: What are my career interests and values? What am I passionate about doing with my life? What are my most valuable skills and abilities? What are my academic strengths and weaknesses? What potential careers would best suit my personality and thinking style? Once you have the answers to these questions, you will be ready to start planning your career path.

First-year tertiary dropout statistics are alarming. It is reported that less than half of all students who enrol for degrees in engineering complete their studies. You do not want to become part of this statistic! What can you do to improve your chances of success? The answer is simple: Do not follow the crowd by choosing what is generally perceived to be the best career choice but make informed and educated career decisions based on your strengths and unique qualities. Remember that different tertiary institutions offer a variety of academic and vocational qualifications. Doing research to inform yourself and choosing the right institution and qualification is the best investment you can make towards ensuring a successful and rewarding career.

Are you not sure of how to calculate your Admission Point Score and how and where to write your National Benchmark Test? Are you still undecided about whether to study for a national diploma or a degree? Are you looking for more information on tertiary funding options? CareerXplora will help you to find answers to all these questions and will provide you with much more.

The CareerXplora live chat function and built-in static content is a 'one-stop shop' where you can find answers to all study-related questions.

Start exploring a better future with CareerXplora today by downloading the free CareerXplora PWA from the Google Play store or visiting [www.careerxplora.com](http://www.careerxplora.com) on your cell phone (low/minimal data costs). Any cellphone that has a web browser allows access to [www.careerxplora.com](http://www.careerxplora.com). A quick two-minute free registration process is all that is required before you can start exploring the service.

**Contact information**  
**Tel** +27 (0)11 291 0420  
**Email** [mmakgosi.chaane@investec.co.za](mailto:mmakgosi.chaane@investec.co.za)  
**Website** [www.investec.co.za](http://www.investec.co.za)



*‘The idea is not to live forever, but to create something that will.’*

(Andy Warhol)



## News

# Social learning spaces enhance student experience

By Ané Wheeler



The transformation of teaching and learning spaces is an ongoing objective of the Campus Planning and Development Division of the Department of Facilities Management. Implementation occurs through continuous planning and engagement initiatives, small-scale interventions and major construction projects.

The facilities are developed to support the way in which students learn and to enhance the specific pedagogy and student experience. To foster organic interactions and cross-disciplinary problem solving, social learning spaces should mimic real-world work and social environments. They should also be flexible to provide forward-focusing platforms that usher in technology.

### Ongoing planning initiatives

Ongoing planning initiatives are undertaken in conjunction with various faculties, students, the Department of Institutional Planning and the Department of Library Services, and with the support of external consultants. The focus area of planning for 2019 is the redesigning of the libraries, the Agriculture Building (Hatfield Campus) and the Student Centre (Hatfield Campus), and the optimisation of the UP residences' underutilised dining halls. Surveys, workshops and interviews are an integral part of the planning process

as such interactions inform the design directive. It is critical to involve students since their experience at UP can be influenced to a large extent by the nature of such spaces. Some interesting findings include:

- 86% of students would welcome open social spaces where they can eat and also work on their laptops between classes. The layout of these spaces and the arrangement of furniture should provide the possibility of working in groups, but should also accommodate social activities during breaks.
- Multifunctionality, environments with a modern appearance, and easy access to food and drinks are also essential. One space should accommodate a variety of options – students want an area for 'down time', a quiet space, but also a place where they can socialise.
- Spaces must be user friendly, which means that they should have a logical flow and different comfortable seating options.

### Small interventions, major impact projects

The process of testing assumptions by introducing small-scale interventions and testing the response of students and staff has been extremely insightful. The Department of Library Services has provided exceptional support in this regard.

A temporary coffee kiosk was opened in the Library foyer (Hatfield Campus) at the end of last year and a survey that was subsequently conducted showed that 82% of the students were overwhelmingly positive about the idea. The concerns raised were with regard to cleanliness, noise, affordability and the regulation of the kiosk. The students made helpful suggestions regarding an operational model, what could be expected from a supplier, the use of eco-friendly cups and design elements. The students were also invited to choose a new colour scheme for the Library.

The Mathematics Building has several teaching venues with fixed seats, which are being used as postgraduate teaching facilities and tutor venues. Since the layout with 50 fixed seats was not considered to be conducive to the modern pedagogy, the fixed seating in one of those venues was removed and stored and a furniture supplier provided a variety of suitable furniture options in order to test some combinations. Glass writing boards were also installed in the venue. Teaching staff quickly responded with suggestions and a final layout was decided on. The seating option now consists of loose chairs on wheels with writing tablets and standard stackable chairs with movable tables. The combination of furniture allows for a variety of teaching options.

## News

### Large-scale construction projects

Recently completed projects include a new postgraduate hub for the Faculty of Economic and Management Sciences and an upgrade of the IT Building atrium.

### Refurbishments planned for 2019 include:

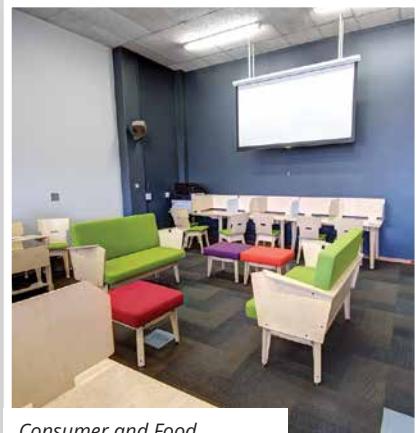
- Akanyang – a shared academic and student support service space with multifunctional facilities, a training room, counselling pods, a coffee kiosk, external social areas and quiet internal areas for relaxation
- Arnold Theiler – upgrading of the foyer spaces of the main lecture complex at Onderstepoort Campus to include a coffee kiosk and pause areas

- Mamelodi Library – changes to address the need for group discussion areas and the incorporation of social learning spaces
- Monastery Hall – upgrade of the residence dining hall, increasing the seating capacity in and around the building and creating more effective social learning spaces
- HW Snyman upgrade on Prinshof Campus – refurbishing of the underutilised foyer to include social learning areas

The availability of welcoming spaces encourages students to remain on campus between lectures. This enhances accessibility and promotes successful learning, which is a critical goal for UP. Such spaces also foster and sustain a transformed, inclusive and equitable University community.



*Department of Statistics*



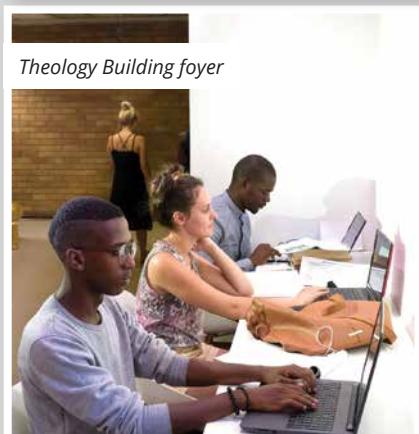
*Consumer and Food Sciences – postgraduate hub  
(Old Agriculture building)*



*Mathematics Building*



*Economic and Management Sciences postgraduate hub*



*Theology Building foyer*



# UP is going for green!

*By Prof Susan Adendorff*

The University of Pretoria's commitment to protecting our environment is getting another energy boost. According to the Director of Facilities Management, Prof Susan Adendorff, UP has embarked on a range of green initiatives over the last few years, including solar panels on the roof of the Merensky Library and Technical Services Buildings on the Hatfield Campus. This assists in reducing UP's overall electricity consumption from the Tshwane municipality.

In addition, the University plans to install solar panels at Building Sciences, Natural Sciences, the Future Africa Development on the Experimental Farm and Engineering 4.

UP is also harvesting rainwater and making use of the many registered boreholes around its campuses for irrigation purposes. This helps reduce municipal water consumption.

**On 24 September 2018, the Department of University Relations launched an awareness campaign aimed at reducing electricity and water consumption.**

The University uses sophisticated technologies to monitor the consumption of electricity and water in buildings and to minimise losses due to leaks and faulty equipment.



## UP is strong on recycling

**An e-waste recycling container is located between the Humanities and IT-buildings on the Hatfield Campus.** Staff and students may use this to dispose of old computers, cell phones, batteries and other e-waste. UP also recycles glass and paper. To date and since January 2017, the University has recycled 222.07 tonnes of general waste.



## Composting

UP produces its own compost and bark chips on the Experimental Farm, where all green waste is taken for processing.

This is one of the reasons the University gardens are so beautiful.



## News



### Tree planting project

UP has also introduced a tree-planting programme. Since 2014 we have planted 1 735 trees. When a single tree is removed from an area where new structures are being erected, three new trees are planted elsewhere on the campuses to replace it.



### Clean up projects in the community

UP is actively involved in clean-up projects in the areas surrounding our campuses eg cleaning local streams contaminated by pollutants that could have a detrimental impact on humans, plants and animals. One such project was the rehabilitation of the Hartbeestspruit on the Hillcrest Campus.



The Department of Facilities Management works closely with The Greenline Society—the student organisation involved in all green issues. Join the Greenline Society and become part of the solution. Every bit helps! We are proud that UP has managed to halve its carbon footprint and we will continue to 'go for green'!

**Contact** Connor Smith (*Chairperson The Greenline 2019*) | Instagram, Twitter @TheGreenlineUP



## News

# UP students excel in GradStar

This year the GradStar Top 10 includes four students from the University of Pretoria. They are Bernice Mabaya and Roger Wyllie from the Faculty of Economic and Management Sciences, and Kirsten Dempsey and Michelle Oelofse from the Faculty of Law.

**GradStar is a programme that recognises the Top 100 university students in South Africa based on their leadership skills and readiness for the workplace. GradStar invites 4 000 students to enter, and from them 100 are selected.**

The GradStar Top 10 are then selected during a weekend of workshops and interviews and are subsequently introduced to potential employers and business mentors.

Both Kirsten and Michelle have completed BCom (Law) degrees and are currently in the penultimate year of study towards their LLB degrees. They are both members of the Golden Key International Honour Society.

Michelle spent the first six months of the 2018 academic year in the Netherlands, studying at Leiden University and completing an internship at the Hague Conference (HCC) on Private International Law. She is an Allan Gray Orbis Foundation bursary holder and feels that this programme provided her with the foundation to prepare for the GradStar selection process. She was a House Committee member of her residence and chaired the UP debating society.

Kirsten was the member responsible for the sports portfolio of the 2017/18 Executive Committee of Law House, the official student body of the Faculty of Law. She commented that 'being selected as one of the Top Ten in the country has taught me a valuable life lesson—never underestimate your abilities.' After the loss of her brother in October 2017, Kirsten established Ruby's Heart Foundation, which aims to assist grieving families after the loss of a loved one.

Bernice Mabaya is completing her final year of the BCom (Financial Sciences) degree. She was a mentor in the Stars Mentorship Programme, served as head of transformation for the Association of Black Securities and Investment Professionals (ABSIP) and the ABSIP Women in Focus. In this capacity she was responsible for uplifting women of colour and equipping them with the knowledge and skills required to bridge the gap between the academic environment and the professional world. She worked as a volunteer in the children's ministry at Rivers Church and at a charity that is very close to her heart, the Sophie A Kanza Foundation, which supplies sanitary items to young women in South Africa and the Democratic Republic of Congo.

This year Bernice is employed by a company rated as the second best South African employer by the

Top Employers' Institute—an opportunity that was made possible by GradStar. She plans to complete an honours degree in Financial Management and obtain the CIMA qualification as a Chartered Global Management Accountant, followed by the Chartered Financial Analyst (CFA) qualification.

Roger Wyllie is a final-year BCom (Accounting Sciences) student who intends to register for a Postgraduate Diploma in Accounting Sciences next year. He will be completing his articles at PricewaterhouseCoopers (PwC). Roger states that, 'The current work climate demands a university degree as a prerequisite and interpersonal or virtue-based skills as a distinguishing quality. I therefore believe that any kind of head-start among peers can be achieved only if one starts preparing to be employable as soon as possible.'



*This year's GradStar Top 10 included four students from the University of Pretoria. They are (from left to right): Kirsten Dempsey, Roger Wyllie, Michelle Oelofse and Bernice Mabaya.*



*The three most important questions we can ask ourselves are:*

- 1. What do you want to experience in life?**
- 2. How do you want to grow and develop yourself?**
- 3. How do you want to contribute to the world?**

Vishen Lakhiani ([www.mindvalley.com](http://www.mindvalley.com))

## News

# The JuniorTukkie Office welcomes UP's new first-year students

By Anthea Pretorius

On 25 January 2019, Prof Carolina Koornhof addressed a group of 424 excited first-year JT students who had gathered in the Aula for a welcoming function. Congratulating the students on their performance in the Grade 12 examinations, she said: 'It took much hard work and dedication to achieve these results, but your efforts have made it possible for you to be among the select group of new first-year students who will be commencing their studies at UP.'

### Recognition was given to top achieving students who qualified for the following UP awards:

- Academic achievers who received the Vice-Chancellor's Special Awards
- Three students who attended the Grade 12 Preparation Conference in 2018 each won a Study Bursary
- Grade 12 Dux scholars from selected schools each received a Dux Scholar Award
- The **Vice-Chancellor's Discretionary Merit Awards** (VCDMA), awarded to top achievers who wrote the NSC, IEB and Cambridge examinations. This award covers three years' tuition costs.
- **Achievement awards** for learners who obtained an average of at least 75% in their final Grade 12 examinations. UP achievement awards are awarded based on the academic average percentage obtained in the final school-year examinations.
  - Students in the Faculty of Engineering, Built Environment and Information Technology, and in the Faculty of Natural and Agricultural Sciences who obtained an average of **75% or more** in their Grade 12 final examinations qualify for achievement awards.
  - Students in all other UP faculties who obtained an average of **80% or more** in their Grade 12 final examinations qualify for achievement awards.

At the event, the new first-year students were informed on what they could expect to receive in terms of academic and emotional support and on the opportunities available for participation in sports, the arts and cultural activities, which is essential for the development of all our students into well-rounded citizens.

They were encouraged to make the most of every opportunity, to concentrate on their studies, to carefully manage their time, to maintain a healthy balance between academics, sport and social activities, to graduate on time and to flourish in our diverse community.

Prof Koornhof also encouraged them to join some of the many student societies on campus, for example the JuniorTukkie Student Ambassador Society (JTSAS), enquire about the possibility of becoming involved in TuksFM (our own radio station), write for the PDBY student newspaper and participate in the activities of our Faculty and Day Houses.



### Rankings

In the QS (Quacquarelli Symonds) World University Rankings for 2018, UP and three other South African Universities were in the 501–550 range, which placed them in the top 1,9% of universities worldwide.

**In 2018, 53 000 South African and 4 000 international students studied at UP.**

### FLY@UP

UP graduates are sought after by prospective employers and 91% of all our graduates find work within six months of graduating.

UP graduates make a significant impact in industry, government, the public and private sectors and NGOs. At UP we focus on the development of the whole person, on leadership and on community service. One initiative through which we hope to achieve this is the Work Readiness and Entrepreneurship (WREN) Programme, which helps our students to develop essential skills and attributes to improve their employment (or self-employment) prospects and facilitate their integration into the world of work. Different packages with free modules that can help to boost your employment opportunities are available online.

## TuksSport

# UP judokas want kids to get active

By Wilhelm de Swardt | Photograph by Reg Caldecott



**According to the 2018 Healthy Active Kids South Africa (HAKSA) Report Card obesity in South Africa for kids under the age of eight and younger is on the increase due to inactivity.**

This fact worried two of UP's foremost judokas, Michaela Whitebooi and Charné Griesel, to such an extent that they decided to see if they can help to bring about change.

As both of them believe that an active body leads to a healthy mind, they decided that they want to start coaching young kids.

'I see it as a win-win situation both for judo and for the kids from a health perspective. The number of participants in judo has been on the decline for quite a few years. When I started participating in judo, there were all sorts of clubs and provincial tournaments we could compete in, but not anymore. It is mainly due to there being fewer judokas who are actively participating,' explains Griesel. 'If we can get kids excited about judo from a young age there is a real chance that we could increase our

numbers again. Over the long term, it is going to be good for the sport as there might be a bigger pool of judokas where we can select our national teams.'

However, Whitebooi stresses that winning and becoming champions is the last thing kids will have to worry about initially.

'It is all going to be about having fun. The kids should enjoy themselves on the mats. If they do, there is a real chance that they may get addicted to an active lifestyle. If that happens, it will be great. I have been told that you learn most when you are having fun. Therefore our coaching is not going to be very technical. The kids should just learn the basic moves and do some exercises that will improve their flexibility.'

'The best thing about judo is that it teaches you discipline and gives you confidence. With bullying being a real problem for kids, it is good for them to have some means to defend themselves should the need arise,' said Whitebooi.

From a personal perspective, the UP judoka has no hesitation in saying that judo has changed her life for the better. Because she comes from a poor background, there was a real chance that she would never have received an

opportunity to study. However, her judo talent was spotted, and that changed her life. Last year she completed her BCom (Financial Sciences) degree, and she is now busy with her postgraduate studies.

According to the two judokas, starting to coach may have hidden benefits for themselves. 'When we are training we often go about things without really thinking about what we are doing. Everything happens automatically. However when you coach you have to think about what you are doing and try to simplify what you are trying to teach so that the kids can understand,' said Griesel.

Parents who are interested in having their kids participate in judo can contact:  
Griesel on +27 (0)79 940 3883 or  
Whitebooi on +27 (0)72 590 9432.



**TuksSport**

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

## TuksSport

# 'Musketeers' defend Tuks honour at USSA Fencing Tournament

By Wilhelm de Swardt | Photograph by Reg Caldecott

The infamous exploits of the 'Three Musketeers' and other Hollywood sword-wielding heroes are the reason why Husna Moosa and Sharon Odegoke decided to take up fencing.

The Tuks engineering students readily admit to being mesmerised every time they get to watch their heroes fight their way out of a predicament, sword in hand. To top it all, they make it seem like fun. No matter how hectic life to death duels tend to get, they always find time for some witty chirp.

The final clincher for them was when they saw an article in PDBY (UP's student newspaper) encouraging students to take up fencing as a sport. They represented Tuks in December 2018 at the USSA Tournament held at Wits.

'When reading about history, it seems that sword fighting played an integral part in the outcome of history, especially during the earlier prophetic times. Fencing is the closest I can get to the sword fighting portrayed in the history of Islam, my religion,' explains Moosa.

'I played tennis and a bit of archery before taking up fencing. What excites me is that archery and fencing allow for a sense of concentration not offered in other sports.'

**I feel that fencing not only trains me physically, but also mentally. It helps to increase my focus and to control my anger, as well as to improve my reflexes every time I try to score points during a bout. It also teaches me character. Fencing is all about mutual respect, no matter the situation.'**

'During a fencing bout, I tend to forget about everything else going in my life. My only intention is to give my best, which leads to cleansing the mind. I would love to excel in fencing and perhaps

one day compete at the Olympics, but for the moment I see it as an enjoyable accompaniment to the busy degree that I am studying towards.'

Odegoke likes the pace at which things happen during a duel.

'Everything is fast. Not only do you have to be quick on your feet, but you need to be focused at all times. One moment's lapsed concentration can easily turn out to be costly. I found that in fencing you have to be able to make decisions in mere seconds. It boils down to trying to decide what move you are going to make while at the same time trying to work on how to counter it,' explains the UP electrical engineering student.



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



Sharon Odegoke  
and Husna Moosa

## TuksSport

# TuksRugby coach sets out to help revive rugby in Eersterust and change players' lives

By Wilhelm de Swardt | Photograph by Reg Caldecott



Rugby in Eersterust, east of Pretoria, has been in decline for a few years—including rugby at school level.

Willy Eckard, rugby organiser at Nantes Primère Skool, explains pupils often resort to playing touch rugby, as they don't have the proper equipment. 'I can honestly say that our players are just as talented as that of any other school, but due to a lack of opportunities they never get to fulfil their real talent. To see this happening as a coach is really disheartening.'

TuksRugby coach Dabeon Draghoender decided to get actively involved in trying to revive a rugby culture in the area. Draghoender says there are two main reasons why he's so passionate about the issue. In the first place is his experience as coach of the Tuks Young Guns, when he found he had to recruit players from all over South Africa. 'Can it indeed be that there are not enough good players in Pretoria? I believe there is a real talent in a community like Eersterust. The same goes for Mamelodi, Atteridgeville and Soshangwe. The challenge is just to make sure all young

players get proper coaching from early on.'

'From my personal experience I can say that rugby is a means to change youngsters' lives. I also come from a poor background. Rugby has certainly changed my life for the better. I want the same for the players of Eersterust. My goal is to have some of them playing for UP hopefully, and maybe even the Bulls in five to six years from now. The ultimate would be to get a few players to also study at UP.'

According to Draghoender, drugs and gangsterism are sad realities for many children growing up in Eersterust. 'Again from my experience, sport—in this case, rugby—is a way to teach the players from a young age what discipline and hard work are all about. I want the kids to dream. The bigger their dreams, the better, as it would mean they are laying a proper foundation for life. It is a case of a healthy body leads to a healthy mind. I have found that gangsters tend to be in awe of those who succeed in their community through hard work. No one willingly chose to be a career

criminal, but unfortunately many are forced to do so due to a lack of any real opportunities.'

Last week saw another big breakthrough for turning things around when Investec donated R45 000 worth of rugby equipment to Nantes Primère Skool.

Onnyen Louw, an avid Bryan Habana supporter, is thrilled about his school's new equipment.

**'Rugby is everything to me. I can't live without rugby. Now we are getting the opportunity to play real rugby, and that is exciting.'**

## Inspiration

# Consistency and social awareness are key to excellence and a purposeful life

By Prof Kobus Maree

**Top achievers have a sense of meaning and strong purpose. They know what they want to achieve in life, and they have the ability to see their plans through to fruition. They search for what will help them live meaningful and purposeful lives.**

The biggest single aspect that enhances their success is acceptance and execution of the time-honoured principle: Either you work hard in a dedicated manner and you achieve, or you don't apply yourself appropriately and you do not achieve. They understand that success is the result of working consistently, planning ahead, and using smart study methods. That success does not come from only starting to work a few weeks before examinations. In fact, it is quite the opposite: the foundations for success are laid very early and one must work harder and harder every year. Moreover, they know from first-hand experience that acting in an emotionally-socially intelligent manner strongly promotes their chances of achieving good marks. They develop the ability to say 'no' to friends who are not serious about their studies and who want you to have fun with them instead of working hard.

Furthermore, high achievers have the ability to prevent sorrow, sadness, pain, and heartache from interfering with their thought processes for prolonged periods. If something is troubling them, they see someone about it. If it is not immediately possible, they note this on their bulletin board where they can see this and tell their brain: 'See, I will do something about this—just give me (provisionally) the peace of mind to continue with my work.' (That really is a skill that all students should acquire and practice.)

To help top achievers attain success, their friends, lecturers, and parents should offer them emotional support. Potential achievers avoid talking negatively all the time. They accept their responsibility to break the prevailing devastating destructive discourse by making a conscious effort to be positive and inspiring instead of bombarding others with negative messages all the time. Yes, of course we live in challenging times. Yes, of course it sometimes feels as if challenges are overwhelming. However, research has shown them that humankind has always experienced major changes but has also managed to find a way to not only survive but indeed to thrive and flourish, to turn challenges into opportunities, defeat into victory, pain into hope and to making a social contribution.

Top achievers realise that converting anxiety into useful behaviour by studying hard is a key life skill. While some students become overwhelmed when they are stressed or anxious, top achievers in general display consistently the ability to focus on something positive and constructive (like working hard) and, in doing so, convert their anxiety into something constructive.

Lastly: Top achievers have a sense of destiny. They know why they are studying, what their guiding star is. Instead of only studying to qualify for a field of study that will help them make a decent living, they identify (or ask a professional person to help them uncover) their key or central life theme(s) and consistently focus on those themes. Here are some real-life examples to show you what I mean:

- Peter\* (pseudonyms are used) has often been bullied in his life. He therefore studies hard because he wants to become a lawyer so that he can help people who, like himself, have been bullied.
- Sharon's mother suffered severe burns when someone set their house on fire. She is studying to become a nurse, specialising in working with burn victims.
- Lebo's younger sister is unable to walk because of a physical disability.



Prof Kobus Maree

■ Lebo is studying very hard to become an engineer so that he can earn enough money to help his struggling family. Most importantly, though, he is motivated by the dream to develop inexpensive wheelchairs to offer to people with mobility challenges in outlying, resource-scarce environments, like the one he comes from. In addition, he has set his sights on becoming the CEO of a large company so that he can one day be in a position to find a way to sponsor these wheelchairs. Lebo says, 'Every time I get tired of studying, I think of my sister's face and I become re-energised and re-motivated.'

What all these stories (shared with me by top achievers) have in common, is the theme of turning suffering into victory and a social contribution; converting passive suffering of 'pain' (of whatever kind) into active mastering thereof by taking action by applying oneself meticulously and consistently. And do you know what? When top achievers help others overcome their challenges, they help themselves, too, to overcome the pain they have suffered in their lives. Ultimately, they succeed in honouring the legacy of their loved ones in the best conceivable way.

To paraphrase Dillon, another top achiever,

**'Your beliefs don't make you a better person; your consistent actions do'.**

## Inspiration

# The STARS Mentorship Programme

By Dr Rina Wilken

The STARS Mentorship Programme offered by the University of Pretoria is a unique programme designed to assist first-year students to adapt to university life and be academically successful.

This programme offers students assistance at the social and emotional levels with a view to enhancing their academic performance. As a first-year student at the University of Pretoria you may find it rather challenging to adapt to university life, but our programme offers help by matching each first-year student (mentee) with a senior student (mentor) who is studying the same programme.

### Your mentors will take care of you and will provide you with the following:

- Someone to confide in about any problem you may be experiencing or any situation in which you might find yourself
- Someone to turn to when you need guidance
- Someone to help you define your ambitions, set goals and decide how they can be achieved
- Someone who will remind you of your academic responsibilities
- Someone who will refer you to competent people for assistance, if necessary
- Someone who will encourage you to take charge of your destiny
- Someone who can assist you with identifying offices where you will find individuals who can help to simplify your life at varsity
- Someone who will be able to provide guidance with regard to the various challenges you may be facing in your programme and faculty

The beauty of having this special person in your life is that it is absolutely free of charge!

### The structure of the STARS Mentorship Programme is as follows:

- Programme Coordinator: Dr Rina Wilken (Head of Student Development)
- Two senior coordinators (students)
- Executive committee (faculty coordinators for each faculty)
- Mentors (senior students at the University of Pretoria)
- Mentees (first-year students at the University of Pretoria)

We will be delighted to welcome you as one of our mentees and thereby ensure that you will have someone in your life who will take care of you during your first semester on campus. All you need to do to become an active partner in this wonderful programme is to sign up!

If you need more information, visit us at Roosmary Building (Room 2-1), where you can meet with one of the executive committee members to discuss the programme.

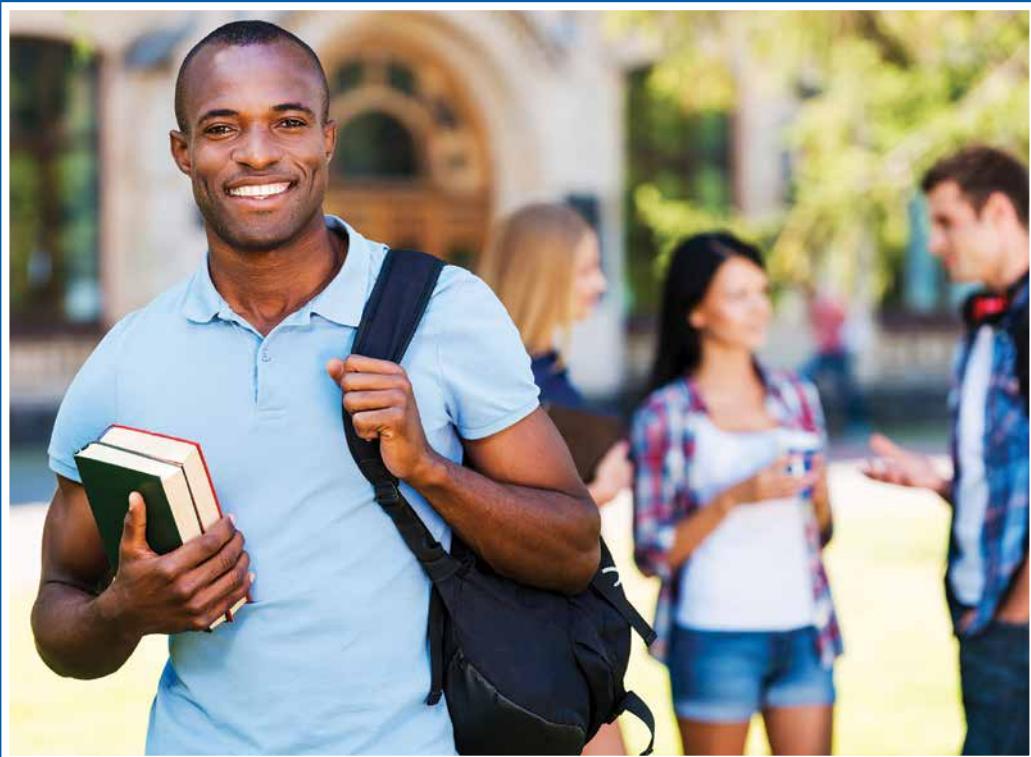
Email [upmentorship@gmail.com](mailto:upmentorship@gmail.com)  
 Follow us @STARSmentorship



## Inspiration

*'Why do we disrespect,  
dismiss, and devalue each  
other instead of declaring  
each other's dignity?'*

(Ann Voskamp)



*'Seek respect, not attention,  
it lasts longer.'*

(JAG)

## Inspiration

# Bono Sigudu has big dreams

*By Anthea Pretorius*

Bono Sigudu, a MBChB – Bachelor of Medicine and Surgery student at the University of Pretoria, grew up in Limpopo and spent time in Khalavha village outside Thohoyandou in Venda. She matriculated from the Gondolikhethwa Christian School in 2017. This is her story:

No one in my family had attended a university and they were apprehensive when they heard that I had applied to UP, but my Dad changed his attitude when I received the Vice-Chancellor's Discretionary Merit Award. I chose to study medicine because I care deeply about people's welfare and want to make a direct impact on their lives. The amazing MBChB – Bachelor of Medicine and Surgery programme requires a lot of hard work, self-discipline, consistency and regular class attendance, which is not easy! I am now in my second year of study, but once I have qualified, I would like to work for UNICEF/UN WOMEN, using my skills in medicine to improve the lives of children in disadvantaged areas.

I am a member of the UP Debating Union, Tuks Surgical Society and various committees at my residence. I love swimming, reading books and reciting poetry. I hope to be a published author before the age of 21.

### Challenges I have faced

During my school years, I spent a lot of time in hospitals. I was admitted to hospital the day after I wrote my final Grade 12 Physics paper, which was the day before I was supposed to write Chemistry. Despite my illness, I managed to write the examination and passed Grade 12 exceptionally well.

### The Vice-Chancellor's Discretionary Merit Award (VCDMA)

Receiving the VCDMA in 2018 made a major difference in my life and enabled me to study at UP.

In Grade 12 I was one of the top learners in my class and very excited about my future. I also felt overwhelmed by the thought of university studies and the costs involved. I did not have a bursary, so you can imagine how delighted my family and I were when I received the VCDMA. At the University of Pretoria I have found a new family that loves me and cares about my studies and my

future. I have met many people who go out of their way to support me and make sure that I achieve my goals.

### The Global Goals UN Model Conference

Together with two other students from UP and 30 other South African students, I was fortunate enough to be among the three hundred and seventy delegates selected out of 4 024 applicants to attend the international Global Goals UN Model Conference, which was held in Malaysia from 11 to 14 January 2019. This was my first trip overseas and it left me speechless with wonder.

The things that stood out for me are:

The trip to Malaysia, where we were hosted in the Sunway Putra Hotel in Kuala Lumpur, was an eye-opener for a girl who had never been to an airport, flown in an aeroplane or travelled to another country. I was delighted to be representing my university and country at the Sustainable Development Goal 5: Gender Equality Conference, but I was also thrilled to travel in an aeroplane and be served by friendly air hostesses.

We gathered in a huge boardroom with each group representing their country and their goal. Our specific goal was to look at the role of women in positions of leadership and authority. We investigated the issues that manipulate the achievement of this outcome and made suggestions about possible solutions.

We felt like presidents and ministers hoping to achieve goodness for our countries. I wish that every youngster in South Africa could have such an experience! Abuses such as child marriages and slavery are experienced all over the world. We felt urged to do more, to be more, because the world needs so much more to solve its problems.

My attendance of this event offered me an amazing opportunity to meet people from other countries. My roommate



*Bono Sigudu*

came from Papua New Guinea – a country I had never heard about before I met her. I was able to share a great deal about South Africa as we dismantled the popular stigmas portrayed by mainstream media of Africa being equal to hunger, poverty and death.

### What is your dream job?

I hope to one day be the Secretary General of the United Nations. I want to make a difference in the world by improving health care, enhancing female reproductive health care and making quality education accessible to children in remote areas. I also want to put a stop to female genital mutilation practices and enable all girls to go to school.

### A final word of inspiration

'I am deliberate and afraid of nothing' (Audre Lorde).

'Tell your heart that the fear of suffering is greater than the suffering itself. And that no heart has ever suffered when it goes in search of its dreams, because every second of the search is a second's encounter with God and with eternity.' (The Alchemist)

## Inspiration



# 55 top school-leavers honoured at merit award dinner

*By Shakira Hoosain*

The University of Pretoria (UP) recently honoured top matric achievers at a celebratory dinner hosted by Vice-Chancellor and Principal Professor Tawana Kupe.

The 55 were all recipients of the university's Vice-Chancellor's Discretionary Merit Award (VCDMA), a prestigious financial accolade awarded to learners who appear on the annual national and provincial top achievers lists, and which covers their tuition for three years, partly in recognition of their outstanding academic achievements.

Prof Kupe urged the selected students to continually strive for success and excellence.

**'UP's 111-year history is marked by excellence and change: it admits students who have excellent academic high school results because it believes that selecting and admitting such students is to affirm excellence... this is a university value and practice. Academic excellence knows no race, gender, religion, borders or alternative choices in life – it simply is human.'**

Recipients of the VCDMA are expected to maintain a good average and ensure that they complete their degrees in the stipulated number of years. The students were also part of a leadership development programme with international organisation Common Purpose.

The VCDMA programme was established in 2016 and has grown to include 182 students from an original intake of 13. Ten students from the first group of selected students were part of a three-year leadership programme and will all be graduating on time in April 2019; nine of them will continue their postgraduate studies at UP. This particular group achieved an 82,47 cumulative grade point average in their 2018 final graduation year, with the highest being 90,33.

Erin Ivins matriculated from St John's Diocesan School for Girls in Pietermaritzburg and is a recent recipient of the award. 'It's a major achievement because it's allowed every recipient to interact and network with some of the top achievers at UP as well as with highly regarded staff members at the university,' she said.

## Inspiration

'The award has also been an opportunity to give back to our parents for all the money, time and love they've spent in getting us all here. We [the recipients] all feel so proud to be able to remove part of the financial burden from our parents, and show our gratitude to them in this way.'

Bono Sigudu, a second-year UP medical student who hails from Khalawha, a rural village in Venda, is a previous recipient of the VCDMA. Boosted by her status as a VCDMA student, she applied for the Model United Nations programme – which required young leaders from around the world to think of solutions for the world's crises.

Addressing Prof Kupe and members of the university's executive, she spoke of her experience in Malaysia as part of the UN programme. 'The trip was eye-opening. For a girl that had never

been to an airport, used an aeroplane or travelled to another country, not only was I thrilled about going to represent my university and country on gender equality, but I was also thrilled about the entire adventure,' she said. 'Each person represented their country and their goal,' Sigudu added. 'We were like presidents, only we didn't have money or power – but we had a solid vision and a goal.'

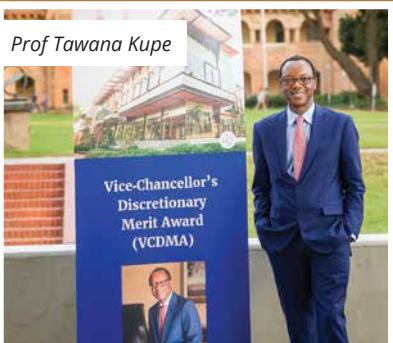
She also spoke about the significance of being a VCDMA recipient and why she decided to #ChooseUP. 'Neither of my grandmothers had the opportunities I have now. They never went to school, and my mother never made it to university – but I am here. I'm opening doors for my children so they too can enter into spaces I have not been in,' Sigudu said.

'If it weren't for the VCDMA, I wouldn't have come to UP. When I was told in

matric that I was one of the university's top learners, I was overwhelmed and excited. All the effort that UP made to give me assurances about the university was enough to convince me to come here because I could sense the love and warmth I would be given.'

Prof Kupe echoes this sentiment. 'UP believes in nurturing the best young, fine minds so that their full potential is realised, and that developing the potential of excellent students will enable them to transform their lives, a society and a continent so that it's economically developed and socially progressive.' He encouraged all the students to pursue postgraduate studies, adding that they should be proud of themselves because UP is proud of them.

*Source: [https://www.up.ac.za/news/post\\_2750370-55-top-school-leavers-honoured-at-merit-award-dinner](https://www.up.ac.za/news/post_2750370-55-top-school-leavers-honoured-at-merit-award-dinner)*





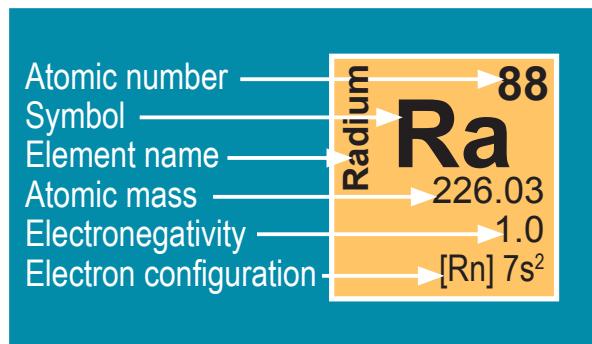
|    |     |
|----|-----|
| 1  | 2   |
| Ia | IIa |

|           |      |                 |
|-----------|------|-----------------|
| Hydrogen  | H    | 1               |
|           |      | 1.0079          |
|           |      | 2.2             |
|           |      | 1s <sup>1</sup> |
| Lithium   | Li   | 3               |
|           |      | 6.941           |
|           |      | 1.0             |
|           | [He] | 2s <sup>1</sup> |
| Beryllium | Be   | 4               |
|           |      | 9.0122          |
|           |      | 1.5             |
|           | [He] | 2s <sup>2</sup> |
| Sodium    | Na   | 11              |
|           |      | 22.990          |
|           |      | 1.0             |
|           | [Ne] | 3s <sup>1</sup> |
| Magnesium | Mg   | 12              |
|           |      | 24.305          |
|           |      | 1.2             |
|           | [Ne] | 3s <sup>2</sup> |
| Potassium | K    | 19              |
|           |      | 39.098          |
|           |      | 0.9             |
|           | [Ar] | 4s <sup>1</sup> |
| Rubidium  | Rb   | 37              |
|           |      | 85.468          |
|           |      | 0.9             |
|           | [Kr] | 5s <sup>1</sup> |
| Strontium | Sr   | 38              |
|           |      | 87.62           |
|           |      | 1.0             |
|           | [Kr] | 5s <sup>2</sup> |
| Caesium   | Cs   | 55              |
|           |      | 132.91          |
|           |      | 0.9             |
|           | [Xe] | 6s <sup>1</sup> |
| Francium  | Fr   | 87              |
|           |      | 223.02          |
|           |      | 0.9             |
|           | [Rn] | 7s <sup>1</sup> |
| Radium    | Ra   | 88              |
|           |      | 226.03          |
|           |      | 1.0             |
|           | [Rn] | 7s <sup>2</sup> |

# Periodic Table of the

- Pink (left):** the s block elements (consisting: hydrogen, alkali metals, alkaline earth metals).
- Blue (middle):** the d block elements (they are the transition metals).
- Yellow (right):** the p block elements (consisting: some metals, metalloids, non-metals, noble gases, and halogens).
- Peach (two rows at the bottom):** the f block elements (they are the inner transition elements, consisting of actinides and lanthanides).
- Symbols printed in solid black:** solids at 25°C.
- Symbols printed in white with outline:** gases at 25°C.
- Symbols printed in grey with outline:** liquids at 25°C.

|                                      |   |   |   |   |   |   |
|--------------------------------------|---|---|---|---|---|---|
| 3                                    | 4   | 5   | 6   | 7   | 8   | 9   |
| IIIb                                 | IVb   | Vb  | VIb   | VIIb  | VIIIb   | VIIIb   |
| Scandium                             | Titanium  | Vanadium  | Chromium  | Manganese   | Iron  | Cobalt  |
| Sc                                   | Ti  | V   | Cr  | Mn  | Fe  | Co  |
| 44.956                               | 47.88   | 50.942  | 51.996  | 54.938  | 55.845  | 58.933  |
| [Ar] 3d <sup>1</sup> 4s <sup>2</sup> | [Ar] 3d <sup>2</sup> 4s <sup>2</sup>                  | [Ar] 3d <sup>3</sup> 4s <sup>2</sup>                  | [Ar] 3d <sup>5</sup> 4s <sup>1</sup>                  | [Ar] 3d <sup>5</sup> 4s <sup>2</sup>                  | [Ar] 3d <sup>6</sup> 4s <sup>2</sup>                  | [Ar] 3d <sup>7</sup> 4s <sup>2</sup>                  |
| Yttrium                              | Zirconium   | Niobium   | Molybdenum  | Technetium  | Ruthenium   | Rhodium   |
| Y                                    | Zr  | Nb  | Mo  | Tc  | Ru  | Rh  |
| 88.906                               | 91.2245   | 92.906  | 95.94   | 98.906  | 101.07  | 102.91  |
| [Kr] 4d <sup>1</sup> 5s <sup>2</sup> | [Kr] 4d <sup>2</sup> 5s <sup>2</sup>                  | [Kr] 4d <sup>4</sup> 5s <sup>1</sup>                  | [Kr] 4d <sup>5</sup> 5s <sup>1</sup>                  | [Kr] 4d <sup>6</sup> 5s <sup>1</sup>                  | [Kr] 4d <sup>7</sup> 5s <sup>1</sup>                  | [Kr] 4d <sup>8</sup> 5s <sup>1</sup>                  |
| Lanthanum                            | Hafnium   | Tantalum  | Tungsten  | Rhenium   | Osmium  | Iridium   |
| La                                   | Hf  | Ta  | W   | Re  | Os  | Ir  |
| 138.91                               | 178.49  | 180.95  | 183.84  | 186.21  | 190.23  | 192.22  |
| [Xe] 5d <sup>1</sup> 6s <sup>1</sup> | [Xe] 4f <sup>14</sup> 5d <sup>2</sup> 6s <sup>2</sup> | [Xe] 4f <sup>14</sup> 5d <sup>3</sup> 6s <sup>2</sup> | [Xe] 4f <sup>14</sup> 5d <sup>4</sup> 6s <sup>2</sup> | [Xe] 4f <sup>14</sup> 5d <sup>5</sup> 6s <sup>2</sup> | [Xe] 4f <sup>14</sup> 5d <sup>6</sup> 6s <sup>2</sup> | [Xe] 4f <sup>14</sup> 5d <sup>7</sup> 6s <sup>2</sup> |
| Actinium                             | Rutherfordium   | Dubnium   | Seaborgium  | Bohrium   | Hassium   | Meitnerium  |
| Ac                                   | Rf  | Db  | Sg  | Bh  | Hs  | Mt  |
| 227.03                               | 261.11  | 262.11  | 266   | 264   | 277   | 268   |
| [Rn] 6d <sup>1</sup> 7s <sup>2</sup> |   |   |   |   |   |   |

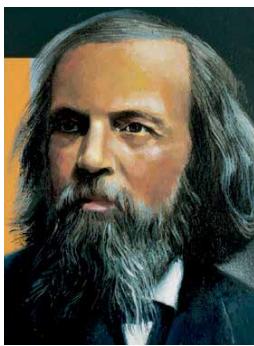


|                                      |  |  |  |                                      |
|--------------------------------------|--|--|--|--------------------------------------|
| Cerium                               | Pr   | Nd   | Pm   | Samarium                             |
| Ce                                   | Pr   | Nd   | Pm   | Sm                                   |
| 140.12                               | 140.91   | 144.24   | 146.92   | 150.3                                |
| 1.1                                  | 1.1  | 1.1  | 1.1  | 1.1                                  |
| [Xe] 4f <sup>2</sup> 6s <sup>2</sup> | [Xe] 4f <sup>3</sup> 6s <sup>2</sup>                 | [Xe] 4f <sup>4</sup> 6s <sup>2</sup>                 | [Xe] 4f <sup>5</sup> 6s <sup>2</sup>                 | [Xe] 4f <sup>6</sup> 6s <sup>2</sup> |
| Thorium                              | Pa   | U  | Np   | Plutonium                            |
| Th                                   | Pa   | U  | Np   | Pu                                   |
| 232.04                               | 231.04   | 238.03   | 237.05   | 244.0                                |
| 1.1                                  | 1.1  | 1.2  | 1.2  | 1.1                                  |
| [Rn] 6d <sup>2</sup> 7s <sup>2</sup> | [Rn] 5f <sup>2</sup> 6d <sup>1</sup> 7s <sup>2</sup> | [Rn] 5f <sup>3</sup> 6d <sup>1</sup> 7s <sup>2</sup> | [Rn] 5f <sup>4</sup> 6d <sup>1</sup> 7s <sup>2</sup> | [Rn] 5f <sup>6</sup> 7s <sup>2</sup> |

For more information please visit

# Elements

earth metals).



Dmitri Mendeleev

|           |           |           |
|-----------|-----------|-----------|
| <b>10</b> | <b>11</b> | <b>12</b> |
| VIIIb     | Ib        | IIb       |

|              |   |             |  |             |  |
|--------------|---|-------------|--|-------------|--|
| Nickel       | <b>Ni</b><br>28<br>58.693<br>1.8<br>[Ar] 3d <sup>8</sup> 4s <sup>2</sup>                  | Copper      | <b>Cu</b><br>29<br>63.546<br>1.8<br>[Ar] 3d <sup>10</sup> 4s <sup>1</sup>                  | Zinc        | <b>Zn</b><br>30<br>65.41<br>1.7<br>[Ar] 3d <sup>10</sup> 4s <sup>2</sup>                   |
| Palladium    | <b>Pd</b><br>46<br>106.42<br>1.4<br>[Kr] 4d <sup>10</sup>                                 | Silver      | <b>Ag</b><br>47<br>107.87<br>1.4<br>[Kr] 4d <sup>10</sup> 5s <sup>1</sup>                  | Cadmium     | <b>Cd</b><br>48<br>112.41<br>1.5<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup>                  |
| Platinum     | <b>Pt</b><br>78<br>195.08<br>1.4<br>[Xe] 4f <sup>14</sup> 5d <sup>9</sup> 6s <sup>1</sup> | Gold        | <b>Au</b><br>79<br>196.97<br>1.4<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>1</sup> | Mercury     | <b>Hg</b><br>80<br>200.59<br>1.5<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> |
| Darmstadtium | <b>Ds</b><br>110<br>271   | Roentgenium | <b>Rg</b><br>111<br>272  | Copernicium | <b>Cn</b><br>112<br>285  |

|           |  |            |  |           |  |
|-----------|--|------------|--|-----------|--|
| Europium  | <b>Eu</b><br>63<br>151.96<br>1.0<br>[Xe] 4f <sup>7</sup> 6s <sup>2</sup> | Gadolinium | <b>Gd</b><br>64<br>157.25<br>1.1<br>[Xe] 4f <sup>7</sup> 5d <sup>1</sup> 6s <sup>2</sup> | Terbium   | <b>Tb</b><br>65<br>158.93<br>1.1<br>[Xe] 4f <sup>9</sup> 6s <sup>2</sup> |
| Americium | <b>Am</b><br>95<br>244.06<br>1.2<br>[Rn] 5f <sup>7</sup> 7s <sup>2</sup> | Curium     | <b>Cm</b><br>96<br>247.07<br>1.2<br>[Rn] 5f <sup>7</sup> 6d <sup>1</sup> 7s <sup>2</sup> | Berkelium | <b>Bk</b><br>97<br>247.07<br>1.2<br>[Rn] 5f <sup>9</sup> 7s <sup>2</sup> |

| <b>13</b><br>IIIa | <b>14</b><br>IVa | <b>15</b><br>Va | <b>16</b><br>VIa | <b>17</b><br>VIIa | <b>18</b><br>VIIIa |
|-------------------|------------------|-----------------|------------------|-------------------|--------------------|
|-------------------|------------------|-----------------|------------------|-------------------|--------------------|

|           |  |           |  |            |  |             |  |           |   |            |   |
|-----------|--|-----------|--|------------|--|-------------|--|-----------|---|------------|---|
| Boron     | <b>B</b><br>5<br>10.811<br>2.0<br>[He] 2s <sup>2</sup> 2p <sup>1</sup>                                     | Carbon    | <b>C</b><br>6<br>12.011<br>2.5<br>[He] 2s <sup>2</sup> 2p <sup>2</sup>                                     | Nitrogen   | <b>N</b><br>7<br>14.007<br>3.1<br>[He] 2s <sup>2</sup> 2p <sup>3</sup>                                     | Oxygen      | <b>O</b><br>8<br>15.999<br>3.5<br>[He] 2s <sup>2</sup> 2p <sup>4</sup>                                     | Fluorine  | <b>F</b><br>9<br>18.998<br>4.1<br>[He] 2s <sup>2</sup> 2p <sup>5</sup>                                    | Helium     | <b>He</b><br>2<br>4.0026<br>1s <sup>2</sup>   |
| Aluminium | <b>Al</b><br>13<br>26.982<br>1.5<br>[Ne] 3s <sup>2</sup> 3p <sup>1</sup>                                   | Silicon   | <b>Si</b><br>14<br>28.086<br>1.7<br>[Ne] 3s <sup>2</sup> 3p <sup>2</sup>                                   | Phosphorus | <b>P</b><br>15<br>30.974<br>2.1<br>[Ne] 3s <sup>2</sup> 3p <sup>3</sup>                                    | Sulphur     | <b>S</b><br>16<br>32.066<br>2.4<br>[Ne] 3s <sup>2</sup> 3p <sup>4</sup>                                    | Chlorine  | <b>Cl</b><br>17<br>35.453<br>2.8<br>[Ne] 3s <sup>2</sup> 3p <sup>5</sup>                                  | Neon       | <b>Ne</b><br>10<br>20.18<br>[He] 2s <sup>2</sup> 2p <sup>6</sup>                                    |
| Gallium   | <b>Ga</b><br>31<br>69.723<br>1.8<br>[Ar] 3d <sup>10</sup> 4s <sup>2</sup> 4p <sup>1</sup>                  | Germanium | <b>Ge</b><br>32<br>72.64<br>2.0<br>[Ar] 3d <sup>10</sup> 4s <sup>2</sup> 4p <sup>2</sup>                   | Arsenic    | <b>As</b><br>33<br>74.922<br>2.2<br>[Ar] 3d <sup>10</sup> 4s <sup>2</sup> 4p <sup>3</sup>                  | Selenium    | <b>Se</b><br>34<br>78.96<br>2.5<br>[Ar] 4d <sup>10</sup> 4s <sup>2</sup> 4p <sup>4</sup>                   | Bromine   | <b>Br</b><br>35<br>79.904<br>2.7<br>[Ar] 3d <sup>10</sup> 4s <sup>2</sup> 4p <sup>5</sup>                 | Krypton    | <b>Kr</b><br>36<br>83.8<br>[Ar] 3d <sup>10</sup> 4s <sup>2</sup> 4p <sup>6</sup>                    |
| Indium    | <b>In</b><br>49<br>114.82<br>1.5<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>1</sup>                  | Tin       | <b>Sn</b><br>50<br>118.71<br>1.7<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>2</sup>                  | Antimony   | <b>Sb</b><br>51<br>121.76<br>1.8<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>3</sup>                  | Tellurium   | <b>Te</b><br>52<br>127.6<br>2.0<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>4</sup>                   | Iodine    | <b>I</b><br>53<br>126.904<br>2.2<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>5</sup>                 | Xenon      | <b>Xe</b><br>54<br>131.29<br>[Kr] 4d <sup>10</sup> 5s <sup>2</sup> 5p <sup>6</sup>                  |
| Thallium  | <b>Tl</b><br>81<br>204.38<br>1.4<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> 6p <sup>1</sup> | Lead      | <b>Pb</b><br>82<br>207.20<br>1.6<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> 6p <sup>2</sup> | Bismuth    | <b>Bi</b><br>83<br>208.98<br>1.7<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> 6p <sup>3</sup> | Polonium    | <b>Po</b><br>84<br>208.98<br>1.8<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> 6p <sup>4</sup> | Astatine  | <b>At</b><br>85<br>210.2<br>2.0<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> 6p <sup>5</sup> | Radon      | <b>Rn</b><br>86<br>222.02<br>[Xe] 4f <sup>14</sup> 5d <sup>10</sup> 6s <sup>2</sup> 6p <sup>6</sup> |
| Nihonium  | <b>Nh</b><br>113<br>286  | Flerovium | <b>Fl</b><br>114<br>289  | Moscovium  | <b>Mc</b><br>115<br>289  | Livermorium | <b>Lv</b><br>116<br>293  | Tennessee | <b>Ts</b><br>117<br>294   | Organesson | <b>Og</b><br>118<br>294   |

|            |   |            |  |           |   |             |   |             |   |          |   |             |  |          |  |            |   |
|------------|---|------------|--|-----------|---|-------------|---|-------------|---|----------|---|-------------|--|----------|--|------------|---|
| Europium   | <b>Eu</b><br>63<br>151.96<br>1.0<br>[Xe] 4f <sup>7</sup> 6s <sup>2</sup>  | Gadolinium | <b>Gd</b><br>64<br>157.25<br>1.1<br>[Xe] 4f <sup>7</sup> 5d <sup>1</sup> 6s <sup>2</sup> | Terbium   | <b>Tb</b><br>65<br>158.93<br>1.1<br>[Xe] 4f <sup>9</sup> 6s <sup>2</sup>  |             |   |             |   |          |   |             |  |          |  |            |   |
| Dysprosium | <b>Dy</b><br>66<br>162.50<br>1.1<br>[Xe] 4f <sup>10</sup> 6s <sup>2</sup> | Holmium    | <b>Ho</b><br>67<br>164.93<br>1.1<br>[Xe] 4f <sup>11</sup> 6s <sup>2</sup>                | Erbium    | <b>Er</b><br>68<br>167.26<br>1.1<br>[Xe] 4f <sup>12</sup> 6s <sup>2</sup> | Thulium     | <b>Tm</b><br>69<br>168.93<br>1.1<br>[Xe] 4f <sup>13</sup> 6s <sup>2</sup> | Ytterbium   | <b>Yb</b><br>70<br>173.04<br>1.1<br>[Xe] 4f <sup>14</sup> 6s <sup>2</sup> | Lutetium | <b>Lu</b><br>71<br>174.97<br>1.1<br>[Xe] 4f <sup>14</sup> 5d <sup>1</sup> 6s <sup>2</sup> |             |  |          |  |            |   |
| Americium  | <b>Am</b><br>95<br>244.06<br>1.2<br>[Rn] 5f <sup>7</sup> 7s <sup>2</sup>  | Curium     | <b>Cm</b><br>96<br>247.07<br>1.2<br>[Rn] 5f <sup>7</sup> 6d <sup>1</sup> 7s <sup>2</sup> | Berkelium | <b>Bk</b><br>97<br>247.07<br>1.2<br>[Rn] 5f <sup>9</sup> 7s <sup>2</sup>  | Californium | <b>Cf</b><br>98<br>251.08<br>1.2<br>[Rn] 5f <sup>10</sup> 7s <sup>2</sup> | Einsteinium | <b>Es</b><br>99<br>252.08<br>1.2<br>[Rn] 5f <sup>11</sup> 7s <sup>2</sup> | Fermium  | <b>Fm</b><br>100<br>257.10<br>1.2<br>[Rn] 5f <sup>12</sup> 7s <sup>2</sup>                | Mendelevium | <b>Md</b><br>101<br>258.10<br>1.2<br>[Rn] 5f <sup>13</sup> 7s <sup>2</sup> | Nobelium | <b>No</b><br>102<br>259<br>[Rn] 5f <sup>14</sup> 7s <sup>2</sup> | Lawrencium | <b>Lr</b><br>103<br>262.11<br>[Rn] 5f <sup>14</sup> 6d <sup>1</sup> 7s <sup>2</sup> |

our website at [www.up.ac.za/nas](http://www.up.ac.za/nas)

## Inspiration

# UP PhD candidate gets the nod for best presentation at national botanist congress

By Martie Meyer

Medicinal Plant Science doctoral student Analike Blom van Staden of the University of Pretoria (UP) was recently awarded for her oral presentation on the effect of rooibos on hypopigmented conditions at the 45th annual congress of the South African Association of Botanists held in early January.

This year's congress was a joint affiliation with the African Mycological Association and the Southern African Society for Systematic Biology.

'Each conference is an opportunity to showcase your research and share your findings with other researchers,' says Blom van Staden.

'I am always astounded by how much research is out there and by the beautiful minds of scientists – people who never give up in their search for an answer or, as you eventually come to realise, part of an answer.'

No stranger to accolades, Blom van Staden was awarded the NRF-DST innovation and priority research doctoral scholarship (2017 to 2018) and a

postgraduate doctoral scholarship from UP for the same period. She was also nominated for a Biotech Fundi Award for two consecutive years, and awarded the best BSc honours presentation in the Department of Plant and Soil Sciences at the Fanie de Meillon Postgraduate Symposium in 2014.

The focus of Blom van Staden's doctoral studies, which are being conducted under the supervision of Prof Namrita Lall, is the effect of *Aspalathus linearis* (rooibos) on hypopigmented conditions, including progressive macular hypomelanosis and vitiligo. Several other disorders may emerge as a result of these conditions, which influence the quality of life and psychological wellbeing of those afflicted. People who live in rural areas are most affected as they often



Analike Blom van Staden

don't have access to relevant treatments or can't afford them. An alternative, less expensive product that is readily available and sustainably cultivated, such as rooibos, could be the answer.

'The more you get enveloped by your research, the more you start to doubt what you know,' says Blom van Staden.

**'Receiving this award assures me that I am making sense, and that gives me the much-needed motivation to keep pursuing answers through my research.'**

**'Botany I rank with the most valuable sciences.'**

(Thomas Jefferson)



## Inspiration

# Best poster award for Ofentse Mathibela

By Martie Meyer



**In January 2019 Ms Ofentse Mathibela, an honours student in plant science at the University of Pretoria (UP), received the award for the best poster presentation in Physiology/Ecophysiology/Biotechnology at the 45th Annual Congress of the South African Association of Botanists.**

This Congress affiliates the Annual South Association of Botanists African (SAAB), African Mycological Association (AMA) and Southern African Society for Systematic Biology (SASSB) Joint Congress.

'Honours studies are usually viewed as a foundation for one's research career. It is a great honour to see my work recognised by the science community. The award serves as an inspiration for me to continue working harder towards achieving my goals. Although the award is presented to an individual, it was actually a team effort. It took a group of extraordinary people (KK Lab) to groom me to become the young scientist I am today. I would also like to express great appreciation to my supervisor Dr Eugene Makgopa for his sterling mentoring throughout the year,' an elated Ms Mathibela said after winning the award.

Ms Mathibela explained that the aim of her honours study was to characterise Bowman-Birk Inhibitors (BBI) in transgenic *Arabidopsis thaliana* under drought and salt stress conditions, with the objectives of performing physiological and biochemical analysis of the plants under well-watered

conditions, drought stress and saline conditions. 'BBI are serine protease inhibitors known for their defence enzymes against biotic stress in sugar cane. There is a lack of characterisation of BBI involvement in abiotic stress tolerance. The characterisation of BBI provides a foundation of abiotic stress improvement in economically important crops, such as soy bean, which could be beneficial to the agricultural sector.'

From March to December 2016 Ms Mathibela was a mentee in the Centre of Excellence in Tree Health Biotechnology (CTHB) Mentorship Programme at UP where she was given the opportunity to work alongside a postgraduate student in a laboratory setting. Ms Mathibela describes this as 'a great opportunity as my mentor's experience in the programme greatly influenced my perception of research and a future career in the natural sciences.'

## Natural and Agricultural Sciences

# Consider a career in food security and nutrition

By Martie Meyer

When considering the options that are available to you when choosing a future career, do you consider how you could make a difference to the world in which you are living? By choosing a career that addresses serious issues, such as food security and nutrition, you will not only have an exciting career, but will also be able to improve people's lives.



The 2018 UN Food and Agriculture Organization (FAO) State of Food Security and Nutrition in the World report reveals a sad and urgent reality: World hunger is once again on the rise. According to Dr Nokuthula Vilakazi, a project coordinator for the Early Career Research Leader Fellowship, an initiative of the University of Pretoria's Future Africa Institute with a background in nutrition, food science and food security, this report shows that, for a third consecutive year, the number of undernourished people worldwide had increased, reaching nearly 821 million in 2017. At the same time an estimated 1.9 billion people were found to be overweight, facing the risks of illness, disease and death that accompany their diet and health status. These alarming figures come at a time when the world actually has the capacity to produce 17% more food per person than was produced 30 years ago. The situation

in South Africa is no better as poverty seems to be on the rise. Statistics South Africa's 2016 General Household Survey showed that 7.4 million people had reported experiencing hunger. One cannot help but wonder how this is possible, since South Africa is one of the ten most food-secure countries in Africa.

A career in food security is a combination of cutting-edge science and opportunities to work in other countries for the good of humanity, which requires a multidisciplinary approach. This is a rare combination in any discipline and a career in this field can be truly rewarding. The demand for scientists with expertise in the agricultural and food sector is likely to increase in the next decade. Skills shortages also exist in areas of expertise such as plant and crop cultivation, plant physiology and pest management, soil science, horticulture and the physiology and

health of large animals. Involvement in food security also means being part of a collaborative effort. Problems are best solved when scientists in several disciplines work together to tackle the biological, ecological, environmental, geographical and agricultural, and even the sociological, economic and financial barriers to providing food for the world.

Although the many different disciplines associated with food security, including agriculture, policy development, economics, nutrition, environment, food science and many more make it an attractive career, it is essential to understand the science and how it is applied to improve food security.

**Contact information**  
[www.up.ac.za/nas](http://www.up.ac.za/nas)

## Natural and Agricultural Sciences

**Make today matter by choosing a career in food security and make a difference!**

The following programmes, offered by the Faculty of Natural and Agricultural Sciences, are related to the issue of food security:

### Biological Sciences

- BSc (Biochemistry)
- BSc (Biotechnology)
- BSc (Ecology)
- BSc (Zoology)
- BSc (Entomology)
- BSc (Genetics)
- BSc (Human Genetics)
- BSc (Human Physiology)
- BSc (Human Physiology, Genetics and Psychology)
- BSc (Microbiology)
- BSc (Plant Science)

### Agricultural and Food Sciences

- BSc (Food Science)
- BSc (Nutrition)
- BScAgric (Agricultural Economics and Agribusiness Management)
- BScAgric (Animal Science)
- BScAgric (Plant Pathology)
- BScAgric (Applied Plant and Soil Sciences)

### Consumer Science

- BConSci (Food Retail Management)
- BConSci (Hospitality Management)

### Physical Sciences

- BSc (Chemistry)
- BSc (Geography)
- BSc (Geoinformatics)
- BSc (Meteorology)
- BSc (Environmental Sciences)

### Mathematical Sciences

- BSc (Actuarial and Financial Mathematics)
- BSc (Mathematics)
- BSc (Applied Mathematics)
- BSc (Mathematical Statistics)

**For the minimum admission requirements and career opportunities that pertain to the programmes above, please download our Undergraduate Faculty brochure here: <https://www.up.ac.za/students/article/2748887/faculty-brochures-2019/20>**



## Natural and Agricultural Sciences

# Dr Chris Oosthuizen wins British Ecological Society photography competition

By Marissa Greeff

Dr Chris Oosthuizen, a postdoctoral fellow in Mammal Research Institute within the Department of Zoology and Entomology recently won the British Ecological Society's annual photography competition, *Capturing Ecology*.

His winning image is of a lone adult king penguin standing among a crowd of chicks on Marion Island. Dr Oosthuizen has been working with the Marion Island Marine Mammal Programme since 2007 as a seal biologist.

'Some images have the power to say much more than words,' says Professor Richard Bardgett, President of the British Ecological Society, 'His image showcases the remarkable colony life of an iconic bird species and raises awareness of their uncertain future due to climate change.'

The winning images were exhibited in Birmingham at The British Ecological Society's annual conference in Dec 2018; and were also on display in London from

21 to 27 January 2019. Dr Oosthuizen took the photograph while conducting research on seals and killer whales as a member of the 68th overwintering team (2011 to 2012) for the Marion Island Marine Mammal Programme. He also won the competition's Dynamic Ecosystems category for his image of a southern giant petrel preying on a king penguin chick.

'Photography is a key science engagement tool that can convey important conservation messages,' says Dr Oosthuizen. 'King penguin populations inhabiting islands around the Antarctic face an uncertain future. Global climate change shifts the oceanic fronts where they feed further away from breeding sites, forcing penguins

to travel further to reach their foraging grounds.'

In the early 1980's there were approximately 50 000 pairs of king penguins at the world's largest king penguin colony, the Morne du Tamaris colony at Ile aux Cochons in the Crozet archipelago. By 2017 that number had declined to only 60 000 pairs. 'Many seabirds are more endangered than elephants and rhinos, and deserve the same attention that these conservation icons receive,' he says. In 2017, Dr Oosthuizen and Prof Nico de Bruyn edited a book, *Pain Forms the Character*, which includes photographs and stories of the 'cat hunters' and 'sealers' of Marion Island. ([www.marionseals.com](http://www.marionseals.com))



Winning photo: Copyright Chris Oosthuizen and the British Ecological Society.

## Natural and Agricultural Sciences

*'If there is magic on this planet, it is contained in water.'*  
 (Loren Eiseley)



## PhD student a runner-up in SAASTA competition

By Martie Meyer

Ms Yashini Naidoo is a second-year PhD student conducting research under the supervision of Prof Don Cowan, the Director of UP's Centre for Microbial Ecology and Genomics (CMEG).

Yashini was the runner-up in the writing category of the South Africa Agency for Science and Technology Advancement (SAASTA\*) Young Science Communicator Competition. The article she wrote was on 'Superbugs: The end of an antibiotic era?'

Yashini is currently investigating antibiotic resistance in Namibian

desert soil as part of a global effort to inform the One Health\*\* concept in antimicrobial resistance.

'I entered the competition for two reasons. Firstly, I am passionate about my research and it is important to me to contribute to society using science. Secondly, I chose the topic because antibiotic resistance is a global crisis and the impact of improper and over-use of antibiotics is something I want to address in my research. I was pleasantly surprised to hear that I was the runner-up, and I am grateful that I get to do my bit by helping promote awareness of this global crisis.'



Ms Yashini Naidoo

\* SAASTA is a business unit of the National Research Foundation (NRF) with the mandate to advance public awareness, appreciation and engagement of science, engineering, innovation and technology in South Africa.

\*\* The One Health approach is a global strategy that encourages interdisciplinary collaboration and communication on health care for humans, animals and the environment. Antibiotic resistance (ABR) is a direct consequence of the selection pressure from the intensive use of antibiotics in human and veterinary medicine, animal farming, and agricultural practices. This results in the continuous release of antibiotics into the environment. One Health focusses on understanding the impact and how best to contain it. Soil is a reservoir of antibiotic resistance genes (ARGs) in both impacted and natural habitats, but relatively little is known about the abundance and composition of antibiotic resistance genes (ARGs) in non-agricultural regions such as hot deserts.

## Engineering, Built Environment and Information Technology

# Mechatronics – here *mechanics* and *electronics* meet

*By Dr Theunis Botha and Prof Schalk Els*



**Mechatronics is a combination of the principles of mechanics, electronics and computing. Mechanical engineers are interested primarily in the mechanical nature of objects and will therefore focus on the design, manufacture and maintenance of physical systems.**

Mechanical engineers led the early development of aircraft and automobiles where motion was controlled through mechanical systems. Initially aircraft were equipped with cables or hydraulic systems that physically connected the pilots with the flaps or control surfaces of the aircrafts. The pilots' own energy was therefore used to move the flaps. In the automotive industry, physical linkages were used to control the motion of the vehicle body to improve the safety and comfort of the occupants.

The advent of electronics led to the development of small devices that can be used to control actuators such as motors. This allowed electrical energy to be applied to mechanical systems. Devices could be easily rotated or moved by using simple electronic components and electrical actuators. The further development of sensors allowed

electronics to sense the physical world. An electronic system can now record the temperature of an object, the force applied to a system, the positions of objects and much more.

The invention of microprocessors, which can effectively act as brains for electronic systems, allowed electronics to use sensor inputs to apply energy to mechanical systems to obtain desired outcomes. Aircraft now use sensors to interpret what the pilot wants to do, and a processor decides which actuators should be used to move the flaps to the optimal position to ensure that the aircraft will do exactly what the pilot wants to do. In automobiles, actuators are used to engage vehicles' brakes when collisions are detected without the drivers having to do anything.

Mechatronics uses sensors to sense what is happening and a processor to take the sensor information and decide which actuators to actuate to ensure that a mechanical system does what needs to be done. Whether this process is used to control robots to manufacture more robots or to develop autonomous robots that can move from one point to another through obstacles without human intervention, a combination of mechanical and electronics expertise is used. Almost all mechanical systems currently in use are equipped with sensors, actuators and processors to

make them safer and more efficient for human use.

What do you have to study to become a mechatronics engineer? Some universities offer dedicated mechatronics degrees, but at most universities you will register for a degree in either Mechanical Engineering or Electric/Electronic/Computer Engineering. At UP, for example, the Mechanical Engineering curriculum includes courses in electrical engineering, electronics, programming and control systems, which provide for all the building blocks of mechatronics. Furthermore, final-year students can choose Mechatronics as an elective and also complete a mechatronics-related final-year research project. Should you consider a degree specifically in mechatronics, it may be worthwhile remembering that although your knowledge will become broader and more multidisciplinary, you may end up lacking the in-depth knowledge gained by completing the more traditional undergraduate degrees (such as Mechanical Engineering) and specialising later, or simply working as the mechanical engineer in a multidisciplinary team.

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## Engineering, Built Environment and Information Technology

# Chemical engineering alumna wins international scholarship in China

By Anthea Pretorius

A twenty-three year old chemical engineering graduate of the University of Pretoria recently became the first and only South African chosen as a Schwarzman Scholar.

Zanele Mahlangu will read for a one-year master's degree in Global Affairs at the Tsinghua University, China, in 2020.

Launched in 2016 the Schwarzman Scholarship offers promising students the opportunity to respond to challenges in the geopolitical landscape. Students can focus on public policy, economics and business, or international studies. Students will meet Chinese leaders, attend high-level interactions, form part of an internship programme and mentors' network, and attend intensive travel seminars.

### One hundred and forty seven students form part of the 2020 cohort

More than 2 400 applicants from 38 countries and 119 universities applied for the scholarship. Of the applicants

40% are from the United States, 20% from China, and 40% combined from the rest of the world.

#### A delighted Zanele responds

Zanele, a business analyst at First National Bank, writes, 'I am honoured and excited to be a Schwarzman Scholar! This once-in-a-lifetime opportunity will give me the occasion to learn about global affairs and to enhance my leadership skills under the mentorship of successful leaders.'

'I look forward to meeting young leaders from around the world who are effecting real change in their spheres of influence. I like coming up with solutions for real world, practical problems. I am passionate about social justice and economic equality in South Africa. I plan to major in economics and business.'

'I have had my share of disappointments and setbacks professionally, academically and personally, but I believe that failure is a critical part of life's journey. It is through setbacks that we learn, improve, revise, and do better.'



Zanele Mahlangu

**Note:** Blackstone Chairman, CEO and Co-Founder, Stephen A Schwarzman, personally contributed R1,4 billion to the programme and hopes to raise an additional R7,1 billion to endow the programme for perpetuity. Schwarzman Scholars have raised R8,2 billion towards this R8,5 billion goal.

## EBIT weeks

Grade 10-12 learners are invited to register for one of the EBIT Faculty Weeks:

**Week one** 24 to 27 March 2019 (Engineering and Built Environment Week)

**Week two** 30 June to 3 July 2019 (Engineering and Information Technology Week)

(Dates are subject to change. Please consult the website below for the most recent information)

**Website** [www.up.ac.za/ebitweek](http://www.up.ac.za/ebitweek)

**Robot Race Day:** 24 May 2019

[https://docs.google.com/forms/d/e/1FAIpQLSfQ5GzCfkQasl9rHwcYIP\\_30ujx5Bjg\\_Tv7cF05-7hRo\\_WmJg/viewform](https://docs.google.com/forms/d/e/1FAIpQLSfQ5GzCfkQasl9rHwcYIP_30ujx5Bjg_Tv7cF05-7hRo_WmJg/viewform)



## Engineering, Built Environment and Information Technology

# The Mining Engineer in the 4.0 Industrial Revolution

By Jannie Maritz

Educating and leading mining engineers to become Imagineers

The world around us requires two types of material to function: that which is grown and that which is mined. Everyday appliances like cellphones and computers, the Internet, the transportation we use and even the fuel we put into it is made possible by the mining industry.

In terms of Industry 4.0, mining is no different from other industries. It needs to adapt and change, learning from the past, embracing the fundamental knowledge and dreaming up new applications for that knowledge. The mining engineer of the future needs to be tech-savvy in order to collect and

analyse data quickly and be able to convert that information into workable systems and solutions for exploiting the valuable mineral hidden in the rock mass.

Traditional silos of technical specialist fields like production, ventilation, rock engineering, geology, planning and management are broken down by interdisciplinary groups, which are managed and led by mining engineers. The mining engineer of the future needs to have the technical know-how to solve the problem of safe extraction, as well as the soft skills to manage teams of diverse ideologies.

The Department of Mining Engineering at the University of Pretoria offers both technical subjects and managerial skills to its students in a four-year degree programme, ensuring employability not only in the South African mining sector, but through its Engineering Council of South Africa (ECSA) accreditation, throughout the world.

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### Admission requirements for the BEng (Mining Engineering) programme:

| Programmes  | Minimum requirements for 2020                              |          |             |          |                  |          | APS       |  |
|---|--|----------|-------------|----------|------------------|----------|-----------|--|
|   | Achievement level*   |          |             |          |                  |          |           |  |
| SCHOOL OF ENGINEERING   | English Home Language or English First Additional Language |          | Mathematics |          | Physical Science |          |           |  |
|   | NSC/IEB  | AS Level | NSC/IEB     | AS Level | NSC/IEB          | AS Level |           |  |
|   | 5  | C        | 6           | B        | 6                | B        |           |  |
| <b>BEng (Mining Engineering)</b><br>[4 years]<br>Closing dates:<br>SA – 30 September<br>Non-SA – 31 August  |  |          |             |          |                  |          | <b>35</b> |  |
| <b>Careers:</b> Mining engineers have a wide range of opportunities, namely mining (mine management, technical management of ventilation, rock mechanics, rock breaking, mineral resources), financial evaluation and management (mine design, mine financial evaluation, mine feasibility studies, mine environmental impact studies), mining and drilling contracting (mining, tunnelling, shaft sinking, mine development, ore evaluation), mining research, mining equipment design and manufacture, mining marketing and mining administration at national, provincial or international level. |  |          |             |          |                  |          |           |  |

\* Cambridge A level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

## Engineering, Built Environment and Information Technology

# UP applauds winner of L'Oréal-UNESCO award

By Anthea Pretorius

At an event held in Nairobi, Kenya on 6 December 2018, Dr Marilize Everts received one of two postdoctoral awards presented by L'Oréal-UNESCO for Women in Science in Sub-Saharan Africa. Dr Everts is a postdoctoral fellow in the Department of Mechanical and Aeronautical Engineering at the University of Pretoria and was one of 488 candidates nominated for this award.

This award recognises and rewards talented young female scientists in the fields of the life sciences (biology, biochemistry, biophysics, genetics, physiology, neuroscience, biotechnology, ecology and ethology) and the physical sciences (physics, chemistry, petroleum engineering, mathematics, engineering science, information science, and earth and universe science).

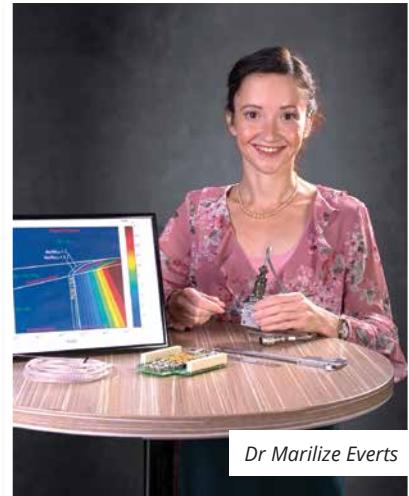
The award included an opportunity to attend a leadership training course in Kenya, which allowed Dr Everts to network with other female scientists from across the continent.

Dr Everts hopes to achieve improved understanding of mixed convection in laminar and transitional flows and her research focuses on the heat transfer and pressure drop of high-viscosity fluids. Her research findings can be applied in air-conditioners, cars, buildings, renewable energy systems (such as solar energy) and the mining industry.

### Dr Everts has received more than twenty awards, including:

- The TATA Africa Doctoral Scholarship for Women in Science, Engineering and Technology (in both 2015 and 2017);
- the S2A2 Medal for Original Research at master's level; and
- the Eskom Chairman's University Award for the best final-year engineering student in the country in 2012.

Dr Everts has published eight journal articles and 17 conference papers. She is currently involved in two



*Dr Marilize Everts*

international research projects, namely the ThermaSmart Horizon 2020 project, which includes 18 universities across five continents and focuses on the phase-change cooling of high-power electronic devices, and a collaboration between the Imperial College of London and the Universities of Pretoria, Nigeria and Mauritius, which is funded by the Royal Society and focuses on unsteady boiling in solar power plants.



**'Every choice moves you closer, or further, from your dreams.'**

**What will you say "yes" and "no" to this year?**

**What is worthy of your consideration, energy and efforts?**

**Risk the impossible – make today matter.'**

*(Anthea Pretorius)*

## Law

# UP Law student Ruvimbo Samanga reaches for the stars and beyond

The Faculty of Law at the University of Pretoria is proud to announce that one of its final year LLB students [and BA (Law) cum laude graduate], Ruvimbo Samanga, recently presented a paper 'Lunar ethics and the implications of resource-mining in outer space' at the African Leadership Congress in Space and Technology in Abuja, Nigeria, where she became a member of the Space Generation Advisory Council for the United Nations and the Women in Aerospace in Africa Committee, which is promoting an African Space Agency.

Earlier this year Ruvimbo was a coach of the first South African team to win the International Manfred Lachs Space Law Moot Court Competition.

Ruvimbo celebrated her birthday at the conference and the organisers surprised her with a cake, which was enjoyed during the Women in Aerospace event.

The cherry on top of Ruvimbo's (birthday) cake was the confirmation that she is a recipient of the Mandela Rhodes Foundation Scholarship for Master's studies.

Explaining her somewhat long and winding road to legal studies, Ruvimbo explains: 'I wanted a career that would help me impact the globe, which has always been my dream with any career.'

'I was originally accepted for International Relations studies at UP which, although globally oriented, did not offer me the large scale policy-making and reform power that I was looking for in a vocation. I then switched to BA and studied psychology for a year, as the University could not immediately transfer me to BA (Law). I concurrently registered for my third year BA (Law) and my first year LLB, thus completing an accelerated programme load last year.'

Ruvimbo explains her passion for space law as follows:

**'It is innovative and engaging. On the former, it provides creative and viable solutions to our socio-economic problems on the continent. Satellite technology and resources from outer space are already changing nations' economic development.'**

'Furthermore the fourth industrial revolution is nigh, and it is one that will be driven by the digital and the space age. If Africa is to compete on international platforms, it too will have



Ruvimbo Samanga

to keep up with changing trends and it is my earnest hope to help conduct Africa to that goal.'

She is currently pursuing a master's degree in international trade and investment law with the UP Centre for Human Rights.

Thank you for keeping us on the global map, Ruvimbo! The Faculty of Law is proud of your achievements.

[https://www.up.ac.za/law-house/news/post\\_2735459-up-law-student-ruvimbo-samanga-reaches-for-the-stars-and-beyond](https://www.up.ac.za/law-house/news/post_2735459-up-law-student-ruvimbo-samanga-reaches-for-the-stars-and-beyond)



► The winning team from UP of the 2018 International Institute of Space Law Moot Court Competition with team members Simon Motsweni and Simon Botha with co-coach Ruvimbo Samanga.  
(Photo source: iislweb.org)

## Law

# Law House rocks the (UP) house

*By Caroline Letsoalo (Law House Vice-Chair 2018/19) and Rameeza Attar (Law House Chair 2018/19)*

The Faculty of Law at the University of Pretoria is very proud of Law House (LH), the student body to which all students who register for an LLB degree automatically belong. At the Department of Student Affairs' Award Ceremony for Student Structures, which was held in October 2018, the 2017/18 Law House Executive Committee (EC) once again won most of the awards, including the coveted Faculty House of the Year Award. Their other awards inter alia included those for Community Service (shared with House Humanities), Student Involvement and Campus Awareness.

According to Caroline Letsoalo, the 2017/18 Vice-chair of Law House, 'Law House is currently the leading faculty house at UP as we walked away with five awards at last year's annual Department of Student Affairs' Award Ceremony for Student Structures. All the events presented by the 2017/18 Executive Committee were very successful and we received rave reviews from the students.'

On behalf of the Faculty, proud Deans Professors André Boraine and Birgit Kuschke, congratulated the 2017/18 Executive Committee of Law House for being such an 'effective and efficient EC – one of the best the Faculty has ever had'. They also expressed the hope that the 2018/19 Law House EC would follow in the footsteps of their predecessors and wished them the best of luck for their term in office.

## Law House serves the law student community

By creating a familiar, inclusive environment for all law students to celebrate diversity and uphold inclusivity while maintaining a healthy balance between academic and other activities, Law House aims to provide a platform for law students to develop the academic, leadership, community engagement, cultural and sports competencies and skills required by well-rounded lawyers.

Law House assists students by organising an annual textbook drive. Another way in which law students experiencing financial hardship are assisted is the 'Pads for Dignity Drive' for female students, implemented in 2018, which

is combined with a bridging food and toiletries bank made possible by donations from students and staff. This gesture is greatly appreciated by the University and the community in general.

The Law House motto for the current year, according to the 2018/19 Chair Rameeza Attar, is 'We are not afraid'. Law House and its members are not afraid of the challenges that life throws their way and believe that if students give it their all, they can overcome any obstacle.

Law House is here to advance, guide, help, serve and support the Faculty of Law and its hardworking students. We understand the challenges faced by law students completing a very demanding programme and are here to lend a helping hand.'

## Law House's contribution to the Orientation Week for new law students

During the 2019 Orientation Week (O-week), Law House arranged a bonding session for first-year law students in the form of a scavenger hunt to help newbies to familiarise themselves with the Campus, followed by a social evening. Law House is planning many recreational activities for this year, including the annual Faculty Festival in August.

**Finally, a word of advice from Caroline Letsoalo (Vice-Chair 2018/19):**

**'When all else fails, drink water. Go back to basics and cry. Cry again. Wake up every day and try to celebrate the small victories. Do it honestly. Find your niche. Work actively towards building a life from which you do not need a vacation.'**



*The 2018/19 Law House Executive Committee*



*The 2017/18 Law House Executive Committee*

### Contact information

Email lh.secretary.up@gmail.com  
Website [www.up.ac.za/law-house](http://www.up.ac.za/law-house)

## Health Sciences



# Message from the Chairman of the School of Medicine

*By Prof Robin J Green*

The School of Medicine at the University of Pretoria is a vibrant and active place to study and work.

On a daily basis, numerous students roam our many campuses, including the wonderful new additions to the Prinshof Campus – the Tswelopele lecture theatre complex and administration building. The HW Snyman complex has also been renovated, with new facilities, including a Skills Lab that would rival any in the world.

Publication outputs, based on novel research in medicine, have increased in our school and we have several research centres and departments, including Nuclear Medicine, Cellular Biology, Immunology, Cancers, Mother and Child Care Pharmacology, Infectious Diseases and Sports Sciences.



*Prof Robin J Green*

The School of Medicine has departments in basic sciences, pathology and many clinical disciplines and we interact with a number of partners, including the Gauteng Department of Health and National Health Laboratory Service. We also engage with external stakeholders to facilitate funding partnerships and research opportunities.



*Leolyn Günther*

'I am a final-year medical student at the University of Pretoria and my experience of the School of Medicine and the Faculty of Health Sciences has been truly impressive. I am an older student and have had the privilege of experiencing a couple of different universities, which has led me to confidently say that the University of Pretoria is the best, by far. The medical degree is academically and practically focused and the Faculty is extremely student oriented. This results in a programme which is geared towards students and provides ample academic support while focusing on quality health care that encourages kindness and professionalism.'

'Throughout the last few years of studies, I have had a few personal and

academic challenges, which have been so attentively and efficiently dealt with by the administrative staff, lecturers and the respective deans.'

'The Faculty's openness, respect and progressive approach towards their students, as well as to receiving feedback, is what distinguishes this University from the rest. I am excited to be graduating at the end of this year with the help of a good support system.'

'I feel that the University has adequately supported and practically prepared me for the two years of internship that lie ahead. I hope that I will become a doctor that will make a difference and make the people around me proud.'

## Health Sciences



*Michelle Cremer*

'White coats, blue scrubs, running after a senior doctor whilst taking notes, answering questions whilst trying to catch your breath... and the director yells, "Cut!" Every medical student imagines medical school to be exactly as they see on television, and every

medical student soon realises that they were very wrong. It is nothing like our favourite TV programmes – it is so much better! The Bachelor of Medicine and Surgery programme at the University of Pretoria is nothing short of phenomenal. The training we receive not only teaches us how to save lives or manage disease, but builds on a foundation of what it means to be a good doctor – to always have our patient's best interests at heart, to be their voice when they want to be heard and help them accumulate the greatest wealth of all – health. At the University of Pretoria, we are privileged to have lecturers from multidisciplinary backgrounds, leaders in the field of medicine and science, who form the heart of our education. As medical students, we are always encouraged to be the best version of ourselves, but our faculty also acknowledges that this is not always possible and therefore emphasises student support, wellbeing and the importance of mental health.

'I am currently a fifth-year medical student, slowly but surely nearing the end of six wonderfully challenging years.

**'Never give up'** – are three words that are used so often that we forget how powerful they truly are.

There is no secret recipe to being a great medical student, nor is there a secret entrance code to be selected to study medicine - even after a first unsuccessful attempt, there are only three simple words: - never give up. I can attest to the power of this phrase after working hard, tirelessly, for four years before I was accepted to study medicine. You do not choose medicine: - medicine chooses you! You choose to become a doctor with astounding knowledge, substance and compassion – which is why you choose the University of Pretoria.'

'My name is Thembile Nofingxana, I am from the rural Eastern Cape. Currently I am doing my final year in MBChB – Bachelor of Medicine and Surgery here at UP.

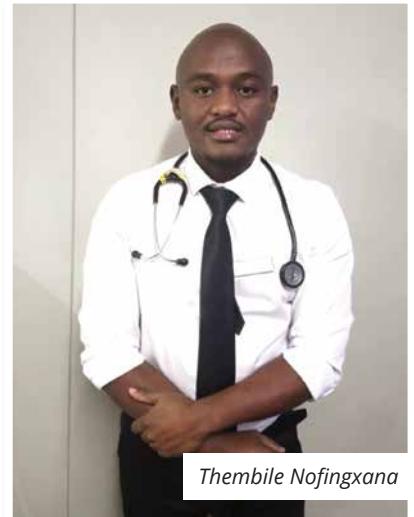
'People still ask why I do medicine. Growing up, I had no clue I would end up applying for medicine. All I knew when I got to high school was that I was fascinated by this well-organised, self-controlled machine with hardworking mechanics, which is the human body. I just fell in love with how the human body works. So, I learnt that medicine is one of the programmes to pursue. So that's my short story on why I wanted to study the programme.

'The MBChB programme at UP is one of the most well thought out and well-planned programmes in the country. Yes, it comes with a lot of pressure, I mean like loads of pressure throughout the six years but still I wouldn't choose any other place to study medicine. The awesome thing about UP is that they really do understand the pressure that comes with the programme; so they have put out a plan to help students. They really have dedicated lecturers who are always more than willing to help students one-on-one, I mean we have their office phone numbers and emails and we are allowed to make appointments with them. That is a big

plus for us. And trust me, they really do make time for students. From a personal perspective, I don't want to believe that medicine is just for "clever" individuals and I am raw proof of that. Studying MBChB at UP requires discipline, hard work (really hard) and being prepared to study while others are going to parties. This is what has worked for me.

**'As I'm doing my final year; every day I step into the hospital I begin to realise more and more that UP is preparing me to go out there and be a doctor. Yes, we do put in long hours but it's worth it.'**

'So, I will do my two years of internship and then one of community service. And yes, I will specialise and I don't see myself doing anything other than specialising in internal medicine and being an internist. I love the whole puzzle of trying to find out what your patient has and making a diagnosis and either managing or referring to other specialists. I would also like to congratulate all the first years for passing matric. Welcome to UP guys, I promise you, you will not regret choosing UP.'



*Thembile Nofingxana*

'For those who will be doing medicine, make sure that you have personal support, because you will need it. At times, the academic pressure will be too much and you will feel like you can't go on, so, value your personal relationships and friendships. You will need such people in your life.'

**'Remember, with God 'all things will always be possible'.'**

## Economic and Management Sciences

# BCom (Investment Management)

The BCom (Investment Management) focuses on the global investment environment and includes topics covering all facets of investment management. The BCom (Investment Management) degree at UP is an Affiliated Program with CFA Institute®. Academic institutions that embed a significant portion of the CFA Program Candidate Body of Knowledge (CBOK) – including the Code of Ethics and Standards of Professional Conduct – into their curriculum may be eligible to participate in the University Affiliation Program.

An Affiliated University signals to their students and to employers that their curriculum is closely tied to the practice of investment management and is helpful to students preparing for the CFA® Program exams.

### What can be achieved with the BCom (Investment Management) degree?

The BCom (Investment Management) creates career opportunities in the dynamic investment sphere of world economies, which offer access to money markets, capital markets, equity markets, financial risk management and the management of investment portfolios. CFA Institute and CFA are registered trademarks of CFA Institute.

#### The degree is suited for you if you have the following traits:

- Strong mathematical skills
- Self-motivated
- Diligent and hard working
- Analytical and independent thinker
- Good presentation skills
- Well spoken and articulate
- Good research and report writing skills
- Ability to make decisions

#### Major subjects:

- Investment Management
- Financial Management
- Financial Accounting
- Economics

For more information:  
[www.up.ac.za/financial-management](http://www.up.ac.za/financial-management)

#### Once you have successfully obtained your degree you may:

- Apply to pursue an honours degree in Investments;
- Pursue a professional qualification: CFA charter; or
- Enter the job market after graduating

#### Career opportunities

- Portfolio Manager
- Fund Manager
- Research Analyst
- Investment Analyst
- Specialisation within various markets, eg: equity, derivatives, fixed income or alternative investment markets

| Programme  | Minimum requirements for 2020                              |          |             |          |     |  |
|--|--|----------|-------------|----------|-----|--|
|  | Achievement level*   |          |             |          | APS |  |
|  | English Home Language or English First Additional Language |          | Mathematics |          |     |  |
|  | NSC/IEB  | AS Level | NSC/IEB     | AS Level |     |  |
| <b>BCom (Investment Management)</b><br>[3 years]<br>Closing dates: SA – 30 September, Non-SA – 31 August | 5  | C        | 6           | B        | 34  |  |

**Careers:** Fund managers, investment advisors, financial advisors, management consultants, stock brokers, investment analysts and investment bankers

**PLEASE NOTE:** Accountancy is not a subject requirement for any of the BCom and BAdmin programmes.

\*Cambridge A level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

## Economic and Management Sciences

# Remo's servant heart pays big dividends

By Nonkululeko Kubeka Moyo

Remofilwe Dikoma could have been easily forgiven for succumbing to the so-called new kid syndrome and becoming withdrawn when she had to move to a third high school by the time she reached Grade 10. Add to this the fact that she had to live in a hostel and away from her parents for the first time and you have the perfect recipe for a potential emotional roller-coaster of epic proportions.

However, rather than become a victim, Remo fully embraced these major changes. She now refers to this period as the highlight of her high school career and says that it was at the Hoërskool Lydenburg that her serving heart was cultivated and her leadership qualities came to the fore. 'Living at boarding school made me realise that we all come from very different backgrounds and I learnt to better understand and relate to people. I developed a strong sense of *ubuntu* and grabbed every opportunity to help people,' she recalls.

Her willingness to serve resulted in her being selected as a prefect in both the school and the hostel. She was also

an avid sportswoman and became the captain of the netball team and vice-captain of the soccer team.

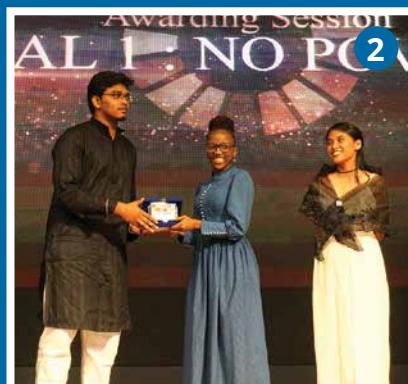
Fast-forward to her time as a new Tukkie enrolled for the BCom – Extended Programme at the UP Mamelodi Campus and Remo once again stepped into a leadership role when she became the secretary of the Faculty of Economic and Management Sciences student house Commercii. She explains: 'My experience as a prefect in high school inspired me to apply for the position as secretary – a decision that was influenced not by a desire for the special blazer, but by my strong desire to serve my fellow students and enhance their varsity experience.' She was later elected as the Commercii chairperson for the 2017/18 term.

The late American writer Robert Ingersoll said: 'We rise by lifting others.' The truth of this statement is evident in Remo's life as her leadership abilities had been nurtured by her selfless service to her fellow students, and by investing of her time and talents for the benefit of others she experienced the most profound personal development. She was one of

only 580 delegates selected from more than 19 000 applicants from around the world to attend the Global Goals Model United Nations Conference held in Kuala Lumpur, Malaysia in January 2019. The conference theme was 'Let's realize 17 global goals for a brighter world' and Remo, who was one of the top performing delegates, received verbal commendations for her efforts.

Remofilwe encourages Tukkies to invest in their futures:

**'Take advantage of the opportunities that can help you develop confidence and people skills in high school by participating in extramural activities such as sports and cultural programmes. Work hard, give it your all and things will fall into place!'**



1. Remofilwe (second from left) with other Global Goals MUN delegates holding placards of the countries they were researching
2. Remofilwe (centre) receiving her Verbal Commendation Award
3. Remofilwe in front of the Petronas Twin Towers during a city tour in Malaysia
4. Remofilwe (fifth from left) with fellow Global Goals MUN award recipients

## Veterinary Science

# SA Veterinary nurse, Ezette Coetzee, passes the US NVTE examination

By Chris van Blerk

Despite setbacks, a veterinary nurse, has excelled to become the first ever South African known to pass the NVTE boarding examination in the United States.

When you believe in yourself, you have faith, and are determined to succeed, nothing will get in your way to reach your goals. This is exactly what Ezette Coetzee did to become the first ever veterinary nurse in South Africa known to write and pass the National Veterinary Technician Examination (NVTE) in the United States, generally known as the boarding examination. She was accepted for the NVTE in North Dakota through the American Association of Veterinary State Boards in 2017 and completed and passed the examination in November 2018. This also means that she received a license to practice in the State of North Dakota, USA.

This extraordinary achievement, however, did not come easy for 29 year-old Ezette who in 2017 also completed her Diploma in Veterinary Nursing at the Onderstepoort Campus. There were huge setbacks and obstacles that changed her life. On her return from her visit to the USA in 2018 she was diagnosed with an extra-large atrial septum defect which led to open-heart surgery during which specialist surgeons built a septum using a pericardium patch. She was also involved in a horrific accident which she miraculously survived. For that she is really thankful:

*'God has a plan for everyone, even for me, and he saved me more than once this year. We do not always understand or agree with things happening in the moment, but if you look back you are thankful that you were not the one in control.'*

During the same year Ezette worked as locum at the Bult Animal Clinic in Potchefstroom, followed by three months as day and night sister at the Onderstepoort Veterinary Academic Hospital (OVAH).

Born to her parents, Dries and Marietjie Coetzee, in 1989, she grew up in Potchefstroom and matriculated in 2007 at the Hoër Volkskool, Potchefstroom. In 2008 she enrolled at the University of North West and in 2012 she completed her bachelor's degree in Recreation and Tourism.

In 2013 she became the restaurant, stable and operational manager at Khumula Game Lodge, and in 2014 took part in an Agricultural Exchange Program with the US which brought her to the Keller Broken Heart Ranch in North Dakota. In 2015 she completed a programme in artificial insemination and pregnancy awareness in cattle.

She describes her veterinary nursing studies at the Faculty of Veterinary Science at the University of Pretoria



Ezette and Dr Ester Botha, the first veterinary nurse in South Africa to obtain a PhD

from 2016 to 2017 as 'an amazing experience', adding that she learned from the best. According to Ezette, a highlight of her career so far was her opportunity to work in the USA in 2014. 'Working on the Keller Broken Heart Ranch as an exchange student alongside Dwight and Susan Keller and their three children, changed me as a person for the better. Dr Susan Keller is an amazing veterinarian and very loving, caring, passionate and kind, but also humble towards animals and people,' she says.

According to Ezette, Dr Keller—whom she sees as an exceptional role model, mentor and life coach—saw her ambition and compassion for animals and taught her a lot about life and animal-orientated skills. Dr Keller, a state veterinarian in North Dakota, inspired her to enrol in a programme where she learned how to care for and improve animal and public health. It was also Dr Keller who, throughout her two years of study at Onderstepoort, never stopped supporting and motivating her and checking in to make sure she was doing well.



Ezette with an American bison

## Veterinary Science

# Faculty's veterinary students clinch international OIE Rinderpest Challenge

By Sarah-Olivia Nunn

South African veterinarians compete globally as professionals and as students with their wealth of knowledge. On 6 November 2018, South Africa was announced the winner of the World Organisation for Animal Health (OIE) Rinderpest Challenge.

One of our students, Muhammed Moola, achieved the highest score and he will fly to Paris later in 2019 to represent South Africa at the OIE General Session.

In October 2018 the World Organisation for Animal Health (OIE) initiated the Rinderpest Challenge. The purpose was to help veterinary and science students determine the cause of an imaginary modern-day rinderpest outbreak. The aim is to heighten awareness of rinderpest, its clinical signs and how it was eradicated.

The game challenges players to solve hypothetical clinical cases with diseased animals that display clinical signs similar to that of rinderpest. Participants have to perform a range of blood tests and post mortems and they need to make a tentative diagnosis of either rinderpest or another disease such as pregnancy toxæmia or foot and mouth disease. South Africa and the United States of America were neck in neck in the

challenge for weeks. However, the grit and perseverance of our Faculty's veterinary students paid off and they were able to clinch the OIE Challenge with Muhammed as the overall winner. He was able to apply knowledge gained from modules such as infectious diseases to this game.

Winning the OIE challenge is an amazing achievement and it highlights the world-class education that students receive at the Onderstepoort Faculty of Veterinary Science.



Muhammed Moola

### Contact information

Sarah-Olivia Nunn  
*Vice-Chairperson of the Onderstepoort Para-Veterinary and Veterinary Student Committee (OPVSC)*  
**Email** sarahonunn@gmail.com  
**Website** www.rinderpestvigilance.com

| Programme   | Minimum requirements for 2020                              |          |             |          |                  |          | APS       |  |
|---|--|----------|-------------|----------|------------------|----------|-----------|--|
|   | Achievement level*   |          |             |          |                  |          |           |  |
|   | English Home Language or English First Additional Language |          | Mathematics |          | Physical Science |          |           |  |
|   | NSC/IEB  | AS Level | NSC/IEB     | AS Level | NSC/IEB          | AS Level |           |  |
| Bachelor of Veterinary Science (BVSc)<br><b>[6 years]</b><br>Closing dates:<br>SA – 31 May<br>Non-SA – 31 May   | 5  | C        | 5           | C        | 5                | C        | <b>35</b> |  |
| Proposed second choice programmes for BVSc are BSc (Biological Science), BSc (Zoology) and BScAgric (Animal Science).<br><b>Careers:</b> Veterinarians in private practice, research, academia or state veterinary services. Veterinarians can also work in the following fields: diagnostic laboratories, veterinary public health (milk and meat hygiene, control of transfer of disease), technical services, research and product development in pharmaceutical and food industries, consultancy, laboratory animal management, wildlife management, poultry and pig production and animal welfare. |  |          |             |          |                  |          |           |  |
| Bachelor of Veterinary Nursing (BVetNurs)<br><b>[3 years]</b><br>Closing dates:<br>SA – 31 May<br>Non-SA – 31 May   | 4  | D        | 4           | D        | 4                | D        | <b>28</b> |  |
| For advice on a second choice programme for BVetNurs, please consult a Student Advisor on +27 (0)12 420 5144.<br><b>Careers:</b> Veterinary nurses can be employed by the following institutions: private veterinary practices, veterinary academic hospitals, the pharmaceutical industry, the animal food industry, animal welfare societies, zoological gardens, game parks, laboratory animal units, rehabilitation centres, research centres, animal boarding establishments, organised agriculture, dairies and farming operations.   |  |          |             |          |                  |          |           |  |

\* Cambridge A level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

## Humanities



*Music students, Sandisile Gqweta and Mxolisi Maqaqula, loving what they do best*

## Make music matter *By Prof Alexander Johnson*

If music matters to you, the University of Pretoria's School of the Arts is the best place to be.

The School hosts one of South Africa's leading music programmes and offers world-class tuition, a diverse curriculum and a wide variety of specialist degrees, from classical music, jazz, opera and African music to composition, music education, choral conducting and music technology. The School of the Arts also offers the African continent's only master's degree programme in Arts Therapies.

In order to enable more students to register for a degree in the Performing Arts, we have launched an extended five-year programme to accommodate those who do not have adequate music performance and music (theory and aural) literacy. In addition to the regular courses that have to be completed for the standard four-year degree, this programme includes four foundation courses in the first year of study.

The first year of the programme offers foundational support in academic and quantitative literacy, academic information management and

competence in music performance and music literacy, which are unique and critical skills required for music studies.

If you see yourself as the next Abdullah Ibrahim, you should join this programme to refine your skills in jazz performance, improvisation, jazz theory and jazz composition and arranging. Or maybe you would like to compose a national anthem, like Jeanne Zaidel-Rudolph—a South African composer, pianist and teacher who arranged the composition of the South African national anthem and wrote its final verse. Most importantly, she studied at UP! You can follow in her footsteps by joining the School of the Arts' five-year music programme.

During the course of the programme you will have the opportunity to fully develop your instrumental and vocal talents through exposure to both studio training and performance opportunities. Options include keyboard, string, wind and percussion instruments, choral conducting, orchestral conducting and voice training. Enhance your music skills and explore the methodology of the instrument of your choice to become an expert performer.

Other specialised areas of study are African and World Music, choral

conducting, music therapy and music technology.

Many opportunities are provided to improve musicianship beyond the studio, classroom or stage. These include regular solo and ensemble performances, lunchtime concerts, class presentations and formal recitals. We encourage participation in a variety of ensemble groups, such as the University Symphony Orchestra, the Departmental Jazz Ensemble, the University Camerata Choir and the African Cultural Ensemble.

**The School of the Arts has two auditoria with exceptional acoustics, three Steinway concert grand pianos, a recording studio, rooms for individual practise and dedicated staff with expertise in classical, jazz, instrumental, vocal, choral and African music.**

## Humanities

### Admission requirements

| Programmes  | Minimum requirements for 2020 |  |           |
|---|-------------------------------|--|-----------|
|   | Achievement level*            | English Home Language or English First Additional Language | APS       |
| MUSIC AND DRAMA   | NSC/IEB                       |  |           |
| <b>Bachelor of Music (BMus)</b><br>[4 years]<br>Closing dates:<br>SA – 30 June<br>Non-SA – 30 June  | 5                             | C  | <b>30</b> |
| Departmental selection is based on a practical singing or instrument performance of 15 minutes, as well as a theoretical test. Required subjects: Music with at least a 4 (50-59%) as Grade 12 subject, or Grade VII Practical and Grade V Theory (Unisa/Royal Schools/Trinity), as well as knowledge of music notation. Students who have been provisionally selected for BMus must undergo another practical selection test. The date of this selection will take place in consultation with the programme coordinator. <b>Candidates who are selected, will be expected to achieve an APS of at least 28 in the NSC to retain admission.</b><br>The NBT is not applicable to this programme.<br><b>Careers:</b> Music teachers, music technicians, solo and/or chamber music performers, orchestral musicians and composers  |                               |  |           |
| <b>Bachelor of Music (BMus) – Extended programme</b><br>[5 years]<br>Closing dates:<br>SA – 30 June<br>Non-SA – 30 June   | 4                             | D  | <b>26</b> |
| Departmental selection is based on a practical singing or instrument performance of 15 minutes, as well as a theoretical test. Required subjects: Music with at least a 4 (50-59%) as Grade 12 subject, or Grade V Practical and Grade III Theory (Unisa/Royal Schools/Trinity), or comparable standard. The date of this selection will take place in consultation with the programme coordinator. <b>Candidates who are selected, will be expected to achieve an APS of at least 26 in the NSC to retain admission.</b> Should the English results be below 50%, the candidate will be expected to obtain at least 51% in the NBT for the section Academic Literacy (AL). The candidates will be required to write the NBT as soon as possible to allow their application to be forwarded to the Department for further selection and auditions.<br><b>Careers:</b> Music teachers, music technicians, solo and/or chamber music performers, orchestral musicians and composers |                               |  |           |

\* Cambridge A-level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

### Career opportunities

Make music matter in your career by cultivating skills that will enhance your personal professional development and musical identity.

Possible careers for graduates in BMus include music teachers, music technicians, solo and/or chamber music performers, orchestral musicians and composers.

You could also consider becoming a music therapist, using music as a therapeutic intervention to improve the quality of life of people of all ages. Music therapy attends to emotional, cognitive, physical, social and community needs by using activities such as improvisation, performance, composition, movement, vocal work and music listening.



Bianca Wesley-Smith and Kevin Gersteling

### Contact information

#### School of the Arts: Performing Arts (Music)

**Tel** +27 (0)12 420 3747  
**Email** sotarts@up.ac.za or dorothy.brown@up.ac.za (Secretary)  
**Location** Musaion, Hatfield Campus  
**Website** www.up.ac.za/schoolofthearts

#### Student Service Centre

**Tel** +27(0)12 420 3111  
**Email** ssc@up.ac.za

#### Fees and funding

**Website** www.up.ac.za/fees-and-funding



Students performing at a function

## Education

# Faculty of Education HIGHLIGHTS

1

### Record number of PhD degrees awarded at Faculty of Education Spring Graduation ceremony



*Prof Norman Duncan, Vice-Principal: Academic and Prof Chika Sehoole, Dean of the Faculty of Education, celebrating the achievements of the 28 students who were awarded the PhD degrees*

3

### Final-year student represents Faculty abroad

Ndumiso Mpanza, a final-year education student, attended a conference in Sweden as part of a group that compared the education systems of South Africa and the other participating countries, namely England, the USA, Denmark, Russia, France, Sweden, Norway, the Netherlands and Germany.

Specific focus was placed on the South African education system during debates about how it needs to be improved. The group discussed the decolonised pedagogical approach and its potential weaknesses and strengths.

Ndumiso also had an opportunity to do his teaching practice at a British school established to cater for the children of statesmen, political figures, ministers and former presidents of Europe, and was one of the first people to witness the systematic operational start of the school. The school is connected to Lund University, which is ranked among the top 30 universities globally.

He also travelled to other countries in the Schengen zone, where he observed teaching and learning.

The most interesting part of this experience, according to Ndumiso, was spending time as a visiting scholar at the University of Oxford School of Education, where he was involved in discussions about the disciplinary models to be introduced to restore education as a noble profession.

Ndumiso also attended the two-day United Nations Summit, which was held in Bangkok, Thailand in January 2019 and focused on the implementation of the United Nations goals to which South Africa has committed.

In August 2019 he will be attending the UNESCO conference in New York. This conference will focus on the transformation of the curriculum and the schooling environment to achieve greater inclusivity, with special emphasis on children with special needs, eg those with attention deficit disorder (ADD) and attention deficit/hyperactivity disorder (ADHD).

2

### Students and lecturers participate in University Social Responsibility Day

On 10 and 11 September 2018, the University of Pretoria (UP) hosted the University Social Responsibility (USR) Day in the Rautenbach Hall on the Hatfield Campus.

The Department of Humanities Education exhibited work done by the final-year and Postgraduate Certificate in Education (PGCE) Visual Art Education students who had participated in the Visual Arts Education Community Engagement Project at the Christian Progressive College.

The project was launched by Ms Delene Human in 2016 and now forms part of the module JMK 430 (Art Methodology).



*Ms Delene Human, lecturer and art student Paseka Chisale*



*Ndumiso Mpanza, who represented the students of the Faculty of Education abroad*

## Education

### 4 Teachers are great human ‘beans’

‘Teachers are great human “beans” who help others climb the beanstalk of knowledge in order to slay the giant of ignorance.’

Every year the students assigned to Professor Rinelle Evans’ class from the Department of Humanities Education for their teaching practice are each given a bean seed, which they have to plant and nurture for the duration of their work-integrated learning at schools.

Luke, one of the students, admitted that some of them had never planted a bean and had to do a Google search to find out how to make sure that their seeds would sprout. The process of watering, ensuring sufficient exposure to sunlight and, finally, a bed of fertile soil to grow in became an analogy for the students’ personal growth as beginner teachers. The results of the students’ bean-growing attempts – some more successful than others – were used during the last mentoring session to reflect on how to become a successful teacher.



*Some of the students involved in Prof Rinelle Evans’ (second from the right) bean project*

### 5 ECE final-year students involved in research project



*Lecturers and final-year Early Childhood Education (ECE) students involved in the programme*

For the elective Early Childhood Development Studies, the final-year students completed an expansive research project on the establishment of a quality Early Childhood Development and Care (ECDC) Centre.

Different groups researched different components of the topic, ranging from policies, the learning environment and budgeting to dealing with parents and marketing. After the completion and assessment of the projects, all the sections were compiled into a complete, useful guide for the establishment of a high-quality ECDC Centre.

As part of the research process the two lecturers, Drs Anienie Veldsman and Judy van Heerden, invited experts in the field of early childhood development to address the students.

Principals of preschools and Grade R centres, as well as a representative of the Teachers’ Union, were invited as guest speakers to share their first-hand experiences and valuable advice with the prospective teachers and to respond to questions related to the research project. This very informative and successful session was beneficial to all the students.

### 6 Sports lecturer crowned at award ceremony

TuksSport celebrated 100 years of excellence with the announcement that Caster Semenya and Lj van Zyl had been chosen as the UP athletes of the century. Lj van Zyl is a lecturer in the Higher Certificate in Sports Science Education programme offered by the Department of Humanities Education.

Lj van Zyl has been one of South Africa’s most prolific international medal winners since 1992. In 2002 he was the junior world champion in the 400 m hurdles event. He subsequently won a gold medal at the 2006 Commonwealth Games in Melbourne, a silver medal at the 2010 Commonwealth Games in Delhi, and a bronze medal at the 2011 World Championships in Daegu, South Korea.

Lj van Zyl was the first athlete to set a South African record on the UP track. It was undoubtedly the pinnacle of his career, he succeeded in breaking through the magical 48-second barrier for this event on four occasions in just 95 days, clocking the four fastest times of the year. In assessing his abilities, Lj van Zyl admitted that achieving a time of 47.50 s would probably be the ultimate race for him.

What makes all his achievements even more remarkable is that he was diagnosed with polio at the age of three. He believes that starting to run and hurdle played a significant role in helping him to overcome the effects of polio.



*Education lecturer, Lj van Zyl crowned Sportsman of the Century.*

## Theology and Religion

# Spending time now, investing in eternity

By Dana Mahan

There are as many ways to use your free time over the holidays as there are learners heading for the streets when the school year finally comes to an end. Most of us enjoy the chance to hang out with family at home or visit friends at the shopping mall, while some use the freedom of the holidays for the greater good. A number of Theology and Religion students from the University of Pretoria chose to spend their break volunteering at a community project in Mamelodi with the children who call this township home.

The Mamelodi Initiative is an educational outreach programme that helps get high school learners off the tough streets and into a safe campus environment for a couple of weeks every December and January. While there, they participate in extra Mathematics and English classes, they engage in cultural and social activities, and, most importantly, they get to build lasting relationships with mentors and new friends.

Thabiso Thoka and Sydney Gololo, both senior students in the Faculty of Theology and Religion, were among those who connected with such learners. Originally from Mamelodi themselves and compelled by what they are studying in

their own classes, these two agents of transformation worked tirelessly throughout the holidays to ensure that the programme ran smoothly, checking that everyone present felt welcome and valued.

**As Jesus teaches us in the Christian scriptures, it is better to serve than to be served, it is more blessed by far to give than to receive.**

These are the very truths mastered by guys like Thabiso and Sydney, life lessons they take to heart and share with the world around them as often as they can!

Could they have waited until they graduated to start caring about others? Could they have held off until they had jobs to begin giving back to society? Of course, but their call to mission and ministry has already reached their ears, loud and clear. In heeding that call now, they demonstrate what UP students are like when they are at their best!



Sydney Gololo



Thabiso Thoka



| Programmes  | Minimum requirements for 2020                              |          |     |  |
|---|--|----------|-----|--|
|   | Achievement level*   |          | APS |  |
|   | English Home Language or English First Additional Language |          |     |  |
|   | NSC/IEB  | AS Level |     |  |
| <b>BDiv – Bachelor of Divinity</b><br>(for admission to MDiv studies)<br>[4 years]<br>Closing dates: SA – 30 September, Non-SA – 31 August  | 4  | D        | 25  |  |
| <b>Careers:</b> Ministers, pastors, priests, preachers in certain denominations, missionaries and youth counsellors. Other possibilities include ethics consultants to businesses. Theological studies can be enriching for people in various other vocations. If prospective students are interested in ordained ministry, this should also be discussed with their church leadership. |  |          |     |  |
| <b>BTh – Bachelor of Theology</b><br>[3 years]<br>Closing dates: SA – 30 September, Non-SA – 31 August  | 4  | D        | 25  |  |
| <b>Careers:</b> Ministers, pastors, priests, preachers in certain denominations, missionaries and youth counsellors. Other possibilities include ethics consultants to businesses. Theological studies can be enriching for people in various other vocations. If prospective students are interested in ordained ministry, this should also be discussed with their church leadership. |  |          |     |  |
| <b>DipTh – Diploma in Theology</b><br>[3 years]<br>Closing dates: SA – 30 September, Non-SA – 31 August   | 3  | E        | 22  |  |
| <b>Careers:</b> Ministers, pastors, priests, lay preachers in certain denominations, missionaries and youth counsellors. Candidates should consult their church leadership on which programme would suit their aims best. The Diploma in Theology is intended for candidates who have completed Grade 12 (or equivalent), but without the required university admission.                |  |          |     |  |

\* Cambridge A level candidates who obtained at least a D in the required subjects, will be considered for admission. International Baccalaureate (IB) HL candidates who obtained at least a 4 in the required subjects, will be considered for admission.

## Culture

# Invest in your future with Tuks FM

*By Leanne Kunz (Station Manager)*

Although the University of Pretoria is above all an academic institution, it offers students many different possibilities for investing in their future. One of these is through its radio station, Tuks FM.

As the most awarded campus radio station in the country, Tuks FM boasts a long, rich history. To date it has produced some of the biggest names in the broadcast media industry, including Anele Mdoda, Ayanda MVP, Gareth Cliff, Robbie Kruse and Rob Forbes. No other campus radio station has fed as many media professionals into the commercial broadcast media industry. This is thanks to a rock-solid training programme for each of the radio station's departments (presenting, news, marketing, music and technical/production), as well as regular external training sessions presented by alumni, who are called upon to share their knowledge with the broadcasters of tomorrow.

In addition to the on-the-job training that we offer to our volunteers, Tuks FM strives to create an environment in which members are encouraged to think independently and are allowed the space to nurture their talents and develop a skill set that will serve them for the rest of their lives, regardless of whether they plan to enter the media space or not. In the words of Tuks FM presenter Kea Boya: 'What a time to be alive and part of an amazing radio station that invests greatly in its talent. Greater things can only happen from here onwards.'

### The birth of Tuks FM

The idea of creating a radio station to serve the needs of the student fraternity of the University of Pretoria was born in 1980, but the first broadcast did not take

place until a year later. Initially Tuks FM broadcast only to the Cafeteria on the Hatfield Campus, but broadcast points were later extended to all the University's campuses and residences.

Christof Heyns, the first Head of Tuks FM during the period 1980/81, said the following: 'I guess we were inspired to start Radio Tuks (as it was then called) by a number of things: it was an opportunity to work with and have access to music, and to connect with the rest of the Campus (neither of which were as easy then as they are now). Certainly for many of us at the time it was a sure way to meet girls and boys (I imagine that remains a driver). It was basically a fun thing to do. But, looking back, for me the lasting legacy is a sense of "can do".'

We wanted to start a radio station, so we drove to Johannesburg and bought the equipment; we built the studio with our own hands during the December holidays, and when everyone was back on campus we pressed the button and it happened – we were live 'on air'. I will never forget the sense of exhilaration and achievement of that moment. It made me feel I could take on the world! I still get a kick out of listening to Tuks FM in my car and feel very proud of how well it is doing almost 40 years later.'

Today Tuks FM's footprint extends to the greater Tshwane area and into the northern suburbs of Johannesburg, so we are by no means a traditional campus

radio station. Tuks FM serves a diverse community of young people between the ages of 16 and 24, and we aim to use every broadcast, event or initiative in which we become involved to inform, entertain and educate. Our focus is hyper-local, we are proudly South African and fiercely loyal to the student market.

### 2019 and beyond

One of Tuks FM's major goals is to become the premier source of infotainment for Pretoria's youth. This is much harder than it sounds, considering the sheer number of options technology has made available to users: from social media to streaming music services and podcasts, the options are endless. However, none of those things offer the human connection that radio affords listeners: the ability to reach someone at an emotional level is what has enabled radio to stand the test of time, despite huge advancements in the world of technology and the media space at large. We at Tuks FM look forward to being around for another 40 years (at least) to provide our listeners with the funkiest, freshest content possible.

#### Contact information

|          |  |
|----------|--|
| Tel      | +27 (0)12 420 3805   |
| Email    | leanne@tuksfm.co.za  |
| Website  | <a href="http://www.tuksfm.co.za">www.tuksfm.co.za</a>               |
| Location | First Floor, Student Centre, Hatfield Campus, University of Pretoria |

## UP residences



# HOUSE MAGS

By Palesa Serumula

House Mags, previously known as Magrietjie Residence, was established in 1982 and has since been home to 330 female students every year.

The residence is known for its striking pink colour and also for the many accolades it has accumulated over the years. House Mags continues to excel in all areas, including sports and cultural activities.

Recent achievements include winning in the women's category of the 2019 INSync competition (an annual sing-and-dance competition for first-year students in which all UP residences compete) and being the Varsity Basketball league winners for the third consecutive year.

The residents of House Mags include first-year students (referred to as Spikkels—a term of endearment meaning beams of light), second-year students (Semis) and third- and fourth-year students (Seniors). The house is managed mainly by a House Committee consisting of 12 members.

As a Mags community, we adhere to a value-based system. We pride ourselves in our value-driven culture and we strive to align our actions with the six values we have identified as being important to us, namely: acceptance, ownership, pride, mutual respect, integrity and being the best that we can be. By defining these values and displaying reminders of what we strive for throughout the residence, we ensure that the young women continue to live in harmony and build an incredible sisterhood.

Sisterhood is one of the central aspects of our residence vision: 'House Mags strives to establish a sisterhood and a sense of belonging in a home that inspires passion and excellence'. This residence is not merely an 11-storey building, but also a space where young women have the opportunity to excel academically and grow as individuals. The residence celebrates diversity and prides itself on its multicultural events, which include cultural sports days.

The University environment develops students by exposing them to knowledge and life experiences. At House Mags we strive to equip young women with a holistic view of life in general and provide them with a myriad of opportunities and experiences. Through our RAG (Reach out and Give) initiatives we create opportunities to give back to the community in a meaningful way. In 2019, House Mags will be partnering with the Sweetheart Foundation to collect bottle tops, which will be exchanged for wheelchairs to be donated to underprivileged individuals. We will also assist the Prinshof School for the Visually Impaired with the refurbishing of their school library. Year after year the young women of House Mags participate with great enthusiasm in activities such as these.

House Mags has many special traditions that distinguish her from the other residences. These include the 'huppel', which refers to the way the residents skip across the hand-painted

*Magrietjie strives to establish a sisterhood and a sense of belonging in a home that inspires passion and excellence*



House Committee 2019

concrete area in front of the building, and the 'pink sparkle' greeting. You have to experience it to understand it!

House Mags is seen as a leading residence as we are often first to implement new initiatives. Our activities are not limited to what happens within our beautiful pink walls, but are extended into and have an impact on the greater community. House Mags breeds excellence: one of our current Mags residents, Gizelle Venske, is the reigning Miss Varsity Cup and our alumni include Donnalee Roberts and Bertha le Roux who are both well-known actresses.

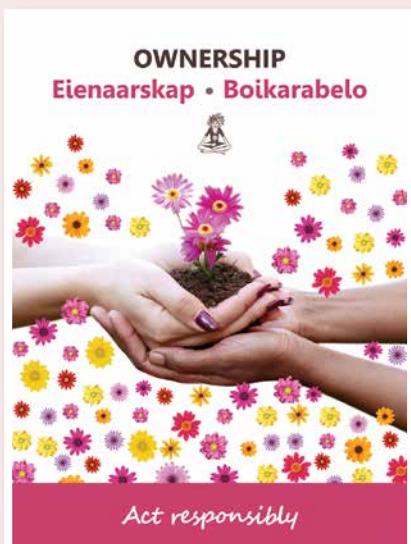
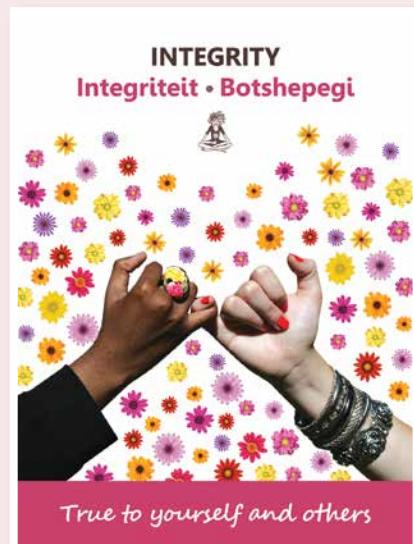
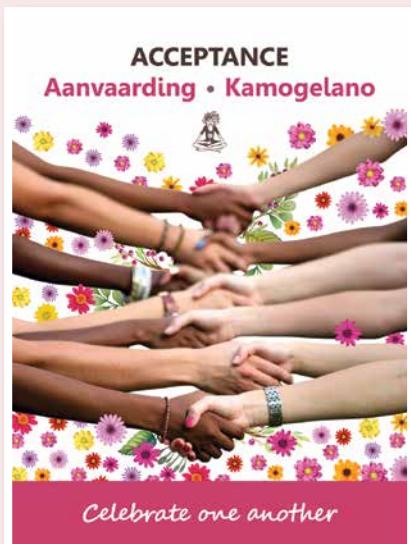
For her residents, House Mags is a home away from home, an incubator for laughs and memories, an educational experience and much more. May you enjoy the privilege of being part of the Pink Palace in the near future!

### Contact information

Email mags@up.ac.za  
 Website www.up.ac.za/house-mags  
 Instagram @housemags

## UP residences

### House Mags Values



Pink...it's not just a colour...IT'S AN ATTITUDE!



House Mags Hockey



Senior Farewell



Volleyball on Sports day

## UP residences

# Mopane: Through unity still higher

By Hans-Peter Fechter

In keeping with the spirit of this issue of the JuniorTukkie magazine, we suggest that there is no better way to invest in your future than by becoming part of a residence community at UP. We would like to introduce you to the Mopane residence, a home away from home for 239 proud 'officers and gentlemen'.

Since its inception in 1969, exactly 50 years ago, Mopane has always been recognised as the place to stay for anyone who wishes to be part of a success story in which those who work hard get to play hard. Whether you are an excellent sportsman, a culture fanatic or a serious academic, Mopane is the place you would want to call home.

Although Mopane is filled with people from different backgrounds with a rich mix of personalities, we manage to build bonds between brothers that span across culture, colour and creed. As a first-year student in Mopane, you will soon become part of this close brotherhood, a group of young men who in many cases become friends for life.

At Mopane we have three main priorities, namely academics, well-being and unity. On the academic front, the house actively strives to provide an enabling learning environment through the availability of academic mentors and subject tutors to support our first-year students who are affectionately known as Peppies. These support mechanisms

seem to work well as proud Mopane residents regularly receive awards at the annual TuksRes Academic Achievers function.

In terms of well-being, we value the importance of students becoming well-rounded individuals and Mopane provides many opportunities for our residents to participate in sports, cultural, spiritual and social activities. Mopane is one of the leading sports residences and dominates across the spectrum—in hockey, soccer, rugby, volleyball, badminton and tennis.

Mopane also excels at cultural activities and achieved a hat trick by being declared the winner of InSync, the University's first-year concert, three years in a row. We also have a rich history of performing world-class a capella serenades that make us firm favourites with the women's residences. Our debating team regularly argue their way to success and we annually participate in a talent show where our members excel in singing, storytelling, poetry and drama.



~ Through unity still higher ~

One thing that is absolutely unique to Mopane is our mealie crop, which is annually planted, protected and harvested with pride. We celebrate each year's bounty by hosting the biggest residence-organised event in Pretoria, namely Harvest Day. This event draws crowds of more than 1 500 enthusiastic music fans from far and wide and is something not to be missed.

Our Peppies start learning 'the Mopane way' of being gentlemen and humble champions as soon as they arrive at the University and become proud members of the Mopane machine from Day 1.

We strive to always live by our motto:  
**Through unity still higher.  
Geolé!**

**Contact information**  
**Email** [mopane@up.ac.za](mailto:mopane@up.ac.za)  
**Facebook** [MopaneRes](#)  
**Instagram** [housemopane](#)



In Mopane we enjoy our sport. Here you can see the Peppies enjoying some time away from the books in front of Mopane.

## UP residences



The House Committee of House Mopane, led by our Chairman Dawid de Beer.



One of our annual events: MealieEsta.



We protect our mealies from any marauders.



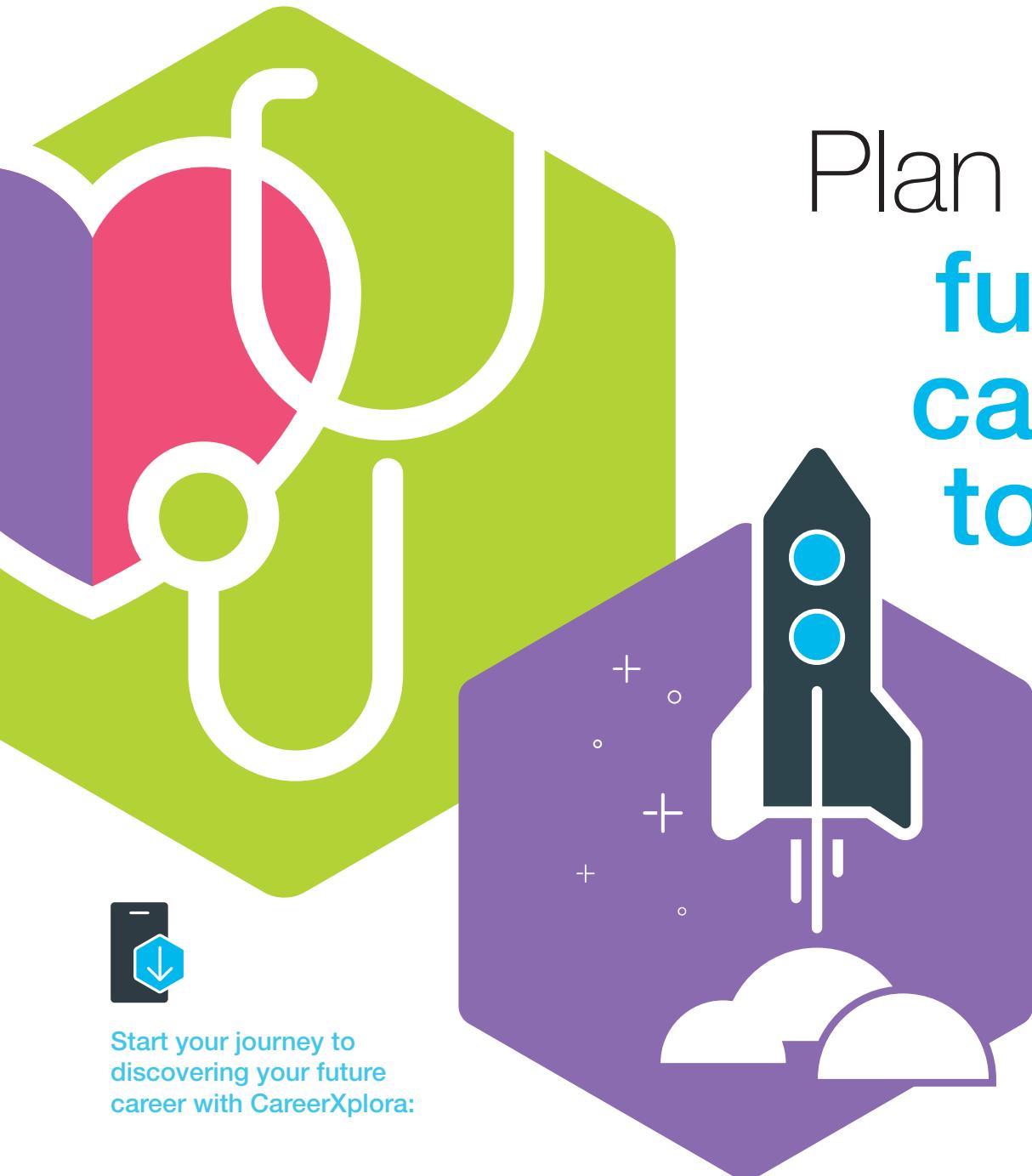
Mopane is passionate about our community outreach programmes and our RAG committee take charge and enrich the lives of others.



Mopane won the 1nSync title for a third consecutive year in 2019 and we pride ourselves in giving it our best and creating opportunities for all to participate.



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**future**  
career  
today



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