

UNIVERSITY

# FACULTY OF SCIENCE NEWSLETTER 2024

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**Avelile Cishe** 

## **Avelile Cishe Graduates Cum Laude with BSc Honours**

### This article was first published in the George Herald.

Avelile Cishe, a passionate leader and researcher from George, recently graduated *cum laude* with a Bachelor of Science Honours in Natural Resource Management from Nelson Mandela University.

This unique programme, offered at the university's George campus, brings together students from diverse backgrounds like forestry, nature conservation and agriculture, equipping them to tackle complex sustainability challenges.

"My granny instilled an inquisitive mind in me," Cishe shared. "That special woman is my motivation."

He also credits his passion for forestry research and development, specifically within site sustainability, applied silviculture, forest growth and yield, tree breeding, and climate change vs forest response, to inspiring mentors in both industry and academia.

However, his drive goes beyond grades. While pursuing his honours degree, Cishe didn't shy away from leadership opportunities.

Cishe's leadership extended beyond the university walls. He served as the head of region (Southern Africa) for the

2022–2023 term, overseeing strategy and development for over 11 local committees across more than eight SADC countries.

He also served in various advisory boards and forums, gaining valuable experience in the fields of university administration, industry, and government. These roles even led him to travel internationally, visiting countries in Africa, Europe and South America.

Cishe expressed his gratitude to the National Research Foundation of South Africa (NRF), the Fibre Processing and Manufacturing Sector Education and Training Authority (FP&M Seta) and Sonae Arauco, all of who provided funding for his studies.

He has demonstrated the power of combining academic excellence with leadership, a thirst for knowledge and a commitment to sustainability.

George Herald congratulates Avelile Cishe on his remarkable achievements and looks forward to seeing the impact he makes in the fields of forestry research and natural resource management.



"My granny instilled an inquisitive mind in me ... that special woman is my motivation."



Avelile celebrating his graduation with friends Yolanda Sopangisa (left) and Achumile Dyantyi.

# **Top Achievers Recognised at Awards Ceremony**

Top achievers in Forestry, Wood Technology and Veldfire Management were recognised for their excellence in the Diploma and Higher Certificate studies at a special awards ceremony recently held on George Campus in conjunction with the George graduation ceremony.

In congratulating the students, Forestry Head of Department Tiaan Pool said, "today we celebrate your excellence, hard work and perseverance shown during the period of acquiring your qualification, we encourage you to continue and be responsible ambassadors of our institution and carry the Nelson Mandela University name with pride in the work place and communities you will serve in".

In the forestry diploma, three students were recipients of the special awards, Benjamin Ringwood received the award for best student in Forest Engineering, Forest Management and Fire Management modules, whilst Mushaisano Ndou and Sandisiwe Langman received awards for best students in the Silviculture and Human Resource Management modules respectively.

In the Wood Technology Diploma, Mponeng Pina received an award for the best student in Timber Seasoning and Iviwe Dangazela for Timber Processing. In the Higher certificate in Veldfire management, Hlobisile Madlala and Amanda Rodo received awards for the best students in the higher certificate.

The Nelson Mandela Forestry Association (NMUFA) committee which served in 2022 was also recognised for their excellence in leadership. The committee members were Avelile Cishe, Lelonathemba Ndaleni, Ronewa Sathuma and Minenhle Machi.

A total of 24 first graduates from the new BSc Honours Natural Resource Management graduated on 5 April at the University's George Campus.



## **100% Pass Rate for Interdisciplinary Honours Cohort**

By Professor Zenixole Tshentu

George's Natural Resource Management boasts a bumper first cohort of honours graduates This interdisciplinary honours degree includes students from Nature Conservation, Agricultural Management and Forestry Management.

The large class of 24 students had a 100% pass rate, several distinctions and eight students graduating cum laude.

The majority are also continuing with their master's degrees, namely nine in Conservation, five in Forestry and two in Agriculture, as well as one student at the University of Cape Town, says Dr Anina Coetzee, lecturer in Conservation Management.

Students typically follow careers at national and international conservation organisations, public and private organisations, that have sustainability managers. This year nine students are enrolled for the programme, says Dr Coetzee.

Among the students who are graduating cum laude are a married couple, Dietre Stols and Rebecca Ryen-Stols, who met at the opening ceremony in 2017 as first-year Nature Conservation diploma students.

"We married at the end of 2021, just after finishing our Advanced Diploma in Nature Conservation. We both love research in the ecological field, especially large mammal ecology.

"Ideally, we would love to work together in the research or conservation management department of a protected area in the savanna biome", Dietre says.

The couple are both studying for their master's degrees in Nature Conservation. Rebecca's research focuses on estimating population density and assessing the territorial behaviour of African lions in Kruger National Park.

Dietre investigates the long-term patterns of species and functional trait preferences of woody vegetation by African elephants and how this influences tree species diversity and functional diversity over time in two protected areas in the savanna biome.

Rebecca's dream job would be to work as a large carnivore ecologist and conduct research on threatened species, such as lions and wild dogs, whereas Dietre would love to work as a researcher or ecologist focusing on large mammals.

For all your graduation content across your social media platforms, please use #MandelaUniGrad24. We would love to collate, share and celebrate this amazing achievement with you on official University platforms.





Rebecca Ryen-Stols and Dietre Stols.

"The large class of 24 students had a 100% pass rate, several distinctions and eight students graduating cum laude."

### **2024 Cala Circuit Career Exhibition**

On the 25th of May 2024, the Centre for the Community Schools in the Faculty of Education, in partnership with the Cala Community of Schools, hosted a highly impactful Career Exhibition at Chris Hani District. This event, part of the ongoing collaboration between Nelson Mandela University and the iKamvelihle Development Trust, aimed to empower learners by providing crucial information on tertiary education and career options in the fields of science and education.

The primary goal of the Career Exhibition was to introduce Grade 12 learners from the Cala Circuit to the wide array of science programmes available at Nelson Mandela University. By encouraging learners to pursue careers in science and education, the event hoped to inspire future leaders and innovators, addressing the challenges facing community schools through access to knowledge and resources.

The exhibition saw the enthusiastic participation of 12 schools from across the Chris Hani District, with a total of 708 learners attending. Notable exhibitors included iKhala TVET College, NMU's Faculty of Education, Emthonjeni Student Wellness, and the university's Student Recruitment and Admissions departments. The event provided learners with guidance on academic requirements, career pathways, and application processes for Nelson Mandela University.

Mr. Nkosinathi Mzuzu, Acting Director of the Centre for the Community Schools, opened the event, followed by a supportive message from Mr. Zanozuko Kene, Cala Circuit Manager from the Department of Basic Education. Learners

had the opportunity to engage in interactive sessions, ask questions, and explore various career options. NMU's Emthonjeni Student Wellness team played a key role in guiding students on how to make informed career decisions.

The career exhibition drew an impressive number of learners, with schools such as Batandwa Ndodo SSS, Cala Village SSS, and Mazibuko SSS contributing to the high attendance. A range of marketing and informational materials, including pull-up banners, faculty leaflets, and science career brochures, were distributed to learners. This hands-on approach allowed students to explore their interests in fields such as Zoology, Physics, and Agricultural Management.

The program's success was evident in the positive feedback received from both learners and educators. The learners, many of whom had limited access to career guidance resources, expressed appreciation for the opportunity to learn more about their future academic and career options. District officials also lauded the event, emphasizing its role in shaping the futures of the learners.

The Cala Circuit Career Exhibition 2024 was a resounding success, with over 700 learners from the Chris Hani District participating in a day filled with learning, engagement, and inspiration. The collaboration between Nelson Mandela University, iKamvelihle Development Trust, and local schools has proven to be an essential platform for empowering young minds and fostering a brighter future for the community.









### 2024 Vhembe Visit

The collaboration between Nelson Mandela University and the University of Venda was a shining example of how outreach can inspire the next generation of scientists. From May 5th to 11th, 2024, the two institutions joined forces in the Vhembe District of Limpopo, transforming classrooms into vibrant spaces filled with curiosity and discovery. Supported by exhibitors like UNISA, SAASTA, and STEAM, the program featured science shows and hands-on experiments that captivated young minds. This initiative wasn't just about teaching science; it was about showing students that science is for society—something that impacts their communities and futures.

The goal was twofold: to engage school learners and educators while building stronger ties with the University of Venda. This district, renowned for producing top matric learners in math and science, was the perfect backdrop for the outreach. By working together, the universities aimed to harness their geographical advantages to create a powerful partnership that could expand the reach of science education, especially in rural areas. With Nelson Mandela University keen to establish a greater presence

across Southern Africa, collaborating with UNIVEN was a strategic move to advance science for society.

Over the course of five days, the program reached more than 4,000 learners from 25 schools, immersing them in engaging and interactive science experiences. The learners were divided into groups and rotated through a series of exhibitions that showcased everything from robotics to nanomedicine, while students from local schools eagerly participated in coding games and chemical experiments. The involvement of industry players like the Department of Agriculture and Land Reform and SANSA added real-world context, helping students connect their classroom learning to careers in science.

Day after day, the learners were given the chance to ask questions, participate in discussions, and see for themselves how exciting and diverse a future in science could be. On the first day alone, more than 1,000 students were welcomed by UNIVEN's Dean of Science, who kicked off the event with enthusiasm, setting the tone for the week. At each venue, learners got up close and personal



with science experiments, while faculty members from both universities answered questions and provided career guidance.

The program's impact was immediately visible. Learners who previously saw science as something distant or unrelated to their lives were now intrigued. Many expressed excitements about exploring careers in fields like robotics, forestry, and agricultural sciences. Educators and district officials also recognized the significance of the event, with many commenting on the high level of engagement and the positive influence it had on the students.

Of course, no large-scale event is without its challenges. Organizers noted some logistical hurdles, including delays and time management issues, as well as a shortage of drinking water for participants. These hiccups, however, did little to diminish the success of the outreach. Organizers took note of these challenges and plan to address them in future events by improving coordination and ensuring better resource management.

The five-day science outreach in Vhembe was more than just an educational experience; it was a celebration of the potential for science to transform communities. It forged stronger partnerships, ignited new interests in science among young learners, and laid the groundwork for future initiatives. As Nelson Mandela University and the University of Venda look ahead, they remain committed to their vision of promoting science for society, empowering the next generation to pursue science-related careers, and expanding the reach of education in rural regions across Southern Africa.



Top Achievers at Mbilwi Secondary School



**Tangible Africa games** 



## From Port St Johns, KwaGingqi to Gqeberha, with love for the people and land

#### By Aphiwe Mgushelo and Musa Khapayi

From Port St Johns, KwaGingqi to Gqeberha, with love for the people and the land, Bongeka Gebuza is one of "Reasons to be Proud" for the Nelson Mandela University. This is a stretch in the surface of her background filled with contradictions as she comes from the people, water and land endowed eMpondweni, which is yet dominated by destituteness, diseases and death. To Bongeka, having a rich endowment of human and natural resources including a share of the Indian Ocean coastal belt, "it never made sense to why the people should encounter such predicaments as a result of malnutrition."

Committed food sovereignty, organic food and agriculture, during the corona virus pandemic, Bongeka worked and maintained the garden in one of our on-campus residence, Charlotte Maxeke, where she also enrolled and supervised 2nd-year National Diploma in Agricultural Management student to complete her project. After persisting and waiting for the approval of the BSc Honours Agricultural Sciences programme, she is now part of the first cohort of students in the programme as a founding student. According to the HoD, Dr Musa Khapayi, transforming from a diploma to a degree, as well as from agricultural management to agricultural



sciences is signifying her resourcefulness to the University and in service to society, Bongeka has also been recruited and appointed by her Department as a Project Leader in the social employment programme - a collaboration between INMED South Africa our University's Department of Agricultural Sciences. INMED SA is a nonprofit organisation focused on developing programmes for food security, child and community health and social development through agriculture. This programme and about four students in the same honours programme are benefiting from the rabbit manure from Bongeka's start-up rabbit farming enterprise (Khanyisa Agri-Organics) established in Summerstrand, where she resides. This also making the University the first to conduct a study which uses rabbit waste (manure) as soil treatment - to study plant growth, nutrition and storage life. Here lies the future of agriculture, research and a solution to poverty, unemployment and inequality.

Bongeka is responsible for two out of the three on-campus gardens used by the Department of Agricultural Sciences to practically train and expose its students. As the first research trial comes to completion, Bongeka and her fellow honours students, assisted my INMED (student interns), are set to harvest and distribute vegetables among students to deal with food insecurity and malnutrition. She believes that the concept of food needs to be reconsidered and redefined, as not everything labelled as food truly qualifies as such. Many people may feel full yet remain malnourished due to a lack of essential nutrients.

To add to this, on 25 June 20424, Bongeka was awarded the MEC Youth Award during the Sarah Baartman district Women Entrepreneurship Awards (WEA) held by the Eastern Cape Department of Rural Development and Agrarian Reform at Algoa Park for her outstanding work in her rabbit farming enterprise. She was always interested in rabbits for their nutritional value and how to take care of them. Bongeka began her enterprise when she was gifted three rabbits by her father, and she has managed to breed them to 72 rabbits. According to the South African Government News Agency, Bongeka "who casually eats and sells her rabbits" said the prize money (R20 000) will assist her with buying the expensive rabbit feed and improve their coops.

### **Reasons to be Proud**

#### **Avelile Cishe**

Congratulations to Avelile Cishe on receiving the prestigious ABE Bailey Scholarship award!

Avelile Cishe has truly set the bar high with his remarkable achievements! Graduating cum laude in both Forestry and Natural Resource Management, Avelile's academic excellence speaks volumes. As President of the NMU Forestry Association, he demonstrated exceptional leadership by raising over R450,000 to support fellow students and clear outstanding debts. His commitment to community development is evident through his roles in assistant teaching and career advisory services, as well as his involvement in environmental projects. Avelile's dedication to uplifting others and driving positive change is truly inspiring.

Avelile's journey is a testament to his outstanding academic achievements, exceptional leadership qualities, and unwavering commitment to community development.

From graduating cum laude in both his Diploma in Forestry and BSc Hons in Natural Resource Management, to achieving an impressive 81.5% average in his Advanced Diploma, Avelile's academic excellence speaks volumes.

As the President of the NMU Forestry Association, Avelile demonstrated his leadership by securing over R300,000 to clear student debts and sourcing R150,000 to support fellow students' learning development. His leadership extended across borders as the Regional Representative for the



SADC region, where he influenced strategy development in eight countries. He also serves on the NMU Curriculum Advisory Board and is a proud member of the Golden Key International Honour Society.

Avelile's commitment to his community is evident through his roles as an assistant teacher in math and science at local high schools, a career advisor, and his involvement in community development projects focused on alien vegetation clearing.

Avelile's dream of becoming a Research Scientist is well within reach, and his dedication to uplifting others will undoubtedly continue to make a profound impact. Here's to a bright future filled with more incredible achievements!



### Mbokazi Ngayeka

Mbokazi Ngayeka, PhD Chemistry student participated in the 2024 SACI Inorganic and Carman Conference, which took place from June 02 to June 06, 2024, in Drankensberg, South Africa. She gave a flash presentation and showcased a poster as well and won an award for best poster/flash presentation.



### **Dr Daniel Lemley**

Dr Daniel Lemley, a Research Fellow in the Botany Department at Nelson Mandela University, has been selected as a finalist for the prestigious 2023/2024 NSTF-South32 Awards in the category "TW Kambule-NSTF Award: Emerging Researcher." Initially nominated by Prof. Janine Adams, the DSI-NRF Chair for Shallow Water Ecosystems, Dr. Lemley has been recognized for his outstanding contributions to science and research. This remarkable achievement places him among South Africa's top researchers, with the winner to be announced at the NSTF Awards Gala in Cape Town on July 11, 2024. Being shortlisted as a finalist in this competitive category is a proud testament to his dedication!

### **Prof Graham Kerley**

We are very happy to congratulate Prof. Kerley on receiving a prestigious B1 rating from the National Research Foundation (NRF). This remarkable achievement reflects Prof. Kerley's advancement from a B3 to a B1 rating, underscoring their exceptional contributions to research and academic excellence. Moving to a B1 rating is a significant recognition of their impactful work and leadership in their field. Well done on this outstanding accomplishment! The official letter from the NRF will follow at a later stage.

