

SPIRIT

DECEMBER 2021 – ISSUE NO. 4



Inaugural International Week a resounding success

Acting Dean receives NRF grant for water research

MUT students are making it big in business

HOW TO APPLY TO MUT

All first year applications to study at MUT are submitted through the Central Applications Office (CAO). This is a simplified way of applying for more than one programme, using one application form, and paying a single application fee. Apply online at www.cao.ac.za or by downloading an application form.

CHECKING THE PROGRESS OF YOUR APPLICATION

You can track the progress of your application by going to www.cao.ac.za and entering your CAO number, sending an email to enqgeneralcao@cao.ac.za or call 031 268 4444.

CLOSING DATES FOR APPLICATIONS

Faculty of Engineering	30 Sept 31 May
Faculty of Natural Sciences	30 Sept
Faculty of Management Sciences	30 Sept

Applications submitted after 30 September accumulate a late application fee determined by the CAO.

APPLICATION DOCUMENTS

For South African applicants

- Grade 11 final results, grade 12 June exam results, National Senior Certificate or Statement of Results
- Identity document
- Students transferring from other universities should submit an academic record and a certificate of good conduct

Non-South African applicants

- Valid passport
- Valid proof of medical insurance cover
- Police clearance certificate
- SGCE, GCE, GCSE, IGCSE or Cambridge School Certificate

MINIMUM ENTRANCE REQUIREMENTS

- National Senior Certificate with a diploma pass or N3 with 50% pass in Mathematics and English
- A minimum of 6 subjects with level 4 pass for diploma study and level 3 for Access Courses
- English Home Language or First Additional language, level 4 pass
- Specific subject combination and pass level relevant to the qualification; and
- Minimum points as per faculty requirement and as listed in the CAO handbook

GENERAL ADMISSION REQUIREMENTS

Each faculty stipulates admission requirements based on points aggregate calculated from the best six subjects presented by the prospective student. Over and above the points system, some departments administer a compulsory entrance test.

ADMISSION POINTS CALCULATION GUIDE

National Senior Certificate		Senior Certificate	
NSC Level Rating	NSC %	Symbol	Points
7	90 – 100	A	8
6	80 – 89	B	7
5	70 – 79	C	6
4	60 – 69	D	5
3	50 – 59	E	4
	40 – 49		3
			2

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From the Desk of the Editor-in-Chief

Innovation and sustainable recovery for 2022 and beyond

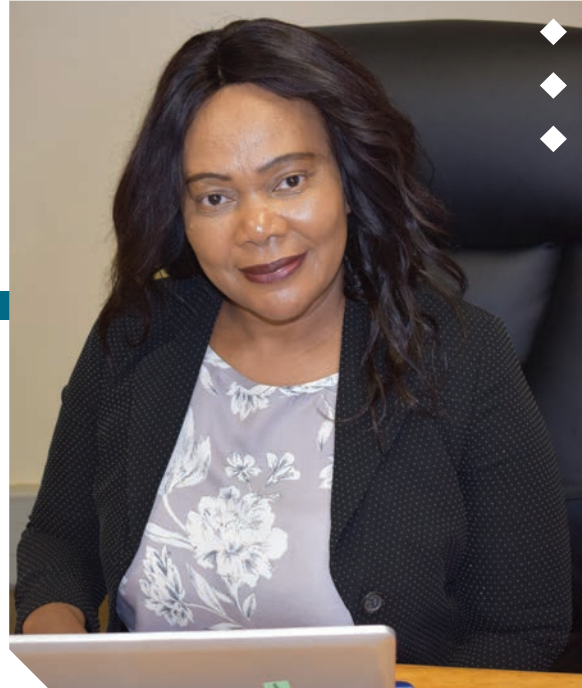
In the 2021 academic year, MUT received more 100,000 applications for the 3,500 spaces available for first-year students in classes and residences.

Today's prospective students have many options when it comes to tertiary study. After two years of the COVID-19 pandemic, the MUT stakeholder relations team knew that they had to do things differently if they wanted to compete. Online surveys by a number of universities showed that many students favoured online learning because of its affordability, safety and security. It seemed that a thick net had been thrown around students who seemed bent on staying at home and studying online.

This was just one factor we had to consider when recruiting for the 2022 intake. There were also fewer opportunities for the MUT team to give in-person presentations at schools, out of fear of these becoming super-spreader events. Some principals wanted presentations to be done over a whole week because of rotational timetables, which was not viable due to time and human resources constraints.

In this context, the team had to think out the box and come up with innovative new communication methods, bearing in mind data challenges and the lack of technological infrastructure at some schools and villages. The international recruitment drive was even more difficult because of border closures.

The adage, "necessity is the mother of invention" came to bear. We had to find new ways of promoting the MUT brand nationally and internationally, and the results were astonishing. Latching onto the



Mbali Mkhize

Acting Vice-Chancellor's strategy of "innovation and sustainable recovery", the team ensured that they took MUT to prospective students, their parents, and the people of South Africa in a sustainable and affordable manner. A number of cost-effective digital campaigns were implemented, including a highly successful Open Day campaign, which students could access on their phones anytime and anywhere.

As Professor Ramogale has highlighted on an ongoing basis, innovation and sustainable recovery must be the new norm – both at MUT and among our stakeholder communities. If the recurring themes of innovation, creativity and initiative in this edition of MUT Spirit are anything to go by, we're off to a good start!

Mbali Mkhize
Senior Director, Marketing & Communications

◆ *"Latching onto the Acting Vice-Chancellor's strategy of "innovation and sustainable recovery", the team ensured that they took MUT to prospective students, their parents, and the people of South Africa in a sustainable and affordable manner." – Mbali Mkhize*

A Message from the Acting Vice-Chancellor

Post COVID-19, the MUT journey of innovation and sustainable recovery begins

Yet again, we start the new year with much uncertainty about the COVID-19 pandemic and the future of higher education.

Universities across the world have felt the impact of the disruptions brought about by the virus, and many of their resources have diminished because of added costs and reduced income. Reserves which higher education could fall back on, and that were the pride of universities, have been depleted – and MUT, like other institutions, is feeling the effects.

Last year, we embarked on preliminary engagements with various MUT executives and heads of department ahead of budget submissions. Guided by the literature on organisational turn-around strategies, we started conversations on how best we could generate more income instead of being a one-way street where funds only flow outwards.

Many departments have already come up with strategies to save our University by spending more prudently. What has been heart-warming is the willpower that various levels of management have shown in order to make this a success.

I call on all our stakeholders to embrace the spirit of innovation and sustainable recovery that we are embracing as a University. This spirit starts with us all being selfless and understanding that we need to work together to help MUT get back to what it was, financially and as a leader in innovation.

Our 2022 journey started last year with a commitment to decrease expenditure and increase revenue. This is an attempt to ensure that beyond 2022, we are still able to offer quality education and accommodation to our students and remuneration for our employees – and also that our students and staff enjoy a rewarding lifestyle today and in the future.

The road ahead may be harder than before as we have been used to a certain degree of comfort without



Professor Marcus Ramogale, Acting Vice-Chancellor and Principal

worrying about what comes in. I have set up an online suggestion box so that you can all be a part of this process of rethinking, renewing and recovering. I invite all students and staff, regardless of position or seniority, to participate in this journey of innovation and sustainable recovery.

When COVID-19 arrived in 2020, we were thrown into the deep end with one common goal: “save lives and save the academic year”. We achieved it and I will be forever grateful to all of you for participating in this effort by supporting various campaigns. You showed us that you are passionate about your University.

This year, we have to ask ourselves where we go from here. The answer is in our hands; a new journey of innovation and sustainable recovery starts with us all. We have seen that there is a lot of potential at MUT, whether in the area of teaching and learning, research or community engagement. The onus is now on us to step up and contribute meaningfully so that we can shape and own the future we dream of.

Professor MM Ramogale
Acting Vice-Chancellor & Principal

MUT IN OUR COMMUNITY AND SOCIETY



Professor Lortan, fifth from left, with the award winners.

MUT celebrates Community Engagement excellence

MUT's core functions – teaching and learning, research and community engagement – are like the legs of a three-legged pot. Take one away and the pot cannot stand. As a University embedded in our community since its inception, we have a long tradition of community engagement; and our community-focused 'anchor' strategy is key to our future plans. To celebrate this essential leg of our institution, the University's Community Engagement and Development Directorate (CEAD) held its annual Community Engagement Excellence Awards on 10 December 2021.

Acting Vice-Chancellor and Principal, Professor Marcus Ramogale, set the tone by reminding staff that the world is always watching and honours those whose actions benefit the greater society. He recalled Chief Albert Luthuli, the late leader of the African National Congress (ANC), whose community development efforts earned him a Nobel Peace Prize.

This spirit of selflessness was also highlighted by Professor Darren Lortan, a Durban University of Technology (DUT) mathematician, who was a guest speaker at the event. Lortan discussed the attitude required when working with communities. He noted that

community developers should not regard themselves as superior to the community or try to dominate people within it. Rather, they must bring themselves to the level of communities and treat them with the respect they deserve. They should find out what communities need and act on that information. It is this spirit of true community engagement that the Community Engagement Excellence Awards recognise.

The CEAD, which is the originator and owner of the off-campus event, has divided the awards into four categories. A total of eight projects were awarded prizes ranging between R2,500 and R20,000.

The Distinguished Community Engagement Excellence Award went to a team from the Department of Nature Conservation, led by lecturer Sithembile Nkosi. An ecstatic Nkosi said: “If someone told me back in 2017 – when I first started the Ecosystems Rehabilitation and Restoration (ERR) Community Engagement Organisation – that today we would receive an award for our work, I would not have believed it. Today, myself and my students realised that the work that we are doing in the ERR is not too little...we have actually done a wonderful job. My sincerest appreciation goes to the MUT Community Engagement and Development Directorate for recognising our hard work.”

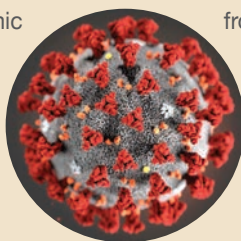
Two projects received first prize for the Best Multidisciplinary Collaboration, the MUT Waste Ambassadors project, led by Londiwe Mbuyisa, a lecturer in the Department of Nature Conservation, and the Improving Community Livelihoods Through Agricultural Activities project, led by Dr Misery Sikwela, a senior lecturer in the Department of Public Administration and Economics.

In the third category, first prize for Best Collaboration for New Community Engagement Initiatives went to the Nonoti Banana Project, led by David Pons, a lecturer in the Department of Agriculture. The second prize was awarded to the TENUSA team, led by Dr Thulile Duma, a lecturer in the Department of Human Resource Management. The TENUSA project assists the Siza Community Care orphanage which feeds approximately 200 people. Dr Duma said she was very grateful for the award. “It shows the compassion our colleagues have for our communities. COVID-19 continues to have a tremendously negative impact on all members of society, but is worse for child-led families.”

The CEAD Director’s Recognition Award went to the Student Success Peer Mentorship Programme, led by Arthi Ramrung of the University’s Teaching and Learning Development Centre (TLDC); and the SMMEs and Cooperatives Development Project, led by Xolile Ngubane, acting director of MUT’s Technology Station in Chemicals (TSC).

Nuance required in debates on the impact of COVID-19

There is no denying that the COVID-19 pandemic has disrupted lives across the globe. Since the hard lockdowns of 2020, organisations across the world are having to consider whether the workforce should continue to work remotely or return to the office.



Speaking as part of the Human Resource Management public lecture themed “The world of work is changing”, clinical psychologist and director of the Vantage Group, Dr Ajay Jivan observed that there is a tendency to think of our own experience of the COVID-19 pandemic as the only one. He urged all to approach the impact of the pandemic on staff from a nuanced position.

“Across the globe we are grappling with the same pandemic and its disruptions, but it impacts on us in different ways,” said Jivan.

He explained that the lack of nuance was evident in discussions on remote and flexible work, which is often based on the experience of wealthy, democratic, industrialised Western countries with educated populations.

“In South Africa, we need to look at our spatial infrastructure, commerce and residential patterns

from apartheid to the post-apartheid state. We need to look at the legacy of disadvantage and exclusion and how this suppresses representativity and inclusion across occupational groups and bands, and importantly, we need to look at the digital divide. This is one of the key things that we are not really talking about when we look at remote work and accessibility, and who can undertake such work. We need to appreciate that only certain segments of the workforce can work remotely,” said Jivan.

Remote work has often been accompanied by digital fatigue, loneliness and fragility. Interacting solely by means of computers is not good for one’s well-being because humans are social creatures. The costs of working remotely are often too high. There is also the question of whether the employees in question are full-time or part-time and whether they can become commodified.

“We should not see employers and employees as a homogenous group. They are very different. We need to pay attention to different geographies and contexts and the working conditions and circumstances of different segments of employees,” concluded Jivan.

COVID-19 mandatory vaccination: To be or not to be?

The COVID-19 pandemic ushered in many changes in higher education and is predicted to continue doing so for the foreseeable future. As things stand, universities along with private companies in South Africa are grappling with whether to make vaccination against COVID-19 mandatory for staff (and students in the case of universities).

The presentation by Imraan Mohamed, Director in Employment Law Practice at Cliffe Dekker Hofmeyr on 10 December 2021, as part of the Department of Human Resource Management's public lecture focusing on the changing world of work was aptly titled, "No job, no job: University student jobs".

Mohamed said that the government was moving in the direction of granting employers more power to mandate vaccination. He explained that objections to vaccination can be classified in three categories: bodily integrity rights, religious belief and medical exemptions and said that such objections need to be balanced against public health imperatives, employers' business imperatives, and constitutional rights.

"Currently, no law in South Africa mandates vaccination," he said, but added that "employees can be dismissed for not vaccinating because the constitutional right to bodily integrity can be limited".

At the time of his presentation, Mohamed was dealing with six cases of objections against mandatory vaccination. "By mid-November, there were already 10 dismissal cases for refusal to vaccinate," said Mohamed. "The Commission for Conciliation, Mediation and Arbitration (CCMA) has ring-fenced these cases due to their national significance."

At the time of the lecture, five South African universities had announced a mandatory vaccine policy.

Mohamed said it was not enough to introduce mandatory vaccination policies and expect employees to accept them. Consultations are key in introducing such a policy.

"In the absence of consultation, an employer that introduces mandatory vaccination could face legitimate objections from employees who are obliged to be vaccinated. This does not relate to exemptions on medical or religious grounds. It is simply a failure to comply with the directive because it says that there must be consultation," explained Mohamed.



Ayanda Bulose, a staff member, said he vaccinated mainly because he travels a lot

Although the directive is to consult trade unions where employees are organised, he recommended institution-wide consultation to accommodate staff members who are not union members.

Risk assessment is another important factor in introducing a mandatory vaccination policy. In South Africa, risk assessment was mandatory when employees were allowed to return to work after the hard lockdowns of 2020. Employers that wish to introduce mandatory vaccination would have to update the risk assessment to give employees a chance to assess their risk factor.

"Effectively what an employer looks for is how many employees have contracted COVID-19 over a period of time, how many possibly contracted it in the workplace, how many potential transmissions of COVID-19 there were, and the level of operational risk. It needs to be updated and considered before the formulation of policy," said Mohamed.

Although no provision in the law deals specifically with universities and mandatory vaccination, Mohamed said universities would have to consult as widely as possible. Where students are concerned, consultations should be held with the Student Representative Council and other elected university student associations.

US Consul-General debates social cohesion during MUT public lecture

One of the roles that universities are expected to play is to interrogate important matters in society. In the spirit of fulfilling this mandate, MUT hosted US Consul-General in Durban, Anne Linnee, to deliver a keynote address during the recent Faculty of Management Sciences Public Lecture.



Anne Linnee (Facebook)

Linnee's address focused on "social cohesion and the role of the public sector in building socio-economically inclusive communities".

The public lecture came at a time when South Africa had just completed its local government elections, paving the way for new leaders who will be responsible for service delivery in municipalities.

In his introductory remarks, Acting Deputy Vice-Chancellor: Teaching and Learning, Dr Manyane Makua, said: "The subject of engagement today, namely social cohesion, is pertinent and current. With all the challenges we face as a diverse society, we have a lot to learn from other contexts on order to forge our own development and cohesion paths."

Linnee said that elections are about testing whether democratic institutions are functioning as they should. "The last elections in both our countries

demonstrated that we are dealing with some real challenges and that our elected officials are doing what they are supposed to do. Despite these challenges, the most important part is that democracy should persist.

"Our institutions have been challenged but they hold. At the heart of so much of this is the youth who are essential defenders of democracy, pushing for accountability and transparency, and giving voice to people in communities."

Linnee added that in a democracy, social cohesion calls for constant shifts and that the youth play a significant role in such shifts.

She noted that, in line with the countries' partnership, the US supports South Africa's efforts to consolidate democracy by providing funding to uplift the poor and those living in rural areas.

"As an institution of higher learning, forming partnerships of this nature is important to us as they offer opportunities for networking and development on various fronts. In the early years of my career as an academic many years ago, I personally benefited from a programme run by the US Embassy in Pretoria," said Makua.

◆ She noted that, in line with the countries' partnership, the US supports South Africa's efforts to consolidate democracy by providing funding to uplift the poor and those living in rural areas.

MUT'S RESEARCH JOURNEY

Onward and upward for MUT research

Research was one of the new responsibilities assigned to former technikons when they were designated universities of technology more than a decade ago. As one of these institutions, MUT is adapting well and is honouring its responsibility to contribute to knowledge generation, assisted by funding from the National Research Foundation (NRF). Under the leadership of Research Director Dr Anette Mienie and her team, the University's research impact is improving, as evidenced by the "Excelleration Award" recently received from the NRF.



Seated, from left, Dr Pillay, Professor Ramogale, and Dr Mienie. Standing, from left, Dr Bheka Ntshangase, Dean of the Faculty of Management Sciences; Professor Roger Cooposamy, Dean of the Faculty of Natural Sciences; Morailane Morailane, Chair of MUT Council; Dr Manyane Makua, Acting DVC: Teaching and Learning; and Professor Babatunde Bakare, Dean of the Faculty of Engineering

To thank both the NRF and its researchers, the University hosted an off-campus ceremony on 13 December 2021. Opening the celebration, Mbali Mkhize, Senior Director: Marketing and Communications, said: "Our researchers have put us on the world map". The significance of the occasion was highlighted by the Chair of the University Council, Morailane Morailane, who commented that the NRF is very careful when making decisions about universities' research performance.

This was confirmed by guest speaker and NRF Deputy Director, Dr Gansen Pillay, who congratulated the University on the award. "We map how a university has achieved what it has achieved. MUT has the right leadership and the right Council," he said. Remarking that a university's research direction is determined by its leaders, he added that the right forms of leadership was the reason for MUT's excellent research performance.

Pillay commended Professor Marcus Ramogale, Acting Vice-Chancellor and Principal of MUT for his

leadership and added that Dr Mienie is the "rock" of MUT research. He said the University is adjusting well to its new mandate and commended it for "changing people's lives" through research. MUT researchers are telling their own story, and their achievements will go down in the history of the institution. He advised the University of the financial support that is available from the NRF and assured it of its ongoing support.

It should not be a surprise that the University's research is on an upward trajectory as seasoned researchers ably support newer ones. All three faculties – Engineering, Management Sciences and Natural Sciences – have dedicated Research Professors or Retired Research Professors who run research workshops on a regular basis, notwithstanding adjustments due to COVID-19.

Ramogale said the NRF award will be displayed for everyone to see that University researchers are making a serious contribution to knowledge generation.

Acting Dean receives NRF grant for water research

If a year could be named after an individual in honour of the work they have done, 2021 would have gone down as Professor Babatunde Bakare's year. Notwithstanding the fact that he is the Acting Dean of the Faculty of Engineering, he continues to raise the bar even higher with his research – and he is being recognised for it.

Bakare was awarded a National Research Foundation (NRF) grant under the Competitive Programme to support Y-rated researchers. The grant will fund his research project titled, "Application of carbon nano-tube technology in emerging contaminants removal from urban wastewater".

Bakare commented that 2021 was "full of pleasant achievements". He received an award for being the Most Productive Researcher in the Faculty of Engineering and also won the Senate Award for research productivity. The NRF grant came on the back of these two awards.

His work focuses on perhaps the most valuable of all resources, water. The project will contribute to the Water Supply, Sanitation and Hygiene (WASH)



Professor Babatunde Bakare

objectives outlined in South Africa's National Water Resources Strategy 2, which encompasses all aspects of managing water for an equitable and sustainable future. The grant will be used from 2022 to 2024 to support the purchase of research equipment and running expenses for the project, and allow for the nomination of postgraduate students.

Last year, Bakare published 10 journal articles, while two academic staff that he supervises in the Department of Chemical Engineering completed their doctoral degrees.

He is also the leader of the Environmental Pollution and Remediation Research Group. "The focus of the research group is largely directed towards the development of new technology and improvement on existing technology for local applications," said Bakare. "Our mission is to undertake high quality basic and applied research; collaborate with industries and serve as a focal point where industrial problems are referred for solutions; and engage with the community in bringing solutions to their day-to-day life and training personnel."

MUT study lifts the lid on the corrupt involvement of legal professionals in health care sector

A study, co-authored by Mangosuthu University of Technology (MUT) research professor, has shone the spotlight on the corrupt involvement of legal practitioners in illegal and fraudulent acts and their role in litigation on issues of medical negligence.

Research Professor Evangelos Mantzaris of the Faculty of Management Sciences at MUT, co-authored the study with Professor Pregala Pillay of Stellenbosch University. The study, titled, *Legal Profession and Corruption in Health Care: Some Reflective Realities in South Africa*, was published in *Frontiers in Public Health Journal*.



Professor Evangelos Mantzaris
(photo supplied)

Professor Mantzaris' study analysed the legal demands, mediators, and negligence in Gauteng's Department of Health in 2017. The analysis painted a grim picture of a Department faced with 2,317 cases for "medical negligence" with the "contingency liability" of between R18 to R21b at the end of that financial year. Equally concerning were the study's findings on how the cases came about.

"In almost all cases, these legal actions against state institutions have been initiated by members of the legal profession who over the years have taken advantages of circumstances to enrich themselves illegally and

immorally. In most instances, they collaborate directly or indirectly with medical or nursing staffs who direct them to existing health problems facing patients. There have been cases where lawyers themselves or their “representatives” (medical practitioners, nurses, or “mediators”) are “searching/haunting” public hospitals mainly to discover patients with medical problems, usually children with defects. After making their own notes or illegally obtaining copies or originals of medical reports, they file cases against the Health Department,” Professor Mantzaris’ study explained.



kickbacks”, Professor Mantzaris’ study found.

Among the key findings of Professor Mantzaris’ study are the roles of collaborators and mediators in enabling fraudulent claims by external legal practitioners.

“There are public servants within the Health Department who help lawyers in state fraud by photocopying documents that are instrumental in the duplication of claims. “Spotters” who are used in hospitals and clinics are those stealing patients’ documents, selling them to lawyers who then institute claims. In a number of cases, the claimants themselves have no knowledge of the claims in their own name,” Professor Mantzaris’ study found.

In terms of possible collusion between the Office of the State Attorney and private legal practitioners, Professor Mantzaris’ study concluded that legal syndicates that operated in the public health sector did so either separately or in collaboration, occasionally. The study quotes a senior Department of Health administrator who alleged that: “it was known that state attorneys did not file court papers in time, did not attend seriously to litigation matters against the Department, colluded with private lawyers and mediators, and were instrumental in settling out of court, exorbitant financial demands, even when they themselves had defended such cases as their position required”.

Professor Mantzaris’ study also referred to reports of scams defrauding government departments through “state attorneys strategically losing cases or settling out of court and sharing the pay-outs”.

Furthermore, Professor Mantzaris’ study also highlighted examples of fraudulent medical negligence claims lodged by legal practitioners in provincial Health Departments as reported the Minister after an investigation. Many of these claims were made in the Eastern Cape, Limpopo, and Mpumalanga. The Eastern Cape was singled out for having the highest number of cases where the state attorneys settled out of court and “shared the pay-outs in the form of

Furthermore, Professor Mantzaris’ study also found that private legal practitioners were resorting to advertising their services in public hospitals by using advertising pamphlets and by using nurses and other medical staff. These legal ‘helpers’ are the private legal practitioners’ contacts with those with medical problems. In some cases, they even go as far as handing patient files to law firms.

According to Professor Mantzaris’ study, the Law Society of South Africa’s response to the allegations against legal practitioners in the State Attorney’s Office and private legal practitioners was that was an effort to tarnish the reputation of the legal profession.

In terms of mitigating against these corrupt activities at a policy level, Professor Mantzaris’ study concluded that comprehensive review of the rules, regulations, legislation, and policy governing the Office of the State Attorney was required. The Procurement Policy and Supply Chain Management systems needed to be strengthened, along with Internal Controls and Internal Audit to effectively play their role of “prevention, deterrence, monitoring, analysing, detecting, investigating, and responding”, Professor Mantzaris’ study concluded.

◆ **Professor Mantzaris’ study also found that private legal practitioners were resorting to advertising their services in public hospitals by using advertising pamphlets and by using nurses and other medical staff.**

MUT TEACHING & LEARNING IN FOCUS

MUT Focus Conference shines spotlight on the future of higher education

While most people believe that the economy is the bedrock of everything – “It’s the economy, stupid!” – the fact of the matter is that this is not true for everyone. It could be argued that the bedrock of our economy, and our country’s future, is education. Because the economy is super-sensitive, everybody talks about it, while very little time is devoted to education matters. For professionals like Dr Manyane Makua, Acting Deputy Vice-Chancellor: Teaching and Learning, and Dr Siphwe Gumede, Acting Senior Director: Teaching and Learning Development Centre (TLDC), education should be first!



Dr Manyane Makua



Interlocutors! From left, Dean of the Faculty of Natural Sciences, Professor Roger Coopooosamy; MUT Chair of Council, Morailane Morailane; Acting VC, Professor Marcus Ramogale; and students from MUT and Durban University of Technology

Together with the team at the TLDC (Makua is the substantive Senior Director in this directorate), they have been running a flagship conference that is a platform for MUT and national and international academics to share their views on the state of teaching and learning in the country and beyond. Dubbed the Focus Conference, its latest round took place off campus from 17 to 19 November under the theme: “The future of Higher Education, where do we go from here?”

Makua and Gumede believe that a strong focus should be placed on the quality of education and how it is delivered to students. It was for this reason that the 2021 Focus Conference shone a spotlight on delivering education during the time of COVID-19. The conference had a strong international flavour, and the key question was: how can institutions of higher learning take advantage of the present global crisis?

According to Makua, the three-day conference was “more necessary than ever before”, given the conditions under which higher education is labouring. He said that its purpose was to create a platform for academics and researchers to share their teaching and learning and research experiences, particularly during the past 23 months: “We need to take advantage of the lessons we have learnt at this time from different contexts as these will inform how academics plan their teaching and learning interventions going forward.”

Speaking during the second day of the conference, the University of Mpumalanga’s Dr Severino Machingambi stated that the higher education sector’s general view is that no student should be left behind in decisions on teaching and learning. He noted that universities have repositioned themselves during the pandemic “so they remain relevant”.



Main men! Dr Manyane Makua and Dr Siphwe Gumede

Professor Maria Mabusela of the University of Zululand, said that her institution faced “challenges” at the beginning of the pandemic, but was adjusting. “We did a number of relevant trainings for staff and bought modems for everyone involved. We also orientated all academic administrators, upgraded our online software, created an e-curriculum and converted face-to-face assessment to online assessment,” she said.

Dr Mmampho Gogela-Smith of Walter Sisulu University raised the issue of students’ lack of connectivity. “The Eastern Cape is largely rural; it is the poorest province in the country. This made the COVID-19 effect much worse. It put pressure on us because many of our students come from a poor schooling background.” Other common factors that affected online learning were load shedding and disruptions at home, such as siblings disturbing students.

The conference attracted more than 128 delegates and was hailed as a much-needed intervention for future success in the higher education sector.

◆ Makua and Gumede believe that a strong focus should be placed on the quality of education and how it is delivered to students. It was for this reason that the 2021 Focus Conference shone a spotlight on delivering education during the time of COVID-19.

Maths PhD graduate takes student to Wits to see him cross the stage

As the best teachers know, there are innovative ways of ensuring that students grasp what they are taught. This was illustrated when Dr Sibusiso Mabaso, a lecturer in the MUT Department of Mathematical Sciences, took the unprecedented decision to take a student with him to Wits University to witness him receiving his PhD in Mathematics.

Mabaso lectures statistics to students from various academic departments. He said the reason for his decision was “to encourage students to perform well in statistics, to change their attitude about this being a challenging subject, and inspire them to reach the apex qualification. I organise some awards for students who performed well for each test.

“I decided to take a student who has the highest DP from three tests they had written to witness this august occasion. Eight students qualified, so in order not to be statistically biased I approached Mr Bheki Hlophe from the Department of Marketing and Communications to do a selection-draw in the presence of the tutors and class reps. A Marketing II student, Mhlengi Hlongwane, won the all-expenses-paid trip to accompany me to my graduation ceremony,” said Mabaso.

He took the student to the Department of Actuarial Sciences and Statistics at Wits “to instil a love for statistics and broaden his horizon in other fields, like actuarial sciences, where statistics is applied”. Another reason he motivates students to change their attitude towards statistics is that it is a scarce-skills subject.

Mabaso’s PhD was on Number Theory, and was titled: “Solving some Diophantine equations involving Fibonacci numbers, Catalan numbers, Ramanujan tau-function and factorials”. His supervisor was Professor Florian Luca, an A-rated Number Theorist. In terms of future plans, he will pursue his studies in statistics and statistical software to help researchers to analyse their data.

Hlongwane said he would be forever grateful for seeing Mabaso cross the stage. “Previously, I only imagined myself completing my studies and obtaining a PhD in Marketing Management. This experience inspired me to make it my mission,” he said.



Dr Mabaso and his student at Wits University (photo supplied)

- ◆ *Mabaso lectures statistics*
- ◆ *to students from various*
- ◆ *academic departments. He said the reason for his decision was “to encourage students to perform well in statistics, to change their attitude about this being a challenging subject, and inspire them to reach the apex qualification.*



Professor Theo Haupt, seated, and the delegates that attended the meeting

SWEET Chair hosts 2021 Construction Education Summit

The Chair of Sustainable Work, Education, Environment & Transformation (SWEET), and Research Professor in the Faculty of Engineering at MUT, Professor Theo Haupt, hosted the Construction Education Summit 2021 (CES21) in Durban from 1 to 2 December 2021 under the theme “Sustainable built environment higher education for the future”.

Haupt said that the focus of the summit was to find solutions to the many challenges confronted by construction education programmes offered at higher education institutions in South Africa. These include the relevance of existing programmes; rapid industry changes and demands; the currency of the programmes in the face of the rapid, exponential growth of knowledge and information globally; the need for swift adoption of and adaptation to alternative modes of instructional delivery of programmes; developing pedagogies driven by the impact of the global COVID-19 pandemic; and demands for construction graduates who are familiar with (and suitably equipped for) the increasing number of evolving technologies within the 4IR, 5IR and cyberlogy spaces.

CES21 was attended by a wide range of leaders directly or indirectly involved in construction higher education. They included the heads of department from South African universities that offer construction programmes, representatives from the Council for the Built Environment (CBE), the Chartered Institute of Building (CIOB), the South African Council of the Quantity Surveying Profession (SACQSP), and industry representatives from Hilti, Modena and Master Builders KwaZulu-Natal.

Several presentations were delivered by experts on the problems facing construction education in South Africa. They included Professor Kathy Michell, Deputy Dean for Undergraduate Studies (Teaching & Learning) in the Faculty of Engineering and the Built Environment at the University of Cape Town; Professor Lykke Bertel, Associate Professor at Aalborg University’s Centre for Problem-based Learning in Engineering, Science and Sustainability; and Professor Francois Jacobs of the Department of Civil, Architectural Engineering and Construction at the University of Wyoming, US. Haupt’s presentation titled “Adapt or die” focused

on the necessity of rethinking the programmes. All the presenters agreed that COVID-19 is both a challenge and an opportunity for higher education, and emphasised that the students needed help to navigate the new landscape.

Delegates discussed a number of issues, including the mismatch between the construction industry and academic programmes offered at universities; promotion of careers in the construction sector; the skillsets needed by construction graduates of the future; enablers for and barriers to sustainable future construction education; and infrastructure needs at higher education institutions to create the required learning environment to equip students for the future world of work and professional practice.

Among the solutions proposed were the need for all stakeholders to work to improve the construction industry's image; publishing a summary of the range

of careers in the sector; and that, given the range of issues facing tertiary construction education, a task team should be established to develop short-, medium-, and long-term interventions in consultation with stakeholders.



Professor Haupt, with Nozipho Mnguni, Research Assistant



Guest speakers, Professor Francois Jacobs, from the University of Wyoming, USA, left, and Professor Kathy Michel, from the University of Cape Town, right, with Professor Haupt



Environmental Health hosts inaugural symposium

In session! The delegates that attended the symposium

To address the gap in working relationships between environmental health academics and Environmental Health Practitioners (EHPs), Dr Thobile Poswa, Head of the Department of Environmental Health, organised a symposium to explore solutions to a situation that is “impacting negatively on the training of environmental health students”.

The theme of the symposium was “Balancing theory and practice: Preparing Environmental Health Practitioners (EHPs) for the 21st century”. Poswa said that it was part of a broader strategy to widen research and deepen science in the training of MUT environmental health students.

Delegates discussed content pertaining to the training of environmental health students and examined the impact of the current dynamics around human interactions with the environment, policy transformation, diversification in the practice of environmental health, and the changing regulatory landscape for environmental health.

The symposium also aimed to empower students, academics and practicing EHPs to expand their knowledge in the training and application of environmental health principles. This was strongly reflected by the presentations. In his opening remarks, Acting Deputy Vice-Chancellor: Teaching and Learning, Dr Manyane Makua, suggested that delegates seriously consider the employability of graduates in their deliberations.

Delegates considered ways to ensure that their academic programmes are relevant, and that students are well-grounded in both theory and practice. They also agreed that academic programmes should be



Dr Kgware supported the idea, and worked with Dr Poswa in organising the event. Dr Kgware used to work in Dr Poswa's department

Fourth Industrial Revolution (4IR) compliant. Poswa said that the time for such adjustments is “now”. He pointed to “several changes in the provision of environmental health in South Africa that necessitate a re-look into the curriculum and employment opportunities beyond the traditional areas of local government or the health department”.

Participants learnt about sectoral collaboration, research and publication opportunities, the impact of genetics on environmental health, the importance of ethical practices, and environmental health policy developments, among other things.

Poswa hopes that the symposium will be an annual event that offers on-going opportunities to enhance student training and environmental health services in South Africa.



MUT Acting VC, Professor Marcus Ramogale, left, with Dr Godson Gatsha, middle, and Cyril Ndaba, form SA Consulate in California, US, and the UK, at the inaugural I-Week

MUT ON THE GLOBAL STAGE

Inaugural International Week a resounding success

The week of 22 to 26 November 2021 will go down in MUT's history as a decisive step towards forging strong links with the international community. The University hosted its inaugural International Week (I-Week), with participants from Europe, Africa, the United States of America (USA) and Canada.

Participants also included representatives of local universities, eThekweni Municipality, Moses Kotane Institute and MUT staff. One of the highlights of the week was the participation of the chief executives of organisations such as the CIDB and the endorsement by MUT's founder, Prince Mangosuthu Buthelezi. Engaging with the international community is part of the University's Strategy 2025, which calls for an "internationalisation agenda".

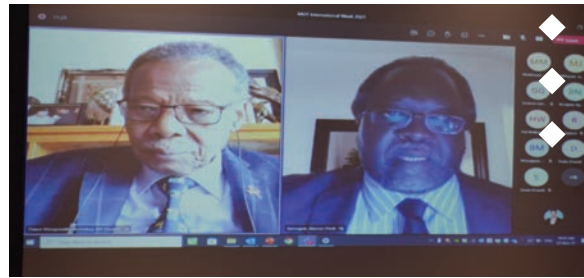
Professor 'Hal' Walker, and his wife, Dr Bettye Walker, on screen, were guests at the I-Week. On the foreground is Professor Ramogale



MUT pays tribute to its Founder and a moon landing icon

One of the highlights of I-Week was the participation of two great movers and shakers, MUT's internationally renowned and respected founder, Prince Mangosuthu Buthelezi, and Professor Hildreth 'Hal' Walker, a man who was responsible for the landing of Apollo 11 on the moon in 1969. They met each other about two years ago, together with Hal's wife Dr Bettye Walker, and at I-Week the trio continued from where they left off. Education is their mutual passion and they talked about how the country's youth could benefit from such.

In February 2019, the Walkers opened the first chapter of the National Space Society in Cape Town, and they have now proposed opening one at MUT – an education landmark for His Royal Highness, Prince Buthelezi. This will be a continuation of his dream of empowering people through education. Prince Buthelezi is known for bringing education centres to where people live, which



On screen, is the Founder of the University, His Royal Highness, Prince Mangosuthu Buthelezi, left and Professor Ramogale. Prince Buthelezi supported the I-Week

is the opposite of what happened to him: he had to leave home for his secondary and university education at Adams College and Fort Hare University, respectively.

Acting Vice-Chancellor and Principal, Professor Marcus Ramogale paid tribute to these pioneers for their contribution to education and community development and expressed his confidence that Prince Buthelezi will continue to support MUT.

- ◆ *“The Walkers work in our country is truly inspiring. By the time they*
- ◆ *opened the first chapter of the National Space Society on the African*
- ◆ *continent in February 2018, they had already established computer literacy laboratories and STEM programmes in a number of schools in South Africa’s townships.” – Prince Buthelezi*

Patron of MUT Internationalisation plays his part

MUT's inaugural International Week was backed by none other than South Africa's former Consul-General, Mr Cyril Ndaba. Known to the University for opening doors for it in the UK and the US, he was the ideal choice of patron to assist MUT in preparing and running the event.

Ndaba believes that empowerment should be at the heart of the relationship between a university and its stakeholders. Using his networks, he worked with the University, from the Vice-Chancellor to the event coordination team.

“Based on my global experience, I have observed that countries that make use of their diplomatic corps to advance internationalisation benefit more than those that do not integrate the internationalisation of higher education. Since my return from California, I



Cyril Ndaba at one of the I-Week sessions

have taken it upon myself to ensure that we elevate MUT and position it globally,” said Ndaba.

His determination to elevate MUT saw him consulting globally to help draw attention to the University. This brought participants from the US, UK and some parts of Africa. He also facilitated networking with California State University, Professor Hildreth 'Hal' Walker and his wife Dr Bettye Walker.

Leveraging international visibility for MUT in California

One of the speakers at MUT's International Week was Professor Boatomo Mosupye, Associate Dean for Resource and Programme Management at California State University in Sacramento, California. Originally from Johannesburg, Mosupye has a similar passion to MUT's patron of internationalisation, Mr Ndaba.

"I come to MUT's Internationalisation Week bearing in mind that California was a hive of anti-apartheid activities and made considerable contributions in education, the arts and political activities to ensure that our fellow Africans could make a better society. I am also inspired by the foundation that the former Consul-General has laid in the state of California for our higher education system to play a pivotal role in the upliftment of SA's higher education system," she said.

Mosupye has offered a number of opportunities to MUT, including student, staff, faculty and administrators' exchange programmes. Her objectives are to help MUT to:

- develop awareness of international dynamics;
- gain exposure to innovative learning methods;
- build a stepping stone to personal growth for students, staff, faculty and administrators;
- plan for the world economy;
- increase its global perspective;
- increase chances of employability;
- create life-long bonds; and
- increase literacy in navigating diverse global environments.

"I am driven by a desire to ensure that an employee in higher education or a student in a higher education environment should at a certain point in their lives have been outside South Africa. Being international is life-changing. I will be keeping my ear to the ground



Professor Boatomo Mosupye, right, with the star of Oscar Winner Movie Tsotsi, Preseley Chweneyagae at the 14th Africa Day Celebration Gala Dinner, June 2 2006, Beverly Hills Hotel, Beverly Hills, California



Professor Boatomo Mosupye and the Consul-General of South Africa Her Excellency Jeanette Ndhlovu (Facebook)

on how we could partner with MUT. I am already eyeing some existing peer programmes as well as emerging leadership programmes as a strategic fit to how I could work with MUT," concluded Mosupye.

◆ *"I am driven by a desire to ensure that an employee in higher education or a student in a higher education environment should at a certain point in their lives have been outside South Africa. Being international is life-changing."* – Professor Boatomo Mosupye

Tech business leader and entrepreneur commends MUT students on choosing entrepreneurship

As unemployment continues to rise in South Africa, it has never been clearer that entrepreneurship could be the potential answer to job creation and to solving societal problems.

This was the message from Dr Oluyomi Ajayi, Chief Executive Officer of Siyacanda Energy, when he made a presentation to a virtual audience at Mangosuthu University of Technology's inaugural International Week, which ran from 22-26 November 2021.

Dr Ajayi said that studies indicated that many young people are in favour of starting their own businesses. This is very true at MUT. MUT students have identified gaps in the market, and started their different businesses based on these facts. Nombulelo Ncube, Advanced Diploma in Human Resources student, said whilst employed at a Human Resources (HR) firm, she felt that she could do more than what she was doing there, and decided to start her own business. Nombulelo is the owner of an HR consulting business. She is one of six MUT students that took part in the International Week. The students introduced their businesses to the virtual audience. These students heeded a call from the University management, particularly Professor Marcus Ramogale, the Acting Vice-Chancellor & Principal, to seriously consider starting their businesses, and become job creators. No one was born to be an employee; Professor Ramogale is known to have said.

The students are doing well under the tutelage of Ntombifuthi Mthembu, a Lecturer in the Department of Human Resources at the University. They took part in the annual EDHE (Entrepreneurship Development in Higher Education) competition. Wandile Sihya went as far as the national level of the competition. He has a business that cleans house roofs.

Emphasizing the need for students to start their businesses sooner rather than later, Dr Ajayi said all that was required was "to have a business mind-set, and not wait until you have a PhD". He said the now powerful businesses like Microsoft, Google, Facebook,



Dr Oluyomi Ajayi

etc, were started by students while they were still in college. In South Africa, Keaton Harris started InforMED. This became a global winning venture. Dr Ajayi told the students not to be afraid to fail.

"Time and age are on your side", he said. "Learn from your mistakes." He advised them to network with other people. "Also, talk to your mentor, to your teacher. Just start," he said. "There are many types of business you can start while you are still on campus."

Mthembu said that the students needed to be given more time to look after their businesses.

Xolile Ngubane, Acting Director of the Technology Station in Chemicals at MUT, pointed out that self-employment was critical. "Entrepreneurship transforms economies. Innovation is the backbone of the modern business," Ngubane said.

All speakers agreed that growth entrepreneurship will reduce unemployment, particularly that of unemployed graduates. They advised the South African youth to follow in the footsteps of their counterparts in Africa and the rest of the world. Dr Ajayi, a serious world traveller, said South African youth are less likely to go into business, compared to the rest of the continent's youth.

"Entrepreneurship transforms economies. Innovation is the backbone of the modern business." – Xolile Ngubane



The spirit of entrepreneurship at MUT is fully supported by staff and business leaders

MUT GETS BEHIND STUDENT ENTREPRENEURSHIP

“MUT students are making it big in business”

Premier promoter of student entrepreneurial skills at MUT, Acting Vice-Chancellor and Principal, Professor Marcus Ramogale, has found a more than willing ally in cultivating this philosophy.

Ntombifuthi Mthembu, a lecturer in the Department of Human Resource Management, has become the face of student entrepreneurship at the University. On 6 and 7 October 2021, Mthembu and colleagues from her department – including the equally enthusiastic Eddie Selebi – gathered with students on the University’s North Campus to share ideas on business and its central role in changing people’s lives. The was part of the national Student Entrepreneurship Week.

Mthembu, the coordinator of the campaign, said MUT wants students to consider entrepreneurship as an

alternative to formal employment. “This event gave students an opportunity to showcase their businesses in whatever form. This year they are showcasing entrepreneurship through storytelling and evidence of their business activities. It was very inspiring to listen to our current and past students sharing their entrepreneurial journey and experiences with other students,” she said.

Thirteen student businesses falling into three categories: ideation stage, existing, and agri. businesses, participated. Mthembu said this was an indication “that the seed of entrepreneurship has been planted at MUT. We have the responsibility of nurturing and assisting student entrepreneurs to have the courage to take their businesses to the next level”.

She added that it is important that businesses that are currently in the ideation stage progress to the next level: “Ideas must be turned into action.” She noted



Ntombifuthi Mthembu

that MUT students are playing a meaningful role in many sectors, with healthy business turnover.

Ithembalamazubane, owned by Zuzile Mthiya, a student in the Department of Human Resource Management, produces and sells white and brown sugar beans. Musa Mkhize, from the same department farms sugarcane and bananas and supplies Umfolozi Sugar Mill. Nompilo Vilakazi, an engineering student, grows chickens and supplies one of the big retailers in KwaZulu-Natal.

“These students have classes to attend and tests to write, but are still able to do such amazing things. All the presenters had amazing stories to tell,” said Mthembu.

Alumni also had the chance to talk about their businesses, including Sabelo Madiba (Blackhorse Group), Ntuthuko Khathi (Khathi Charcoal); and Simphiwe Goniwe and Sanele Shandu (Isiqalo Institute in Academics). They all advised students to learn to do



Wandile Sihya, went as far as the national level of the EDHE competition.

something for themselves and to “not hesitate to take calculated risks, and be resilient”.

The second day consisted of interactive workshops with students. Kwazi Bhengu from Sibani Consulting highlighted the importance of personal entrepreneurship competencies and discussed behavioural indicators. Ndumiso Ncala, an Information Officer from the Small Enterprise Development Agency (SEDA), outlined SEDA’s mandate in implementing the government’s small business strategy, the sectors supported by SEDA, and the role played by the Small Enterprise Finance Agency (SEFA) in assisting small businesses to secure finance. Ncala encouraged students to keep abreast of the opportunities advertised by SEDA and to seek assistance in applying for them.

- ◆ *It is important that businesses that are currently in the ideation stage*
- ◆ *progress to the next level: ‘Ideas must be turned into action.’ She noted*
- ◆ *that MUT students are playing a meaningful role in many sectors, with healthy business turnover. – Ntombifuthi Mthembu*

MUT 'WELLNESS'

MUT gets yet another clean financial audit

Over more than a decade, MUT has received consecutive unqualified audits from external auditors. The external audit is a statutory requirement regarded by many as the equivalent of a “clean bill of health” for a patient. This type of report is issued when the organisation’s financial condition, position and operations are fairly presented in the accounts.

“I am heartened that in 2020, we once more maintained high-level standards in the financial management of the University. We have come a long way as a University. To receive an unqualified audit, especially during an unprecedented year of a series of lockdowns, deserves the highest accolades. I am grateful to everyone that contributed to this clean bill of health for the University,” said Professor Marcus Ramogale, Acting Vice-Chancellor and Principal.

The University’s Chief Financial Officer, Rodney Delomoney, said in terms of audit outcomes, an unqualified audit report is excellent as this means that the annual financial statements comply in all material respects with the relevant regulations – which for MUT would be the International Financial Reporting Standards (IFRS) and the requirements of the Higher Education Act.



Rodney Delomoney

“It also confirms that no other material discrepancies were identified by the auditors,” said Delomoney. He added that this was achieved through proper planning, and ensuring that during the financial year, MUT adhered to relevant processes and systems, as well improving them.

“This required significant effort from all finance staff directly and indirectly involved in the audit while navigating the various challenges of the COVID-19 pandemic,” said Delomoney.

◆ *“I am heartened that in 2020, we once more maintained high-level standards in the financial management of the University. We have come a long way as a University. To receive an unqualified audit, especially during an unprecedented year of a series of lockdowns, deserves the highest accolades.” – Professor Marcus Ramogale*

Staff check their health status during Wellness Day

One of the reasons why people are living longer lives is the availability of medicine and improvements in science and technology. Another factor is how they respond to wellness advice from relevant professionals. The latter is as, if not more, important as taking medication for an ailment. It is for this reason that MUT's Human Resources and Development department invites staff to its annual Wellness Day.

On 28 October 2021, many staff headed to the University's Seme Hall to check their health status with various service providers. Some staff drove there, some boarded the University bus and others walked. They left with a smile and an added spring in their steps.

Safety, Health and Environmental Officer at MUT, Lizwi Masondo, highlighted the importance of staff knowing their health status. "If you know your health status you can take the necessary steps if there is problem. If you do not have to do anything, it will confirm that

you are looking after yourself. This will motivate you to continue doing what you have been doing."

Staff were able to check their blood pressure, HIV status, and body mass index (BMI), have a pap smear (in the University Clinic), and consult with financial institutions.

The service providers recommended that staff check their health status at least twice a year, eat healthily and get regular exercise.

- ◆ *The service providers*
- ◆ *recommended that staff check*
- ◆ *their health status at least*
- ◆ *twice a year, eat healthily and*
- ◆ *get regular exercise.*



A staff member having his eyes checked

MUT Bodybuilding team dominates USSA games

University sports were one of the casualties of the covid-19 pandemic, with sporting activities cancelled in fear of them becoming a platform where the virus spreads. As South Africa continues to roll out its vaccination, university sporting calendars are slowly resuming in various institutions, much to the delight of the sporting community.



Zolani Khoza, middle, with other participants (picture supplied)

For Mangosuthu University of Technology (MUT), the resumption of sporting activities has also offered students an opportunity to represent the university at the University Sports South Africa (USSA) games. This opportunity fell on the MUT Bodybuilding team on 5 December 2021 as they compete at the University of Zululand against students from six other universities in the USSA games.

The MUT Bodybuilding team produced an excellent performance, demonstrating that the team has been preparing throughout the lockdowns.

Njabulo Gasa, final year Human Resources student, placed first in Classic Bodybuilding category. His coach Zolani Khoza, final year Construction Management and Quantity Surveying student, placed second in the Open Bodybuilding men's category, under 75 Kg. Mdingi Memela, another final year student, placed second in the Men's Physique category, as was Ntobeko Nzuzza, a second year Bachelor of Applied Sciences student. Audrey Sibambo, a third year Electrical Engineering student, placed second in Classic Physique.

The women's team also claimed silverware, shattering stereotypes about the sport being for men. In the Ladies Wellness category, Phindile Ngubane, a second-year Diploma in Agriculture student, placed second, while Nontokozo Zungu, a first year Construction Management and Quantity Surveying student, placed third.

A day before, these bodybuilders competed at Durban's former Clairwood Racecourse, where both Khoza and Gasa placed first. Nzuzza and Memela placed second. This was an open competition called Sunfest Arnold Qualifier Show.

Khoza said he was proud of his team's performance.

"The other universities dominated us with numbers, but we definitely dominated them with the quality of muscle. We still need to grow the sport though, especially in



MUT Body Building coach, Nothando Magwaza



Leading example! Zolani Khoza (picture supplied)

making students understand what bodybuilding is all about, and the character and discipline it builds in a person," said Khoza.

IT&N rolls out the digital transformation

One of the great lessons of the COVID-19 pandemic is that humanity will have to rely on technology not only for communication but also to carry out tasks remotely. For universities, this means having digital infrastructure that can withstand modern technological demands.



Dr Marlo de Swardt
(photo supplied)

For institutions such as Mangosuthu University of Technology (MUT), this meant embarking on a journey towards the transformation of the university's digital infrastructure. The Information Technology & Network Department (IT&N) has already started making this transformation a reality.

Dr Marlo de Swardt, Senior Director in the Department said: "We have recently procured and replaced old server infrastructure that houses critical systems in the main campus datacentre".

The project forms part of the foundation being outlaid for the University's five-year digital road map transformation.

Considered a key milestone for MUT, Dr de Swardt said that this initiative is meant to improve operational efficiency within the University IT landscape.

"It is also meant to provide enhanced technology and expand on these offerings to the University community. This new infrastructure will significantly improve bandwidth capacity and accessibility to the MUT community making use of the relevant IT systems. Furthermore, it is beneficial for the University to also keep our technology refreshed and aligned with current and newer IT trends emerging in local and global markets," continued Dr de Swardt.

The 'Server, Storage, and Firewall Refresh' began in September 2021 and was completed on 30 November 2021. Dr de Swardt said that they had challenges in getting the equipment into the country.

He added that the project would enable the University to benchmark and stay ahead of other higher education institutions by adding an improved IT security layer to protect the University intellectual property.

This development enables the capability to install an additional 155 Wi-Fi access points on and around campus, driving what is considered "the foundation for a smart campus concept".

Mass WiFi in campus and residences to increase connectivity

The 'Server, Storage, and Firewall Refresh' was followed by a roll out of extended WiFi capability throughout campus, as well as in all internal (on-campus) and external (off-campus) student residences to support blended teaching and learning modes within the University. The extended WiFi capability is also to provide enhanced internet access and network connectivity to expand on these offerings to the University community.

"The new WiFi infrastructure will significantly improve network capability and accessibility to the MUT student community making use of the relevant IT systems such as Blackboard, Student email and Microsoft Teams for e-learning," said Dr de Swardt. There will be 155 WiFi access points installed throughout campus to provide faster, more robust and reliable internet access.

At present, there are two projects underway, Core WiFi and the External WiFi for student residences, which began in October 2021 and July 2020, respectively. The External WiFi for Student Residences is a three-year project and will be completed in 2023, while the Core WiFi project will be completed in January 2022.

Dr de Swardt said these projects are beneficial for the University to equip all our students for onsite, remote and off-site learning due to COVID-19. This is called a blended and hybrid learning approach being adopted by MUT, similar to other universities.

Dr de Swardt said these projects ensured the University stay ahead of the curve in respect to other higher education institutions transitioning to a fully online smart campus in the near future.

Projects such as these will form part of the foundation being outlaid for the University's five-year digital road map transformation strategy (2022 – 2026).

MUT has internet connections all over the campus



The network is driven by a powerful server system

ALUMNI IN ACTION

Engineering's "best" student of 2010 studying in Japan to solve problems in SA

It is wonderful to hear how our graduates are doing beyond MUT. With so many graduates in South Africa struggling to find jobs, it is also exciting to share success stories to inspire us. Nomvelo Nzimande's story is one of these. After graduating in 2010 as the "best student" in the Faculty of Engineering, she decided to do more.



Nomvelo in Japan (photo supplied)

In the same year she graduated, she enrolled for a B. Tech degree at the Durban University of Technology. In June 2011, she started teaching Mathematics and Electrical Technology in Durban's Chesterville Secondary School while continuing with her studies. In February 2012, Nomvelo joined Eskom Grootvlei power station as a project technician. She worked in different positions at Eskom power stations between 2014 and 2020 and also enrolled with CraineField College for an Advanced Diploma in Project Management.

In October 2020, Nomvelo was on the move again. She enrolled with Kogakuin University of Technology and Engineering in Japan, and in April 2021 she began her Master's degree in Electrical and Electronics Engineering. She is one of 6,317 students in this private Tokyo university which is more than 130 years old.

Nomvelo's research study focuses on the integration of large-scale photovoltaic (PV) and wind power generation in the national electricity grid. This topic is most appropriate for South Africa which has been dogged by an energy crisis since 2008, with the term "load shedding" one of the most familiar in South Africans' vocabulary.

In April 2022, 12 months into her two-year study period, Nomvelo will spend six months doing an internship in a Japanese company before returning home.

So far, she is doing well. "Last semester, I passed with an A in all my subjects," said Nomvelo, who presented



her research in December 2021. She received the certificate for the best presentation and a 3,000-yen Amazon voucher.

Nomvelo is coping in a different country and different culture. She is fluent in Japanese, which she studied as soon as she joined the university. "Although my Japanese

is not perfect, I can handle a conversation. I find it easier to handle the conversation if I am the one who started it. The culture is different. It encourages people to be friendly and the communication style reflects the value placed on maintaining harmony. A large amount of communication is indirect or not spoken at all. However, if you pay attention to actions or certain sounds such as 'mmm', you can read between the lines. They avoid responses such as 'NO' or 'I CANNOT'. They will rather say they will think about it or you sometimes you get a 'Yes' that means 'no', depending on how the 'yes' is pronounced. For example, a lengthened yes (...Ye...s...) means no. I try my best to adopt the culture here so that I do not irritate people. I can only practice what I am aware of since some things are not spoken because they think it is common sense – for example, 'keep left and pass right' when you walk. For more information, please watch this video, <https://www.youtube.com/watch?v=zWnTzyZuSw>. Talking on the phone is not allowed on a train and you have to take off your shoes when you enter the house, or the fitting room in some shops. When I was staying at the student residence, I had to take off my shoes when I entered the building and

wear different shoes to walk inside. Another different pair was used in the bathroom,” said Nomvelo.

Japan's weather is very different from South African weather, but this student from Pietermaritzburg took this challenge in her stride. “Winter is very cold; summer is very hot. It is winter now in Japan; I rely on the aircon to adjust the temperature to a comfortable level. In summer, I use sunscreen.”

Nomvelo plans to join the renewable energy department at Eskom to apply the knowledge and skills she obtained during her stay in Japan. She says that although a large amount of power from renewable energy is supplied by independent power producers, it is Eskom's responsibility to integrate renewable energy into the grid. “Photovoltaic and wind power generation depend on weather conditions. That is why their output tends to fluctuate a lot. This is not healthy for the grid,” said Nomvelo. She adds that her main purpose in her research is to identify control strategies to integrate large-scale PV and wind farm power generation into the South African grid to help create a more sustainable power supply.



- ◆ *Nomvelo's research study focuses on the integration of large-scale photovoltaic (PV) and wind power generation in the national electricity grid.*
- ◆ *This topic is most appropriate for South Africa which has been dogged by an energy crisis since 2008, with the term “load shedding” one of the most familiar in South Africans' vocabulary.*

MUT Engineering graduate takes over family business as CEO

Hlophani Dlamini, who graduated in 2021, is shaping and owning the future as the Chief Executive Officer (CEO) of Inghube Farming, a family-owned business he restructured with his siblings in 2020.

Dlamini's five-year journey to complete a Diploma in Civil Engineering at MUT was full of challenging and encouraging moments. He said that MUT was there for him all the way and he never gave up on his dreams of becoming an engineer.

Dlamini also acknowledged his parents who "instilled in us an inherent belief that we could do literally anything we put our minds to, and this included us being job creators within our region and district." He and his siblings Ms Sixolile, Mr Mbuso and Mr Phakamani Dlamini, who are all graduates of different institutions and have their own skills sets are in the farming and accommodation business. They have various livestock including pigs, rabbits, goats, sheep, and cows, and they also plant maize and vegetables on their two farms in Ulundi and Vryheid.

One of the key ingredients to strengthen the bonds between the family and the business is educating the next generation about family business matters. "My years at MUT empowered me with skills that I did not even know I would need in the family business. This is working for me and my business partners. It is one of the reasons that the Inghube Group Board entrusted me with the position of CEO," Dlamini said.

He added that he is lucky to have the opportunity to make a real impact on the family business, and not just be another number in a large organisation.

The siblings formalised the business in 2020 and have since managed to employ six permanent and 10 temporary employees. They also host students for experiential learning and exposure to the world of work.

Dlamini dreams of building a sustainable long-term vision for future generations and creating a platform to share experiences within the family business which



Dlamini farms with different animals

his father began. Having a good education helps him to shape and develop a vision and identity as the enterprise grows.



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