NELSON MANDELA UNIVERSITY’S Dream Medical School

Missionvale Campus puts community needs at its heart

Faces first-year medical students will encounter

Medical School will honour Professor Lungile Pepeta

Faculty of Health Science students enjoy hi-tech facilities

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Message from Vice-Chancellor Professor Sibongile Muthwa

Nelson Mandela University stays true to its purpose

There is so much more we can do to improve the health, quality of life and lifespan of everyone in South Africa, and, at the same time, achieve a better return from the public health spend.

We are confident that Nelson Mandela University’s new medical school will help us achieve this and that, once it is up and running, the health services platform throughout the Eastern Cape will improve.

We thank our country’s other medical schools, their researchers and practitioners for their collaboration, which contributed greatly to our curriculum design. We hope to continue to work together in finding solutions and innovations.

It has been intense to fulfill the requirements of launching a medical school on our Missionvale Campus.

The infrastructure includes lecture halls, laboratories for physics, chemistry, physiology and anatomy and over 60 offices for medical school staff members. We are also partnering with several provincial and district hospitals like the nearby Dora Nginza Regional Hospital and associated clinics.

Our first intake of first-year MBChB students has largely been from the Eastern Cape and associated hospitals like the nearby Dora Nginza Regional Hospital and associated clinics.

In terms of staffing we have received and continue to receive CVs from all over South Africa and internationally from doctors, specialists and professionals wanting to be part of the medical school.

A significant number have moved to Gqeberha, with many more in the pipeline.

One of the first appointments in 2019 was the Director of the Medical Programme, Professor Mfanufikile Nomvete: a gastroenterologist from Livingstone Hospital and former head of its Internal Medicine Department.

While the human and capital investment for the new medical school is significant, so will the returns be for public health and research.

Our University pursues transdisciplinary scholarship and research, and one of the alignments is a partnership between our Faculty of Health Sciences and our Faculty of Engineering, the Built Environment and Technology (EBET) in the medical device and biomedical engineering field.

EBET’s Advanced Engineering Design Group is involved in the development of intelligent prosthetics to assist people with limited mobility, while the virtual reality (VR) domain presents another great local opportunity.

In line with our holistic approach, we are strongly pursuing community engagement.

We believe that the best approach to medical education, the practice of medicine and healthcare service delivery is one that engages the agency of our learners with strong pass rates in maths, physical science, life science and English.

In 2022 our intake will increase to 80 first-years.

We will partner with these communities to build on their efforts to be informed about the drivers of disease, and to pursue preventative approaches to health and wellness.

We are encouraged by, and fully embrace, the suggestion and advice of the Health Professions Council of South Africa that we constitute an outward facing Advisory Board to guide and enable our medical programme delivery, and to ensure that it stays true to its promise.
New medical school becomes reality

New medical school becomes reality

Long wait for new facility finally at an end

Professor Cheryl Foxcroft outlines what the university is learning, and how it is teaching, over the pandemic

Learning and teaching in the COVID-19 era

The global coronavirus pandemic has led to changes in multiple facets of life and this includes how universities position their learning and teaching.

Here at Nelson Mandela University we continue to:

● Remain flexible and adaptable through unchartered territory
● Adopt a human-centred pedagogical approach
● Prioritise the health of students and staff
● Reaffirm the core values of our university
● Commit to excellence, social justice and equality, and integrity.

To this end we are taking key learnings from our experience of the pandemic in 2020 forward in our ever-growing Faculty of Health Sciences as 2021 unfolds.

Due to the ongoing lockdown restrictions across South Africa, our medical students have had a very different orientation compared to past first years starting out on their university career.

A critical factor to foster their academic success is that students can transition from school to university studies, and we have had to be agile and innovative to ensure they can do so in safety.

Thankfully, the medical school is not a new entity on its own but part of a strong Faculty of Health Sciences which has helped to smile their path.

The Interprofessional Education and Collaborative Practice (IPECP) model is embedded in this faculty, and our medical students will be exposed to the same clinical training platforms as their peers in other healthcare disciplines.

There are other complex realities to learning and teaching over a pandemic.

The online environment has shown us that students need clear communication about where to find the information they need, what is expected of them in a task and, in turn, what they can expect from their lecturers.

It also has led to lecturers becoming increasingly flexible and creative, displaying “without-a-box” thinking as they adjust tests and activities to ensure they are relevant to the COVID-19 environment.

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Support for student learning and wellness is embedded in a variety of platforms at Nelson Mandela University. Though much of the theoretical work in the new medical curriculum will be covered online, it will be augmented with virtual lectures and flipped-class discussions.

We also sought to find ways to make the workload for students and lecturers more manageable. Contact mask-to-mask sessions that adhere to physical distancing and health requirements will be limited to lab work, experiential and work-integrated learning, and possibly revision sessions and tutorials, tests and exams, depending on the level of lockdown.

It’s about finding the balance: keeping our students engaged with the COVID-19 while ensuring the highest possible standards of learning and teaching.

Given our context, flexible, hybrid approach, and the grit shown by academics as well as professional and administrative support staff to persist and adapt as needed, we are confident that our new medical school is prepared for the academic year.

Deputy Vice-Chancellor: learning and teaching, Professor Cheryl Foxcroft, said partnerships were key. “The collaborative engagements with our colleagues at Walter Sisulu University (WSU) and the support we have had from all the other medical schools across the country enabled us to be ready to launch the new, unique medical programme successfully,” Prof Foxcroft said.

“We are a university in the service of society, particularly as it relates to equality and social justice; inclusive of access for good health care,” said Prof Muthwa.

In service to society

Mandela University Vice-Chancellor Professor Sibongile Muthwa said the SAQA approval in December was a welcome step in the lengthy accreditation process.

“We are a university in the service of society, particularly as it relates to equality and social justice; inclusive of access for good health care,” said Prof Muthwa.

“Student safety and security will be supported by the university’s safety and security implementation plan, and to improve the water and electricity challenges, which will in turn also benefit the surrounding community. To manage costs, the university will depend heavily on the Eastern Cape health sector for joint appointments of senior and specialist medical doctors.

Catalyst for urban renewal

The new medical programme is more than a dream come true, it also is a story of hope — thanks, in part, to the urban renewal opportunities triggered by its intentional positioning in Mthatha.

“The late Nelson Mandela said: “Health cannot be a question of income, it is a fundamental human right.”

There is the added opportunity for the medical school to be a catalyst for change in the surrounding townships. Within the university, the medical school joins the faculty of health sciences to become its twelfth department.

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The University had a very clear goal in mind when it decided to place its new medical school in the heart of one of the poorest areas in Nelson Mandela Bay. This intentional location of the campus in Missionvale, says medical school director Professor Fikile Nomvete, is in line with the school’s vision to train general medical practitioners who also have a deep understanding of primary health care.

“Our school must be community-oriented and responsive to that community’s needs, and our geographical location speaks to that vision,” Prof Nomvete said.

He hopes a primary healthcare orientation will become so deeply ingrained in the students that when they graduate “they’ll always remember that the greater population of SA requires primary care.”

“They will understand what it means to be working in an African context, and know how to offer a service to that population.”

In addition to its placement in an under-resourced area, the campus is near Dora Nginza Hospital, one of the state facilities where students will train.

The city’s northern areas lie slightly to the west, with New Brighton, KwaDwesi, KwaMagaiki and other major townships close by to the east.

It is also positioned on a key arterial road, halfway between Gqeberha and Uitenhage, with its proximity allowing for academic development partnerships and engagement with the FET colleges, schools and civil society.

For example, notes Prof Nomvete, “there are two big NPOs around the centre”, referring to the Missionvale Care Centre, whose church tower is visible from campus, and Ubuntu Pathways in Zwide.

“This means we are really well positioned for primary healthcare and community-oriented training.”

Nomvete said, in their first three years, students will spend most of their time in on campus in Missionvale and in the surrounding communities.

Here they will learn first-hand about SA’s health care needs, as Missionvale faces the same triple blight of unemployment, poverty and injustice seen in many other parts of the country.

They also will learn about associated health challenges such as TB and HIV/AIDS.

In response to why the university chose Missionvale and not another large township such as Motherwell or Gqeberha (Walmer) for the school, Prof Nomvete states the obvious: “It is more practical to use a resource that already exists. If you put it elsewhere that would have meant starting from the foundation, putting brick and mortar together.”

Various lecture halls and laboratory facilities have been refurbished at the Missionvale campus and, so far, no building has had to be erected from scratch.

The Missionvale campus was originally Vista University.

Traditionally, South African tertiary institutions were placed far from the people they trained their students to work with, and this needed to change.

Today’s Nelson Mandela University is radically different, as it has overturned the apartheid-era way of thinking and replaced it with an approach that has universal respect for individual dignity and human rights.

In short, the country’s 10th medical school is ideally situated at the Missionvale Campus to meet its mandate of being in the service of society, among those with the greatest need for the provision of good healthcare.
Engaging with our communities

Just as Nelson Mandela University’s new medical school had been looking forward to joining the Missionvale Campus family and getting to know its neighbours, so too, it seems, that the Missionvale community is looking forward to meeting students and staff. 

Metro Ward 31 councillor Luyolo Nombola, for one, could not wait until the medical school opened and he would always follow through — in Missionvale and Algoa Park — started to feel the impact of its presence.

“We are welcoming it with hot hands,” he said. “Knowing that this is the poorest area, in a disadvantaged community, having a medical school here is historical.

“Our residents welcome the university and we have engaged around how it will work, not just in my role of councillor but also as a resident of this ward.

“People understand the importance of this medical school.”

Once it is fully up and running, Nombola hopes “the whole community will benefit.”

And these benefits, he believes, will extend further than Ward 31, citing the councillors in Ward 25 which includes Zwide and part of Algoa Park, and Ward 33 which includes Gouan Mheli, also known as Zinyoka, and Bethelsdorp.

“We are all positive; we couldn’t wait to see it launch,” Nombola said, referring not only to 2021, but also to ongoing infrastructure being developed.

“We will work with them [the university] so that they can deliver on time.

“This must be the flagship of urban renewal in Ward 31, because it is situated among informal settlements.

“It is named after an icon in the late Nelson Mandela and it is only the second medical school in the province, so we are very privileged to have it here.

“It sends a clear message that there is nothing that cannot be done in a township that is of a high standard.”

University community liaison and marketing manager Khanyi Manzini said community engagement was a multidimensional process.

“It seeks to include the diverse voices of communities so they can fully contribute and participate as agents of change in shaping a better society for all,” she said.

“The medical school and its location in the Missionvale area are envisioned to strengthen, deepen and complement the community engagement efforts of the university.”

There are several key NGOs nearby, such as the non-profit trust Missionvale Care Centre, and Ubuntu Pathways in Zwide.

Missionvale Care Centre’s founder and director, Sister Ethel Normoyle, is another community figure who has welcomed the new school.

“Our partnership goes back a long way — we’re practically first cousins,” said the tiny Irish nun who was awarded an honorary doctorate in the Faculty of Health Sciences by Nelson Mandela University (then UPE) in 2001 for her humanitarian work here.

“We have a long connection with the university. We have a memorandum of understanding with it and the former vice-chancellor Derrick Swartz, who was so passionate about this subject, is on our board.

“The late Professor Pepeta used to come around here.

“He was so full of enthusiasm and he would always follow through on what he said he would do,” Normoyle said.

Missionvale Care Centre’s values resonate with those of the university as both believe that education is a powerful avenue to build resilience, and rise above poverty, unemployment and inequality.

Normoyle described their partnership as a “marriage” in as much as “we have a lot to offer and they have a lot to offer.”

“We are also right across the road from the new medical school.

“That’s the great thing about having them so close by, as the students will be able to come here for their fieldwork.”

Medical students will gain experience not only in the centre’s medical, nutrition and wellness units, but also in other areas of its extensive outreach, including home visits.

“They will be visiting people in their home, and standing there, with them where they are, will give them an experience that no book can give,” Normoyle said.

Nombola also appreciated this validation of what each party could contribute.

“The university has not taken just the academic way, the helicoptor view, but they have invested in deeper way that goes to the roots, where we work as a unit,” Nombola said.

“When we talk about legacy, we can achieve so much more with a community dialogue.

“I can’t wait, because the university can play a big role.”
Faculty of health science students enjoy hi-tech facilities

There is a new clinical skills unit, human biology laboratory, a human anatomy and medical physiology laboratory, multipurpose teaching venues, computer laboratories and lecture halls.

State-of-the-art equipment

A high-tech medical school calls for extremely specialised laboratories and training, including state-of-the-art equipment such as the Universi ty’s three-dimensional Anatomage table. Body interact simulation for clinical skills and cadaveric machines to help teach physiology. Tertiary anatomy lecturer Dr Zitulele Thobilabala, for example, has been25 years teaching the subject and teaching students the inner workings of the human body using the Anatomage table.

The first of its kind in South Africa, this fully segmented, three-dimensional (3D) human anatomy system allows the user to visualise organs and tissue exactly as they would see on a cadaver. For Dr Thobilabala, a former Uni versity of Pretoria lecturer who joined Mandela Uni in August 2020, it is a revolutionary teaching aid.

“Anatomy is one of the basic sciences they need to know as a foundation to their clinical studies,” Dr Thobilabala said.

Anatomage

Individual structures are reconstructed in 3D with an amazing level of accuracy on the Anatomage table, and students will sit beside the Anatomage to "see" body parts in 3D as well. This will help to make the subject of anatomy a fully interactive, 3D and touch screen experience.

“The best thing about the table is that a student can remove layers of tissue and then put all the back, down again and have the same experience,” said Dr Thobilabala.

In real-life cadavers, this "rewind" facility is not an option as, once a layer has been removed, the real student is not able to work on the same area.

You also go as deep as you want and when you do find a structure nobody gets to miss out on it because all you need to do is just re-wind. Dr Thobilabala points out that the technology allows students to experience direct dissection and students will be able to experience the same as in the real cadaver, allowing a culture of open communication and collaboration and this is also excellent for teamwork.

Biopac machines

Biopac machines will be used to teach physiology. This system features research-grade, four-channel, data acquisition platforms with built-in universal amplifiers. These amplifiers can record and condition electrical signals from the heart, muscle, nerve, brain, eye, respiratory system, and tissue preparation.

The high-end training apparatus was in use during the latter part of 2020, which allowed for ongoing snagging and procuring outstanding furniture and equipment.

The University has refurbished the following laboratories specifically for the medical school on the Missionvale Campus:

Common basic science laboratory

This will accommodate practical classes for chemistry, biochemistry, cell biology and physics, as well as physiology practicals in a well-lit laboratory. It is designed to seat 51 students.

Physiology laboratory

The physiology laboratory is primarily centred on the requirements of the BioPac student laboratory system where students record and analyse data generated from their own bodies.

 Provision has been made for 12 stations as well as a wash up area and store.

Cross and digital anatomy

A human anatomy laboratory that can be used for anatomical teaching using cadaver, prepared specimens, as well as models and electronic resources such as Anatomage tables, has been designed to seat a maximum of 56 students.

There is a viewing and storage area for cadaver and wet specimens, as well as a teaching area where specimens can be displayed. Students can work in groups either around Anatomage tables or with models, as digital programmes such as Pro3D Picture and Complete Anatomy.

An adjustment can be made to certain teaching areas being developed into an integrated anatomy and pathology museum.

The anatomy laboratory is equipped with adequate lighting, ventilation, air conditioning, 3D connectivity, Holo Maps and security measures. It is a flexible teaching space.

Skills laboratories

The skills laboratory is divided into five areas:

● A physical examination area with nine cubicles and a central teaching space.

● A part-task trainer area for practising clinical procedures. This can also be configured to serve as a simulation room.

● A simulation room with a built-in control room and exterior access.

● Two debriefing rooms which can also be utilised as consultation rooms.

● A teaching venue for student teaching, group work and discussion.

There are plans for adequate and suitable storage areas for task trainers, marking stock as well as high-speed Wi-Fi connectivity.

Attention has been paid to ensure spaces are flexible so they can be reconfigured to suit changing needs.

Additionally, an interactive body interact table will be available for clinical skills training.

Lecture halls

There are five existing lecture halls seating 61, 123 or 282 students in Blocks 106.

These have been refurbished to ensure adequate acoustical facilities, access, lighting, seating and temperature control.

Multipurpose teaching venue

There are two multipurpose teaching venues that can seat at least 100 students, offering a space which can be configured for both formal lectures and facilitated group work.

The decks and audiovisual facilities can be set up in various formations based on the lecturer’s requirements.

Campus actions to keep surrounding community safe

With crime a national challenge across SA, Missionvale Campus has a comprehensive security plan in place to safeguard not only people but also equipment and property — and this has already made an impact on community safety.

Drown up in consultation with key stakeholders, the security improvements aim to benefit both Nelson Mandela University and the surrounding community.

"On completion of all the upgrades, that campus will be the safest campus of all the campuses we have in Port Elizabeth or George,” protection and security director Simphiwe Nokosan said.

Positioned as the campus in the heart of Missionvale, Nokosan said it had been vital to consider internal and external safety.

While putting up state-of-the-art fencing all around and also we have a police presence doing the patrols outside campus in addition to our patrols inside, we said. And it’s paying off — since the introduction of armed response pat roles near the busy intersection of Johnson and the Old Ndhlovu Road, the number of small-scale and high-profile crimes nearly had all but vanished.

“We have not heard of robberies here in the past seven months, which makes us confident that our efforts are working on the outside as well. "Whatever direction you are travelling, whether on the campus as well as outside, there will be safety measures.”

A campus security audit found in on specific focus areas and the university was reassured with the improvements, with students and staff on the mission.

"It’s good to not let not only current but also prospective students know what we are doing in our drive to become an institution of choice, because we are taking security very seriously."
Information and communications technology as an enabler

Using ICT to enhance learning and teaching programmes

**As an innovative and entrepreneurial university, Nelson Mandela University is coming up with solutions that are relevant to South Africa’s healthcare needs. In particular, the new medical school is embracing information and communications technology (ICT) to enhance its learning and teaching programmes. This includes exposing its first intake of 50 medical students to state-of-the-art equipment and making extensive use of online learning resources.**

The University’s senior engineer for blended learning Shaun Meyer spelt out three key areas:  
- Medical technology  
- ICT devices, for example, laptops with 3G connectivity, and the audio-visual and recording equipment used in the classrooms  
- WiFi connectivity.

“ICT is a critical element in the smooth functioning of the medical school,” said Meyer.

The supporting ICT strategy stretches beyond the Missionvale Campus into hospitals, community health care centres and clinics in the metro. Later it will extend further in parts of the Eastern Cape and beyond.

**High-speed connectivity**  
Senior unified communications engineer Cheslin Bagley has been responsible for the networking infrastructure which includes the high-speed connectivity between buildings and between the University’s five campuses.

“Missionvale Campus is already connected to Dora Nginza hospital by a 10-gig fibre link,” said Bagley.

The goal is to connect to all the training hospitals such as Livingstone, PE Provincial and Uitenhage, as well as to the Community Health Care Centres, for the benefit of the medical students.

Bagley said that eduroam, a secure international roaming service developed for the international research and education community, would be available in identifiable spaces within Dora Nginza. It will provide students with easy and secure network access while they are at the hospital.

Students will receive extensive orientation and training on the use of information technology in areas specific to their MBChB programme.

They will need these skills from the outset as they will be using various technology-based platforms in the basic sciences, which include primal pictures, complete anatomy and anatomage.

Computer studies, referred to as digital literacy, form an integral part of a supportive first-year module called academic literacy and reasoning.

Here students will develop both academic and digital skills, essential for success in their studies. This includes training on Moodle, the University’s learning management system that supports blended learning.

There is further back-up from a dedicated Missionvale Campus computer centre for medical students, supported by an ICT technician, as well as the general computer facilities and support services on campus.

**Synergy on and off campus**  
The medical school ICT project has synergies with the Off-Campus Connectivity project which began in November 2019. This is aimed at improving the connectivity to students living in accredited off-campus residences across Nelson Mandela Bay. “We want to give the students staying off campus the same experience as those students staying on campus with regards to internet connectivity,” Bagley said.

Hence students will not only benefit from WiFi connectivity when they are on campus or attending practicals, they also will have access when they go ‘home’ to their residences.

With 3G connectivity enabled, students will be able to access some resources when not in an eduroam space, for example at clinics in rural areas.

They can also access all online course content on their laptops as the prescribed textbooks are based in the cloud.

The idea is that each student will be issued a device at the start of their studies to access their learning materials.

ClinicalKey software will be used to provide all prescribed books on an e-platform. The system provides textbooks, high resolution images, interactive learning tools, information sharing via Office 365 and ability to install the software on up to four mobile devices. ClinicalKey also integrates with Moodle.

Meyer and Bagley admit that COVID-19 did bring its own headaches in 2020. “We were extremely busy during lockdown,” Meyer said, referring to the growth in online use over the pandemic.

“We had to make sure that all our systems were up and running because everything was dependent on it.” Power-cuts are another additional complication in South Africa, particularly at off-campus venues.

“On campus we do have back-up because our main data centre has a generator back-up power supply and the medical school has its own supply of power,” Meyer said.

He sees ICT as playing a vital enabling role, not only for the new medical school but across all the University’s sites. It is essential that all the new infrastructure is compatible with existing platforms.

“We have to ensure that we can provide support and training across all our campuses, equally well,” Meyer said.

Bagley agreed. “ICT is a critical element in the smooth functioning of the medical school,” he added.
Healthy partnerships in service of society

The curriculum

Comprehensive primary healthcare is the foundation on which the curriculum has been designed for Nelson Mandela University’s medical school. Students will be based at Missionvale Campus for their first three years. In their final three years of study, students will be placed at hospitals, health centres and clinics in Nelson Mandela Bay, rotating through different medical disciplines and being taught by clinicians and healthcare workers at the different facilities.

As the programme develops, and especially in their final year of study, students also will be taught in district hospitals in the western region, which includes Humansdorp, Cradock, Graaff-Reinet and Makhandh (Grahamstown).

The curriculum will consist of:

Year 1:
- Academic Literacy and Reasoning
- Basic Medical Science
- Theory and Practice of Medicine I

Year 2:
- Structure, Functioning and Development of the Body
- Basic Principles of Pharmacology
- Theory and Practice of Medicine II
- Year 3
- Integrated Pathology
- Medical Pharmacology
- Clinical Reasoning and Methods

Students will spend most of their time within the Cqebha hospital complex for their clinical training years from Year 4 to 6. This includes Dora Nginza Regional Hospital, Livingstone Tertiary Hospital and Port Elizabeth Provincial Hospital. They also will train at Uitenhage Provincial Hospital.

Year 4:
- Integrated Learning I
- Paediatrics
- Obstetrics and Gynaecology
- Internal Medicine
- General Surgery and Urology

Year 5:
- Integrated Learning II
- Family Medicine and Primary Care
- Psychiatry
- Additional clinical specialties I
- Additional clinical specialties II

Year 6:
- Longitudinal District Hospital Clinical Placement
- Specialist Rotations in fields such as Surgery, Paediatrics, Obstetrics and Gynaecology
- Internal Medicine and Psychiatry

After graduation

After students have successfully completed their MBChB training, they also need to complete their internship and community service. This is as prescribed by the Health Professions Council of South Africa to be registered as an independent medical practitioner.

In line with the University’s belief in working together for the greater good, it partners with many other stakeholders to be in the service of society.

The Faculty of Health Sciences has partnerships with, among others, the departments of Health and Higher Education and Training and these stretch across national, regional and local levels.

Medical School director Profesor Fikile Nomvete outlines how the National Health Act impacts the medical school activities.

“All medical schools must be approved by the Department of Health to exist — without their blessing no medical school would exist,” he said.

In addition, a relationship with the department of higher education and training also was essential for an academic institution such as a Nelson Mandela University, which is a comprehensive university.

“Medical schools therefore generally pride themselves on saying they are managed by two departments, Health and Higher Education,” Prof Nomvete said.

These national government departments ask the University relevant health and academic questions, such as if the medical training facilities are suitable, or if the relevant staffing is in place.

The provincial department of health manages the hospitals and clinics where Mandela Uni students will be deployed.

“All faculties of health sciences — Rhodes University, Fort Hare, Walter Sisulu University and us — have a vertex in the provincial department of health,” Prof Nomvete said, adding that inter-institutional agreements took these partnerships further.

The University’s interprofessional education model also has implicit partnerships within and across disciplines relevant to holistic primary healthcare.

In 2020 when University representatives became part of the Provincial Coronavirus Command Council, and this is an ongoing relationship.

“We have seen this partnership in action during the COVID-19 outbreak, where we serve on the advisory committee of the PCCC of the premier,” Prof Nomvete said.

There also are partnerships with the provincial government for students to train at Dora Nginza, Livingstone and PE Provincial hospitals. As the programme develops, students also will train at another field, in Uitenhage Provincial and at Settlers in Makhandh.

“There are key hospitals which our students will penetrate.”

As a partner to other health professionals, the school also will work with the National Health Laboratory Service (NHLS) for lab work and other treatments.

Good working relationships

On a local government level, the University has a good working relationship with the Nelson Mandela Bay Metro.

“It’s really important that we pay attention to the Nelson Mandela Bay Metro, and we’ve had meetings with the mayor and mayoral committee members,” said Prof Nomvete.

“We do appreciate the solid relationships we have with them; the metro will always take its rightful position in terms of being a partner.”

He said the municipality was not only key in identifying clinics where medical students could be of service and receive optimal training but also assisted in other areas such as infrastructure, economic development, and safety and security.

“The Metro helps us to reinforce the issues of safety and security,” Prof Nomvete said.

“Because that is a real situation: we have seen it with emergency medical services and ambulances that sometimes are hijacked or robbed.”

As an engaged institution, Mandela University in addition has ongoing partnerships with ward councilors from the Missionvale community and its surrounds.

“The community needs a degree of ownership,” Prof Nomvete said, hence the University has set up a community Advisory Board, as recommended by the HPCSA.

Related to this, the University’s Missionvale Consultative Committee meets to keep its neighbours up to speed. It also shares information so that local SMMEs can benefit from opportunities generated by its Missionvale projects.

Partnerships also mobilise funding support to enable urban renewal and regeneration. As an entrepreneurial and innovative university, Mandela University plans to come up with solutions that are novel and relevant to SA’s healthcare needs.
Establishing a new medical programme requires extensive human resources, which in part calls for joint appointments for clinicians employed by the Eastern Cape department of health.

Medical programme director Prof Zoleka Mpompa was appointed from October 2019, with further appointments made in 2020. The staff complement includes administrative, academic and support staff, as well as a dedicated administration officer.

Here are a few of the faces first-year medical students will encounter.

Prof Philile Nomvete, medical programme director

Prof Nomvete is a qualified and registered gastroenterologist and internist physician who joined Nelson Mandela University on October 1, 2019 as director of the medical programme. Born in a rural village in Flagstaff, in the Eastern Cape, he trained as a medical doctor (MBChB) at the then University of Natal (Durban) and with the College of Medicine of SA in internal medicine, subsequently gastroenterology. He has previously held the positions of head of gastroenterology at Livingstone Tertiary Hospital (Gqebergha, head of gastroenterology at Dr George Mukhari Academic Hospital and University of Limpopo (Ga-Rankuwa, Pretoria), and head of internal medicine at Livingstone Tertiary Hospital (Gqeberha). He is also enrolled in a postgraduate diploma in health professions education.

Dr Savania Nagiah, senior lecturer: medical biochemistry

Dr Nagiah is a senior lecturer in medical biochemistry in the human biology department of the Mandela University medical programme. She has a PhD in medical biochemistry from the University of KwaZulu-Natal, specialising in molecular and epigenetic mechanisms. Dr Nagiah’s research interests include epigenetic mechanisms of metabolic disorders associated with HIV and anti-HIV drugs, and particularly interdisciplinary research drawing links between molecular biology and clinical outcomes. She has ongoing collaborations with UKZN in projects involving molecular mechanisms of toxicity by food contaminants and HIV-associated gallstone disease. Nagiah has served the NRF Innovation Postdoctoral Fellowship (2016-2019) and was a postdoctoral fellow in the HIV/TB treatment unit at the Centre for Aids Programme of Research in SA (Caprisa) before joining the medical programme.

Dr Yoshna Kooveree, co-director: theory and practice of medicine

Dr Kooveree is a medical doctor with an interest in biostatistics and in addition medicine. Her qualifications are MBChB (Wits), diploma in mental health (CMASA), postgraduate diploma in general practice (FPD) and master’s in applied ethics (Stellenbosch). She is completing year one of the postgraduate diploma in addiction care (Stellenbosch). Kooveree is a senior lecturer (co-director) in theory and practice of medicine 1 & 2 for MBChB. She also works with patients at two private addiction treatment centres in Gqeberha.

Dr Francois Fourie, Nelson Mandela Fidel Castro (NMFC) medical collaboration co-director

Dr Fourie qualified in 2000 from Stellenbosch University with a MBChB and went on to complete an advanced health management programme (cum laude) from Yale School of Public Health and the Foundation for Professional Development Business School. Thereafter he completed a MPH (applied biostatistics) from Stellenbosch University, and fuelled by his passion for management, embarked on an MBA at Stellenbosch University.

He has a passion for biomedical ethics and healthcare management and previously was senior clinical manager of the Nelson Mandela Bay Health District. He is the co-director of the NMFC medical collaboration.

Ntombokholo Ndima, NMFC medical collaboration programme administrative assistant

Ndima was born and raised in Gqeberha and obtained her national diploma in public management (development option) from the then PE Technikon in 2002. She worked as a data capturer at the Nelson Mandela University for two years and now is programme administrator for the NMFC programme. Her major role is to liaise between learners and students and all administrative duties for the NMFC programme in the faculty of health sciences.

She is passionate about solving problems in her work environment.

Philanthisa Mabena, associate lecturer: human biology

She was born and raised in Lusikisiki, Mabena holds a BSc (honours) (physiology) degree from Walter Sisulu University for her research work focused on male erectile dysfunction. She recently completed an MSc in medicine (physiological sciences), with research on vascular events in young people of African descent.

His research interests include the investigation of premature vascular events in young South Africans, beyond conventional risk factors, as well as male sexual health, particularly erectile dysfunction.

Mabena is associate lecturer in human biology in the medical programme.

Marie Williams, community platform co-director

Williams is a registered nurse with 22 years of experience, 20 of them at community level. She holds honours and master’s degrees in primary healthcare. Her area of interest is tuberculosis and she has been a TB programme manager for more than seven years at district level as well as district level. This has enabled her to establish strong working relationships with global, national and Pepfar-funded NGOs that specifically support the TB and HIV programme in the Nelson Mandela Bay health district.

Her other interest is clinical platform training.

As a community platform co-director, Williams will be responsible for allocating students to all six district-level services such as clinics, community health centres, hospitals and the Zanempilo mobile clinic, as well as assisting in the clinical skills laboratory.

Dr Zithulele Tshabalala, senior lecturer: human anatomy

He has a keen interest in translational anatomy in orthopaedics, anaesthesiology and vascular surgery, and his focus is on using cadaveric dissection and imaging for application in surgical and clinical procedures.

He is collaborating with UP, where he is a lecturer in the department of anatomy.

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Joastin Naidoo – Associate Lecturer: Human Anatomy
Born and raised in Chatsworth, Durban, Joastin Naidoo completed his Bachelor of Medical Science: Anatomy (Honours) in 2018 and recently commenced his Master of Medical Science: Anatomy. His research interests lie in endodontic and neuroanatomy, anatomical variations and medical education.

Dr Simo Zulu – Senior Lecturer: Human Physiology
Dr Simo Zulu holds a PhD in Human Physiology from the University of KwaZulu-Natal. He completed his Postdoctoral Fellowship at the University of Cape Town. He is an International Brain Research Organization (IBRO) Associate and currently an executive member of the South African Neuroscience Society (SAN). His research interests are mainly in translational neurosciences and aimed towards understanding the pathophysiology of Neuroinfectious diseases, particularly HIV neuropathogenesis.

**Dr Paul Caiger, curriculum developer**
Dr Paul Caiger also holds a diploma in mental health in and tropical medicine and hygiene. He has vast experience as a medical officer in the mining industry and government services as well as in occupational health. His interests are in trauma, orthopaedics, tropical medicine, occupational health and medical education. Caiger is part of the team developing the medical curriculum and is involved with all aspects, especially:

- The scenario-based core curriculum in conjunction with Gqeberha specialists
- The development of the virtual families experience
- The clinical methods and skills curriculum in the theory and practice of medicine manuals.

He has also been involved in reviewing the curriculum for the basic medical sciences.

**Dr Nomalungelo Ngubane, senior lecturer: academic literacy**
Ngubane is a senior academic literacy lecturer. She holds a PhD in education from the University of Zululand (2019), a postgraduate diploma in higher education (Rhodes University); master’s degree in education (University of KwaZulu-Natal); bachelor of education honours (UKZN) and advanced certificate in education (Unisa).

**Michelle Butler - Operations Co-ordinator**
Butler worked as a physiotherapist lecturer at the University of the Free State (UFS) for eight years before moving to Gqeberha to work in interdisciplinary simulation for co-ordinating and present interprofessional simulation workshops. Butler holds a BSc (physiotherapy) degree from the University of KwaZulu-Natal and an MSc (physiotherapy) degree from UFS.

**Maria Phillips - Clinical Skills Lab Co-ordinator**
Dr Phillips’s role is to improve student learning through innovative learning strategies and to advance the use of technology in the Faculty of Health Sciences. She also directs the academic integrity of the Nelson Mandela Fidel Castro programme.

These students learn together during their training with the implication that collaborative practice is ingrained in their DNA.

**Respect for collaborative care**
Evidence-informed research suggests that once health care professionals work together, collaboratively, patient care improves significantly.

Furthermore, healthcare professionals learn to respect each other’s roles and acknowledge each role as equally important, irrespective of whether they are novice graduates or super-specialists.

As the late Nelson Mandela once cautioned: “The important thing to remember is that no single person can do everything.”

The Faculty of Health Sciences has already successfully introduced this model as a force for good, with students and the communities they serve benefiting from ongoing partnerships.

It is important to note that, although the curriculum has a primary health care orientation, Nelson Mandela University medical school graduates will be professionally qualified to serve in the public or private health system, able to practise in a holistic, culturally sensitive and comprehensive manner.

In training to become doctors who are fit-for-purpose, students learn in the setting where they are most needed, which is the primary health care environment in Africa. Programmes, thus, have a clear community-led learning approach.

This primary health-care orientation will incorporate health promotion and disease prevention, curative medicine, rehabilitation and protection from harm, which underpins the medical curriculum design.

This ethos is vital given the dire shortage of qualified healthcare professionals in South Africa.

The most recent statistics show that more than a third of all doctors’ posts are vacant and there is only one doctor to every 4230 people in the Eastern Cape.

Furthermore, only 14834 of the 37641 qualified doctors works in the South African public sector and 79% serve private paying patients.

The Faculty of Health Sciences has seen significant growth in both existing and new programmes across various health professions and will continue to grow with the launch of the medical school.
The kind of doctors the University wants to develop

New medical programme puts communication and community at the centre of care

Nelson Mandela University’s Medical School graduates will carry on the legacy of the late, great man after whom the institution is named. This is why the University has paid particular attention to the kind of doctor it would like to develop through its new medical programme.

Dr Yoshna Koojeeve, who teaches Theory and Practice of Medicine to the first-year students, is clear about who this will be.

“We want community-orientated, fit-for-purpose doctors who communicate medicine that meets the needs of our communities,” Dr Koojeeve said.

“This graduate profile is based on the seven core competencies listed by the Health Professions Council of SA for undergraduate students in medical teaching and learning programmes.

Though first and foremost a healthcare practitioner, every graduate will also be able to:

- Professional
- Communicator
- Collaborator
- Leader and manager
- Health advocate
- Scholar

“These HPCSA competencies are the qualities we need our graduate doctors to have,” Dr Koojeeve said.

Nelson Mandela University also has an underlying philosophy of delivering graduates who are attuned for primary healthcare orientated practice.

The doctor as communicator

“Everything that we teach spirals up through the six years, but the emphasis from year one is to teach the students how to communicate effectively and what it means to be a professional,” she said.

“Around the world, medical educators have realised one of the biggest problems patients face, and a main cause of unhappiness with medical doctors, is not in their scientific knowledge or clinical skills, but in their communication skills.”

“How do we make sure what a good communicator: How do we listen? How do we elicit the information that we need?”

Multilingual focus

“Communication must also be able to reach across the language groups of the Eastern Cape, which are predominantly English, Afrikaans and isiXhosa.”

Cultural awareness is another facet.

“We do not focus purely on just delivering the information,” Dr Koojeeve said.

“We also try to gather from the patient what it means to them in their cultural context to have a certain illness, and what they want from the doctor in terms of treatment.”

“Students will also focus on professionalism in the first year.”

“This carries through in everything that they do — students are expected to demonstrate professionalism in the way they dress, their behaviour, their communication with patients and with other professionals — anybody they come into contact with,” Dr Koojeeve said.

“Being a professional has certain ethical obligations and requirements.”

“We’re moving away from this idea that the doctor is just a scientist imparting knowledge, who tells you what needs to be done. It’s about putting the patient at the centre of care.”

Strong community orientation

Students will learn medical humanities, which includes an introduction to psychology, sociology, medical anthropology, ethics and more.

“We draw in perspectives from different healthcare fields because there’s a very strong community orientation to our course.”

“Competencies include leadership and management, and we introduce those in year one by getting students to see the real-world setting healthcare is practised in and how these competencies are applied at primary healthcare level.”

“We introduce our medical students to collaboration with other health professions from year one.”

“Students are also introduced to what it means to be a health advocate.”

Focus on primary healthcare

In the past, medical school students would only go out for clinical practice to clinics or in hospitals in year three or four. “However, our students will be going out and making contact with families and clinical patients from year one,” Dr Koojeeve said.

“Traditionally, you would learn about psychosocial development, or social determinants of health or primary healthcare, but only see it in a clinical setting in later years of training.”

“We want to take it out of the textbook and say, when we talk about TB and HIV, this is how you see it when we talk about poverty or malnutrition affecting health, this is how you see it.”

“We are in the heart of the township and we want to develop this relationship with the community so that in the beginning the community almost ‘mentors’ the students.”

“Around the world there has been this recognition that you cannot just produce the scientist, because we are predominantly dealing with people.”

“This is very much the way medical curricula are orientated internationally,” she said, and here is where she had found her MPhil in Applied Ethics (Bioethics) from Stellenbosch University helpful: “That links into this course because these are ethical competencies we’re talking about, and we need to develop these skills very early on, and especially so in our setting.”

“We fall far short of the World Health Organisation’s recommendation for the number of doctors per number of people, but I had thought we were going to get between 1000 and 1500 applications.”

How to join Nelson Mandela University

There are only 80 places for the 2022 class of 40 students at Nelson Mandela University from applications close on June 30 2021.

So, if you are keen to be part of the second trailblazing group of doctors in training, submit your online application and all supporting documents as soon as possible.

You can take a virtual tour around the new campus, view a photo gallery of the Medical School and find the website: https://medicalschool.mandela.ac.za/.

For further information, e-mail: medicalschool@mandela.ac.za.

With school contact, exhibitions and face-to-face initiatives being held, the student recruitment team are still supporting prospective students via online platforms.

They will help to answer all queries online. For an online form, find out more by e-mailing Myfuture@man dela.ac.za or visiting the website: https://myfutu re.mandela.ac.za.

Before completing an online application form, undergraduate applicants must note the Applicant Score (AS) and minimum pass percent- age for each admission requirement, or refer to the A-Z career webpage, faculty website or facult y guides for additional information.