

**NELSON MANDELA**  
UNIVERSITY



**December 2020**

**Virtual Summer Graduation**

**Session 5**

**Faculty of Engineering, the Built Environment  
and Technology**

18 December 2020 | 14:30



VISION

To be a dynamic African university, recognized for its leadership in generating cutting-edge knowledge for a sustainable future

MISSION

To offer a diverse range of life-changing education experiences for a better world

VALUES

Excellence

Diversity

Ubuntu

Social justice and equality

Integrity

Environmental stewardship

Excellence

Diversity

Ubuntu

Social justice  
and equality

Integrity

Environmental  
stewardship



# Contents

Vision, Mission, Values	
Congratulatory Message	4
Nelson Mandela University	6
Fast Facts	7
Exciting Prospects	8
Office-Bearers of the University	10
Executive Deans of Faculties	11
Order of Proceedings	12
Honorary Doctoral Recipient Phuthuma Nhleko	22
Academic Dress	23
Faculty Colours	24
Congratulatory Message from the Alumni Association	25
National Anthem	26



# Congratulatory Message



Dr Geraldine Fraser-Moleketi  
Chancellor



Professor Sibongile Muthwa  
Vice-Chancellor

Graduation is a significant milestone in anyone's life. It is the culmination of an academic journey that reflects your commitment, perseverance, hard work, intellect and sacrifice, and particularly so this year. We know the pandemic seriously impacted on your studies. It has not been easy. We also know the sacrifice and hard work is often not yours alone as many have travelled with you – your friends, your lecturers, your supervisors, your mentors and your family. They have invested in you financially, encouraged you to persevere, guided your studies and above all, believed in your ability to succeed and achieve this graduation dream.

Today your joy is our joy too, even though we are celebrating virtually. Such a significant moment – your graduation day – must be celebrated for it not only recognises all that you have achieved but focuses on all the potential and possibilities to come. It offers us great hope for the future – for you are that future.

We salute and applaud your achievement and wish you all the very best for your future endeavours.

Never stop learning. Do not let your curious spark die out, for education is not only your passport to the future – but also to the future hopes of our country, our continent and is indeed a foundation for a better world, as Nelson Mandela so eloquently put it:

**“Education is the most powerful weapon which you can use to change the world.”**

Congratulations!

**Umyalezo wokuvuyisana nabo bathweswa isidanga. Ukuthweswa isidanga, yimbalasane kubomi bakhe nabani na. Ngumda wendlela yezemfundo, obonisa ukuzinikela, ukunyamezela, ukusebenza nzima, ukuba krele-krele nokuncama ngenxa yezifundo, ingakumbi kulo nyaka. Siyayazi ukuba lobhubhane sijongene naye uzichaphazele izifundo zenu. Bekungekho lula. Siyazi kanjalo ukuba ukuzidina nokusebenza nzima kumatyeli amaninzi ayondlela eniyihamba ninodwa, koko baninzi**

abahamba nani- izihlobo, abahlohli, abaphathi, abacebisi kwakunye neentsapho zenu. Baninceda ngokwemali, bekwanikhuthaza ukuba ninyamezele, benikhokela kwizifundo, kuba bekholelwa ukuba nizophumelela nifezekise iphupha lokuthweswa isidanga.

Namhlanje uchulumanco lwenu, lukwa luchulumanco lwethu, nangona sivuyisana nani ngobuxhaka xhaka balemihla. Lo mzuzu ubaluleke kangaka- usuku lwenu lokuthweswa izidanga- kumele ubhiyozelwe nanjengoko ungabonisi oko sele ukuphumelele kuphela, ukwa bonisa amandla kwakunye namathuba azakuvela. Oku kusinika ithemba elikhulu ngekamva, nanjengoko nili kamva. Sinothulela umnqwazi sikwaniqhwebela izandla ngempumelelo yenu, sininqwenelela okuhle kodwa kwinzame zekamva lenu.

NIngadinwa kukufunda. Ningayeki ukufuna ulwazi, nanjengoko imfundo ingesostixo sekamva lenu kuphela- koko ilithemba lekamva lesizwe sethu, ilizwekazi liphela, kwaye isisiseko selizwe elingcono, nanjengoko uNelson Mandela esitsho:

**“Imfundo sesona sixhobo sinamandla ongasisebenzisa ukuguqula ilizwe”**

#### Sivuyisana nani!

Boodskap van gelukwensing

Gradeplegtigheid is 'n belangrike mylpaal in enigiemand se lewe. Dit is die hoogtepunt van 'n akademiese reis wat jou toewyding, deursettingsvermoë, harde werk, intellek en

opoffering weerspieël, en veral hierdie jaar. Ons weet dat die pandemie 'n ernstige invloed op jou studie gehad het wat nie maklik was nie. Ons weet ook dat die opoffering en harde werk dikwels nie net joune was nie, aangesien baie mense saam met jou die pad geloop het - jou vriende, jou lektore, jou studieleiers, jou mentors en jou gesin. Hulle het finansieel in jou belê, jou aangemoedig om te volhard, jou studies gelei en bowenal geglo in jou vermoë om te slaag en hierdie droom om te gradueer te bereik.

Vandag is jou vreugde ook ons vreugde, hoewel ons dit virtueel vier. Jou gradedag is so 'n belangrike oomblik en dit moet gevier word – nie net omdat dit erkenning gee aan alles wat jy bereik nie, maar ook fokus op al die potensiaal en moontlikhede in die toekoms. Dit bied ons groot hoop vir die toekoms - want jy is daardie toekoms.

Ons wens jou geluk en is saam met jou verheug oor jou prestasie en ons wens jou net die beste toe vir jou ondernemings in die toekoms.

Moet nooit ophou leer nie. Moenie toelaat dat die ondersoekende vonk in jou geblus word nie, want opvoeding is nie net jou paspoort vir die toekoms nie, maar ook vir ons land se hoop vir die toekoms en ons vasteland en dit is inderdaad 'n grondslag vir 'n beter wêreld, soos Nelson Mandela dit so welsprekend gestel het:

**“Opvoeding is die kragtigste wapen wat jy kan gebruik om die wêreld te verander.”**

Veels geluk!

# About Nelson Mandela University



Nelson Mandela University is the only university in the world to carry the name of Nelson Rolihlahla Mandela.

With this honour comes the responsibilities of leading our university into a new era of transformative innovation, development and change in line with the ethos and values of our namesake.

Living the legacy of Mandela should be reflected in the way we teach, learn, do research, engage with our partners, and work, study and live as staff, students and alumni.

We are on a journey to achieve this and become the learning destination for staff and students who:

- Are pioneering change agents for a better world;
- Are committed to creating jobs in an entrepreneurial economy
- Work together across disciplines in seeking solutions and innovations to achieve quality of life and a health environment for all people, and
- Are instilled with a deep need to serve and give back

## Fast Facts



### CAMPUSES

NORTH, SOUTH, OCEAN SCIENCES, SECOND AVENUE (IN SUMMERSTRAND) MISSIONVALE (MISSIONVALE), BIRD STREET (CENTRAL), GEORGE (GEORGE CAMPUS IN THE GARDEN ROUTE)

# 474

### PROGRAMMES

(from certificate through to doctoral qualifications)

# 7 FACULTIES

(Business and Economic Sciences; Education; Engineering, the Built Environment and Technology; Health Sciences; Humanities; Law and Science)

# 29 462

### ENROLLED STUDENTS

# 6 STRATEGIC RESEARCH AREAS

# 7 STRATEGIC PRIORITIES

- Student access and success
- Resource stewardship
- Engaged innovative scholarship
- Transformative institutional culture
- Talented high-performing staff
- Enabling systems, processes and infrastructure

# 3000

### PERMANENT EMPLOYEES



# 4.5%

OF THE STUDENTS COME FROM

# 60 DIFFERENT COUNTRIES



# Exciting Prospects



## Ocean Sciences Campus

Our new generation university is set to become the leading “go-to” destination in Africa for all marine and maritime teaching, learning, engagement, innovation and research at postgraduate level.

This follows the launch of the Ocean Science Campus in Summerstrand in September 2017 as part of the University’s strategic drive to unlock the potential of the blue economy in a sustainable manner to benefit all South Africans.

The development and expansion of our academic programmes will offer new opportunities to all South Africans.

## Intentional Design

The new campus at the former CSIR offices has been intentionally designed and revamped to embrace a transdisciplinary way of working. It has also been specifically branded to reflect its purpose – that of a dedicated creative and innovative hub for postgraduate studies, and its physical spaces revamped to allow scientists from all disciplines to

work as teams. Phase two of the infrastructure project is now underway.

## Partnerships

This transdisciplinary research strategy does not stop with the academic project. Instead, it also seeks to embrace a ‘blue commons’ partnership with the metro, local government, big business, civic society and all those who live, work and play at the water’s edge and the oceans. It also includes several international partner universities.

By bringing all players together, all basic, formative and applied professional knowledge competencies in Ocean Sciences are exposed, developed and shared in novel ways. Strategically, this approach offers better options for both discovery research and that of solving real world problems arising from economic need, while always ensuring ecological sustainability.





## New Medical School

The University is confident of accepting its first intake of medical students for 2021 and establishing itself as the country's tenth medical school on Missionvale Campus.

Once the final accreditation from the Council for Higher Education (CHE) and South African Qualification for the new Bachelor of Medicine and Bachelor of Surgery (MBChB) is received, then it will be full steam ahead for the University's first cohort of 50 students in early 2021.

## Innovative Teaching Model

The University will be using an innovative transformative distributive teaching model that will see students come together to study across health science disciplines and leverage the benefits of technology – all towards their service to society, especially within the metro.

The transformative interprofessional education model (IPE) will see doctors work and study alongside nurses, radiographers, psychologists, environmental health practitioner, pharmacists, emergency medical care students and the like, to offer holistic and integrated health care.

## Mandela University healthcare graduates

Mandela University has an underlying philosophy of delivering graduates who are attuned for primary healthcare-oriented practice.

Like today's graduates, the University's Medical School graduates will carry on the legacy of the late, great man the institution is named after.

Which is why the University has paid particular attention to what kind of doctor it would like to develop through its new medical programme.

"We want community-oriented, fit-for-purpose doctors who are skilled to practice medicine that meets the needs of our communities," says Dr Yoshna Kooverjee, who will teach Theory and Practice of Medicine to the first-year students in 2021.

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

## Missionvale Campus

The MBChB programme has been intentionally located on Missionvale Campus, not least because of its proximity to several clinical platforms, including Dora Nginza Hospital, but because of the opportunities of the Medical School offers as a catalyst for positive change in terms of urban renewal in an impoverished area and in serving those where healthcare is needed most.



# Office-Bearers of the University

## **Chancellor**

Dr GJ Fraser-Moleketi: MAdmin (UP), DPhil (hc) (Nelson Mandela University)

## **Chairperson of Council**

Ambassador NP January-Bardill: Cert in Ed (UBL), Dip HR Mgt (Damelin), BA (UBL), MA (Essex, UK)

## **Vice-Chancellor**

Professor SW Muthwa: BA (SW) (Fort Hare), BA (SW) Hons (Wits), MSc, PhD (London University, UK)

## **Deputy Vice-Chancellor: Engagement and Transformation**

Prof A Keet: BA, HDE, BEd, MEd (UWC), PhD (Edu Mang, Law and Policy) (UP)

## **Deputy Vice-Chancellor: Learning and Teaching**

Prof CD Foxcroft: BA, BAHons, MA, DPhil (UPE)

## **Deputy Vice-Chancellor: People and Operations**

Mr LE Hashatse: B (Journ & Media Studies), BAHons (RU), MA (Edith Cowan, Australia)

## **Deputy Vice-Chancellor: Research, Innovation and Internationalisation:**

Dr T Mgwebi: BSc, BScHons (Botany) MSc (Aquatic Resource Management), Higher Diploma in Education (Unitra); PhD (Cell & Developmental Biology) (UCT); PGDip (Tertiary Education Management) (University of Melbourne, Australia)

## **Executive Director: Finance**

Mr MR Monaghan: BCom (UPE), BComHons (UNISA), Professional Accountant (SA)

## **Executive Director: Human Resources**

MS N Bam: BSocSc (UCT), PGDip (UFH), MBL (UNISA)

## **Registrar**

Mr E De Koker: BA(Pub Admin) (UCT), BAHons(Pub Admin) (UNISA), M(Pub Admin) (University of Warwick – UK)

## **Dean of Students**

Mr LP Jack: NDip (PMA) (EC Technikon), BTech(PM) (PET), BAPhil (US), MCom (UKZN)

## **President of Alumni Association**

Mr K Blöse: BSc (Building Economics), BScHons (QS) (UPE)

# Executive Deans of Faculties

## **Business and Economic Sciences**

Prof HR Lloyd: BCom, BComHons, MCom, DCom (UPE)

## **Education**

Dr T Morar (Acting): PTD (Dower College), BA (UPE), BEdHons (RU), MEd (Leeds, UK), BCom (Vista), DEd (Curtin, Australia)

## **Engineering, the Built Environment and Technology**

Prof Barend van Wyk: NHDip (Technikon Pretoria), NHDip (Technikon Witwatersrand), BTech (Technikon Pretoria), BCom (University of South Africa), MTech (Technikon Pretoria), MSc (University of Southern Mississippi), PhD (University of the Witwatersrand), PrEng, PrTechEng, SMIEEE, MSAIMC.

## **Health Sciences**

Prof D van Rooyen (Acting): Cert GM, DipIntN, Dip Nurs Ed, BCur (UPE), BACurHons (Unisa), MCur, DCur (UPE)

## **Humanities**

Prof M Duker (Acting): NDip (FA) (PET), NH Dip (FA) (PET), MTech (FA) (PET)

## **Law**

Prof A Govindjee: BA, LLB (RU), LLM (UPE), LLD (Nelson Mandela University)

## **Science**

Prof A Muronga: BSc,UED (UNIVEN), BScHons, MSc (UCT), PhD (University of Minnesota, USA)

## **Dean of Learning and Teaching**

Dr PP Kota-Nyati (Acting): BA, BAHons, MA Couns Psych (UPE), DPhil (Nelson Mandela University)

# Order of Proceedings

## **Academic Procession**

### **Constitution of Congregation**

Dr G Fraser-Moleketi (Chancellor)

### **Welcome**

Prof S Muthwa (Vice-Chancellor)

### **Choral Performance**

Nelson Mandela University Choir

### **Conferring of an Honorary Doctoral Recipient**

Dr G Fraser-Moleketi (Chancellor)

### **Awarding of Qualifications**

Chancellor

## **Cultural Performance**

Nelson Mandela University Students and Alumni

### **Conferring of Doctoral Degrees**

Dr G Fraser-Moleketi (Chancellor)

### **Message of Congratulations and Dissolution of Congregation**

Dr G Fraser-Moleketi (Chancellor)

### **National Anthem**

Nelson Mandela University Choir

### **Departure of Academic Procession**

*The words Cum Laude indicate in the text that the diploma or degree is awarded with distinction to the candidate/s listed.*

## **FACULTY OF ENGINEERING, THE BUILT ENVIRONMENT AND TECHNOLOGY**

### **HIGHER CERTIFICATE IN MECHATRONIC ENGINEERING**

ZINYA, Sinethemba

### **DIPLOMA IN ARCHITECTURAL TECHNOLOGY**

HAEFELE, Christiaan Franswa  
HERTZ, Cameron  
JODO, Emihle Olimpia  
RAPUDI, Dominic Thabang  
ROSSLEE, Jean-Pierre  
TWEELINCKX, Ennio Petra Peter

### **DIPLOMA IN BUILDING**

FOURIE, Zander  
SINDE, Sakhe Cassin

### **NATIONAL DIPLOMA: ENGINEERING: CIVIL**

JANA, Tracy Alinace  
KOLOI, Thuso  
MAKHOSAYAFANA, Sisanda  
MAQABUKA, Khayaletu Gordon  
MILLER, Blayne Austin Mcgregor  
SCHERENECKAU, Junaygan

### **NATIONAL DIPLOMA: ENGINEERING: ELECTRICAL**

BASKITI, Xolile  
CHAPWETEKA, Cynthia  
FODI, Sivuyile  
GROVES, Dominique Grant  
LANGWANI, Kelvin Joshua  
LOLWANA, Siphhelele  
MAKUPULA, Laylaa Nondima  
MASHABANE, Busie Bunhle  
MOPA, Katleho  
MPAHLWANA, Aphiwe Odwa  
MPAMBANI, Mhlahli  
NETSHIAVHA, Rotakala  
NGEZANA, Makwande Mjoli  
NJOLI, Siyabonga  
SIKHULUME, Buntu  
TROLLIP, Dean  
TSHAKA, Yamkela  
ZWANE, Thabani

### **NATIONAL DIPLOMA: ENGINEERING: INDUSTRIAL**

FODO, Khanya Nosipho  
MALATJI, Mahlatse Matsie  
MKHETHO, Yanga  
MPHOMANE, Sandise Simamkele  
PETTITT, Steven Luke  
SITHOLE, Samora Sakhiwe  
STEENKAMP, Malan  
TIVA, Jabulani Grason  
TSHIPUKE, Mukondeleli  
VAN WYK, Ruan  
ZONDANI, Simanye

### **NATIONAL DIPLOMA: ENGINEERING: MECHANICAL**

CARTER, Richard Frederick  
CHAMBERLAIN, Andrew  
CHIRUME, George Tinotenda  
DIKGALE, Ranti Augustine  
FREWEN, Louis Fick  
KHOZA, Siyabonga  
LOTTERING, Juan-Pierre  
MADIHLABA, Ivan Motheo  
MAPASA, Hlanganisa  
MAYEKISO, Aluve  
MOYO, Vhutshilo  
MTHEMBU, Ebrahim Sfiso  
MTSHWENI, Xolile Leubi  
NASE, Yongama  
TSHIDAVHU, Tshilidzi  
WARNER, Caleb

### **NATIONAL DIPLOMA: INFORMATION TECHNOLOGY (SOFTWARE DEVELOPMENT)**

GOEDDE, Anton

### **NATIONAL DIPLOMA: OPERATIONS MANAGEMENT**

DLULANE, Pumza Phyllis  
MADLAVU, Ntombizine Nwabisa  
MALGAS, Xola Happy  
MONQO, Vuyokazi

**BACHELOR OF ENGINEERING IN  
MECHATRONICS**

MAHAMID, Ahmad  
MOHLALA, Thabelo Brilliant Makgapole

**BACHELOR OF SCIENCE IN CONSTRUCTION  
ECONOMICS**

GWADELA, Ntsika

**BACHELOR OF TECHNOLOGY: ENGINEERING:  
CIVIL (URBAN ENGINEERING)**

BAVUMA, Noloyiso Princess

**BACHELOR OF TECHNOLOGY: ENGINEERING:  
ELECTRICAL**

MNDIYA, Sipehelele Joseph

**BACHELOR OF TECHNOLOGY: ENGINEERING:  
INDUSTRIAL**

AYESSAKI, Emmanuel Youssouf  
BOTH A, Dewald  
MNISI, Mbuso Snowboy  
VELENGCENI, Ayanda

**CUM LAUDE**

CLOETE, Michael Norman  
WALDNER, Anthony Frank

**BACHELOR OF TECHNOLOGY: INFORMATION  
TECHNOLOGY (COMMUNICATION NETWORKS)**

BAMBENI, Sisipho Silungile  
MJOLI, Siliziwe  
WILLIE, Mlibo Abongile

**BACHELOR OF TECHNOLOGY: INFORMATION  
TECHNOLOGY (SOFTWARE DEVELOPMENT)**

DAVIDS, Lyle

YATES, Wesley Wayne

**BACHELOR OF TECHNOLOGY: OPERATIONS  
MANAGEMENT**

BUCWA, Mandilakhe Mazizandile  
DORFLING, Francois Daniel  
FILLIS, Kevin John  
FREEMAN, Simone  
HURTER, Stanton  
JOB, Olivia Teresa Alethea  
LOTTERING, Wayne Jonker  
MBANE, Thembekile  
MOSES, Lucille Annabel  
MTSHISA, Nomawele  
NGAZI, Xolisa  
NGQUWE, Lusanda Emmanuel  
PONASE, Lulamile Evans  
ROBERTS, Barry John  
WILLIAMS, Maurice Thomas

**CUM LAUDE**

MOODALEY, Angelo Clifford Venesh  
ZONDIE, Azaam

**BACHELOR OF TECHNOLOGY: QUALITY**

BANTOM, Lee-Ann Samantha  
JONAS, Clint James  
NTLANZI, Sinazo

## MASTER OF ENGINEERING (RESEARCH)

VAN ECK, Elandre  
(Civil)

Title of dissertation:

*ANALYTICAL EVALUATION OF THE EFFECT OF AGGREGATE VARIATION ON ASPHALT MIXTURE PROPERTIES*

Supervisor: Prof WK Kupolati

---

## MASTER OF ENGINEERING IN MECHATRONICS (RESEARCH)

HWEJU, Zvikomborero

Title of dissertation:

*ADAPTIVE NEURO-FUZZY INFERENCE SYSTEM MODELLING OF SURFACE TOPOLOGY IN ULTRA-HIGH PRECISION DIAMOND TURNING OF RAPIDLY SOLIDIFIED ALUMINIUM GRADE (RSA 443)*

Supervisor: Prof K Abou-El-Hossein

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## MASTER OF INFORMATION TECHNOLOGY (RESEARCH)

AH WHY, Brandon Lawrence

Title of dissertation:

*GUIDELINES TO ADDRESS MEDICAL IDENTITY THEFT AWARENESS: THE CASE OF SOUTH AFRICAN MEDICAL AID MEMBERS*

Supervisor: Prof D Pottas

---

KUCHERERA, Lean

Title of dissertation:

*A CYBERSAFETY EDUCATIONAL FRAMEWORK FOR PRIMARY SCHOOL LEARNERS IN SOUTH AFRICA*

Supervisor: Prof LA Fatcher

---

MABONA, Teoflax Anele

Title of dissertation:

*APPLYING THE SUBSTITUTION ARGUMENTATION MODIFICATION REDEFINITION MODEL TOWARDS ADOPTION OF E-LEARNING USAGE AT WALTER SISULU UNIVERSITY*

Supervisor: Prof D Van Greunen

Co-supervisor: Dr R Jere

---

MBUQE, Apelele Alungile

Title of dissertation:

*A CYBERSECURITY CURRICULAR FRAMEWORK FOR IT UNDERGRADUATES IN SOUTH AFRICA*

Supervisor: Prof LA Fatcher

Co-supervisor: Prof K Thompson

---

MZILI, Xolelwa

Title of dissertation:

*TOWARDS USER EXPERIENCE PRINCIPLES FOR ELECTRONIC TAX*

Supervisor: Prof D Van Greunen

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NGCAMA, Lwando

Title of dissertation:

*THE STATE OF SOCIAL MEDIA POLICY AWARENESS AND COMPLIANCE AT THE NELSON MANDELA UNIVERSITY*

Supervisor: Prof N Mostert-Phipps

---

#### **MASTER OF PHILOSOPHY IN INFORMATION TECHNOLOGY GOVERNANCE (COURSEWORK)**

MABASO, Ngoakoana Unity

Title of treatise:

*AN IT RISK MANAGEMENT FRAMEWORK FOR PROVINCIAL BUSINESS ENTITIES: A CASE STUDY FOR LIMPOPO ECONOMIC DEVELOPMENT AGENCY (LEDA), LIMPOPO PROVINCE, SOUTH AFRICA*

Supervisor: Dr M Makalima

---

MATHASE, Euphodia

Title of treatise:

*A FRAMEWORK TO ENHANCE ICT READINESS FOR BUSINESS CONTINUITY AT THE SOUTH AFRICAN REVENUE SERVICES*

Supervisor: Prof H Fourie  
Co-supervisor: Mr T Jagwanth

---

SIZIBA, Makabongwe Johnson

Title of treatise:

*A STRATEGIC APPROACH TOWARDS THE SUCCESSFUL IMPLEMENTATION OF CORPORATE GOVERNANCE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN THE KWAZULU-NATAL DEPARTMENT OF SOCIAL DEVELOPMENT*

Supervisor: Mr DL Steenberg

---

#### **MASTER OF SCIENCE IN THE BUILT ENVIRONMENT (COURSEWORK)**

CAMNGCA, Vuyokazi Precious

*(Project Management)*

Title of treatise:

*UNDERUTILISATION OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THE AMATHOLE DEPARTMENT OF PUBLIC WORKS*

Supervisor: Ms E Ayesu-Koranteng

---



MAGABUKO, Thando Zuko  
(Project Management)

Title of treatise:

*ETHICS AMONGST PUBLIC SECTOR BUILT ENVIRONMENT PROFESSIONALS: GAUTENG PROVINCIAL GOVERNMENT*

Supervisor: Prof WWM Shakantu

---

MAUBANE, Lekgatla Donald  
(Facilities Management)

Title of treatise:

*ENERGY MANAGEMENT AS AN ELEMENT OF FINANCIAL EFFICIENCY STRATEGY: A CASE OF THE CITY OF TSHWANE*

Supervisor: Mr CJ Allen

---

MOFOKENG, Mosa  
(Property Economics and Valuation)

Title of treatise:

*FROM HOUSING TO SUSTAINABLE HUMAN SETTLEMENTS: A CASE STUDY OF BUFFALO CITY METROPOLITAN MUNICIPALITY*

Supervisor: Prof SL Mbanga

---

NEMUTANDANI, Tshimangadzo Mulisa  
(Project Management)

Title of treatise:

*CRITICAL SUCCESS FACTORS FOR SUSTAINABILITY GOVERNANCE IN TRANSPORT INFRASTRUCTURE DELIVERY IN THE CITY OF JOHANNESBURG METROPOLE*

Supervisor: Prof NS Buys

---

PHIRI, Mkheleni Collen  
(Project Management)

Title of treatise:

*MASS HOUSING DELIVERY IN ADDRESSING HOUSING DEMAND IN ETHEKWINI MUNICIPALITY IN KWAZULU-NATAL*

Supervisor: Prof SL Mbanga

---

TSOSANE, Mosa Brunette  
(Construction Management)

Title of treatise:

*INNOVATIVE CONSTRUCTION METHODS TO ADDRESS HOUSING DEMAND IN SOUTH AFRICA*

Supervisor: Prof WWM Shakantu

---

**DOCTOR OF PHILOSOPHY IN CONSTRUCTION ECONOMICS**

KABUNDU, Emmanuel Kizito

Title of thesis:

*A HOUSING AFFORDABILITY AND TENURE OF CHOICE QUANTUM DELIVERABLE MODEL FOR SOUTH AFRICA*

Supervisor: Prof B Botha  
Co-supervisor: Prof SL Mbanga  
Co-supervisor: Prof GJ Crafford

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**DOCTOR OF PHILOSOPHY IN INFORMATION TECHNOLOGY**

DELPORT, Petrus Marthinus Jacobus

Title of thesis:

*A FRAMEWORK FOR THE ASSURANCE OF CORPORATE GOVERNANCE OF ICT IN SOUTH AFRICAN LOCAL GOVERNMENT*

Supervisor: Prof R von Solms

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SIBANDA, Mbusi

Title of thesis:

*A STRATEGY FOR GOOD IT GOVERNANCE IN SOUTH AFRICAN MUNICIPALITIES*

Supervisor: Prof R von Solms

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## DOCTORAL CITATIONS



# THE DEGREE OF DOCTOR OF PHILOSOPHY IN CONSTRUCTION ECONOMICS

**EMMANUEL KIZITO KABUNDU**

**Previous qualifications:**

2002	Bachelor of Science (Hons)	Makerere University, Kampala, Uganda
2009	Master of Science (Built Environment)	Nelson Mandela Metropolitan University
2017	Trainers of Assessors	Quality Skills Framework, Gaborone
2018	Trainers of Trainers	Quality Skills Framework, Gaborone

**Thesis:**

*A HOUSING AFFORDABILITY AND TENURE OF CHOICE QUANTUM DELIVERABLE MODEL FOR SOUTH AFRICA*

This research proposed and developed a model for housing tenure of choice and housing affordability. Secondary data from Statistics South Africa was used. Joint binary regression modelling in presence of endogeneity between affordability and tenure of choice was used as a check for the developed model. There is significant evidence to suggest that the developed model is reliable at correctly recovering the tenure statuses of the households, with the recovery rate being better than the regression model. The models also correctly predict the behavioural patterns of the South African housing markets such as worsening affordability.

Supervisor: Prof B Botha  
Co-supervisors: Prof SL Mbanga  
Prof GJ Crafford

# THE DEGREE OF DOCTOR OF PHILOSOPHY IN INFORMATION TECHNOLOGY

**PETRUS MARTHINUS JACOBUS DELPORT**

**Previous qualifications:**

2014	NDip IT (Communication Networks)	Nelson Mandela Metropolitan University
2015	BTech IT (Communication Networks)	Nelson Mandela Metropolitan University
2017	Masters (Information Technology)	Nelson Mandela University

**Thesis:**

*A FRAMEWORK FOR THE ASSURANCE OF CORPORATE GOVERNANCE OF ICT IN SOUTH AFRICAN LOCAL GOVERNMENT*

This study addressed the importance of the assurance of effective corporate governance of ICT implementation in South African local government. Municipal Councils, as part of its fiduciary duties, need to provide some form of assurance on the effective implementation of corporate governance of ICT. Unfortunately, such assurance is lacking, as evident from the limited assurance that Municipal Councils provide in this regard. To address the identified problem, a framework that essentially assists local government with conducting assurance assessments on its corporate governance of ICT implementation has been developed. This framework provides a subsequent level of confidence to the Municipal Council and its associated constituency.

Supervisor: Prof R von Solms

# THE DEGREE OF DOCTOR OF PHILOSOPHY (INFORMATION TECHNOLOGY)

**MBUSI SIBANDA**

**Previous qualifications:**

2000	BSc (Hons) (Computer Science)	National University of Science and Technology, Zimbabwe
2012	Master of Commerce (Computer Auditing)	University of Johannesburg

**Thesis:**

*A STRATEGY FOR GOOD IT GOVERNANCE IN SOUTH AFRICAN MUNICIPALITIES*

The purpose of the study was to devise a strategic approach for the effective and viable implementation of IT governance in municipalities in South Africa. The research contends that by identifying strategic business and IT issues facing municipalities, and implementing actions based on identified guiding principles, value can be obtained from the use of IT. The proposed strategic framework explores the responsibilities of all layers of government, regulatory institutions and municipalities in addressing the root causes of the poor implementation of IT in municipalities, consistently reflected in qualified annual audit outcomes. It also provides a practical application of IT governance principles in the context of a developing country. The findings suggest that, municipalities that work in isolation will not be able to overcome the current issues. Hence, the proposed framework emphasises the need for the participation of all role players guided by mandates and principles derived from regulations and statutes that support the implementation of IT.

Supervisor: Prof R von Solms

# Honorary Doctoral Recipient

## Phuthuma Nhleko - Doctor of Philosophy (Honoris Causa)



Phuthuma Nhleko, was born on 7 April 1960 in Gauteng. He completed his schooling at St Marks High School in Swaziland where he achieved his O levels.

After finishing school, he moved to the United States where he graduated with a BSc in civil engineering from Ohio State University in 1983 and thereafter, an

MBA in finance from Atlanta University.

Before joining MTN where he made his mark as a hugely successful businessman, Nhleko was a senior member of the Standard Corporate & Merchant Bank corporate finance team. He also practised as a civil engineer in Ohio and South Dakota in the US. Nhleko was also a Senior Road Engineer at the Ministry of Works in Swaziland. On returning to South Africa he held the position of Project Manager at the Urban Foundation.

His arrival at the GSM cellular telephone networks giant, MTN, was marked by fundamental change in the company's strategic vision and implementation plan. Nhleko was instrumental in leading the management leveraged buy-in to MTN in 2003.

Under Nhleko's leadership, MTN's mobile subscriber base grew to over 185 million users in 22 countries in Africa and the Middle East and earned over US\$15 billion in annual revenue. During his tenure the company's market capitalisation increased from US\$6 billion in 1994 to over US\$35billion.

MTN and its subsidiary companies won numerous awards and distinctions including a spot in the top 10 companies in the prestigious American Business Week Survey which identifies companies that show vision, growth and are global companies of the future.

Nhleko is also chairman and a founding member of Worldwide African Investment Holdings (WAIH), an investment holding

company with interests in petroleum, mining, and cement production. WAIH has subsequently been renamed Phembani Group.

Phuthuma Nhleko has managed to enable the successful operation of industry in emerging markets. By applying talent and skill, he has shown that emerging markets can be a logical destination for investors and capital. His strategic executive leadership of from 2002 to 2011, led to the expansion of the mobile operator industry into the developing markets of Africa and the Middle East.

Through his work, he has also ensured that respect for the natural environment is visible as the mobile operator expanded its footprint globally.

Awards for Phuthuma Nhleko include South African Business Leader of Year Sunday Times award in 2009, a Financial Mail Lifetime Achievement Award and inclusion on the list of the top 50 Trailblazers globally.

Nhleko has previously served as a director at Old Mutual Life (SA), Nedcor Investment Bank, Anglo American Plc, BP Plc, Afrisam, Phembani Remgro Infrastructure Fund, GSM Board, Nelson Mandela Children's Hospital and Engen Limited. He returned to MTN as a Non-Executive Chairman during the period 2013 - 2019. He currently holds a Transformational Leadership Fellowship from the University of Oxford for 2019-20.

His leadership style of being team-oriented and decisive, objective-driven and his ability to listen before making a decision, are characteristics that align to the values of Nelson Mandela University.

As a dynamic and relevant role model who adds value to the engineering discipline through his own example of interdisciplinary work, it is an honour for Nelson Mandela University to confer the degree of Doctor of Philosophy (*Honoris Causa*) in the Faculty Of Engineering, The Built Environment and Technology on **Phuthuma Freedom Nhleko.**

# Academic Dress

Special academic attire has been designed for office bearers at Nelson Mandela University to be worn at prestigious academic events like graduation.

Each outfit – from that of the Chancellor and Vice-Chancellor to those of the Executive Deans – has been meticulously selected to signify a particular office; this is a tradition that is consistent with leading universities throughout the world.

The gowns, caps and hoods of Nelson Mandela University graduates were similarly inspired and are explained in detail below.

Academic dress for graduates at Nelson Mandela University is as follows:

## Doctoral Degrees

**Gown:** Cardinal red polyester cashmere gown with long pointed sleeves pleated up with blue cord and button and lined with blue satin with 125mm facings and a blue collar.

**Hood:** Full shape hood in cardinal red polyester cashmere lined with faculty colour satin and edged around the cowl with 75mm faculty colour ribbon with 15mm blue ribbon overlaid central. 50mm wide straight neckband in cardinal red polyester cashmere, 25mm faculty colour ribbon in centre of neckband with 15mm blue ribbon overlaid central to faculty ribbon.

**Cap:** Round doctor's bonnet in black velvet with faculty colour cord and tassel.

## Master's degrees

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail is used.

**Hood:** Full shape blue hood lined faculty colour satin and edged around the outside of the cowl with 75mm faculty colour with ribbon. 50mm straight neckband in blue with 25mm faculty colour ribbon centred.

**Cap:** Black mortarboard with blue tassel.

## Postgraduate Diplomas

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined silver grey satin. Straight neckband with 15mm faculty ribbon on top edge of neckband and around cowl. 15mm silver grey ribbon on bottom edge of neckband and around cowl spaced 20mm away from the faculty colour.

**Cap:** Black mortarboard with blue tassel.

## Bachelor Honours Degrees

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined silver grey satin with

50mm wide straight neckband in faculty colour. Cowl edged 75mm faculty colour ribbon on the outside.

15mm silver grey ribbon runs along the outer edge of the cowl, overlaid on faculty ribbon and on top edge of neckband.

**Cap:** Black mortarboard with blue tassel.

## Four-Year Bachelor's Degrees (Including Bachelor of Technology Degrees)

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined silver grey satin with 50mm wide straight neckband in faculty colour. Cowl edged 75mm faculty colour ribbon on the outside. Silver grey cord runs along the outer edge of the cowl, overlaid on faculty ribbon and on top edge of neckband.

**Cap:** Black mortarboard with blue tassel.

## Three-Year Bachelor's Degrees

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined with silver grey satin with 50mm wide straight neckband in faculty colour. Cowl edged 75mm faculty colour ribbon on the outside.

**Cap:** Black mortarboard with blue tassel.

## Advanced Diploma

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood lined with silver grey satin with 50mm wide straight neckband. 15mm faculty colour ribbon on top and bottom of neckband around cowl.

**Cap:** Black mortarboard with blue tassel.

## Diploma

**Gown:** Black gown, long pointed sleeves pleated up with blue twisted double cord and button. Similar cord detail.

**Hood:** Blue simple shape hood with 50mm wide straight neckband. 25mm faculty colour ribbon on centre of neckband.

**Cap:** Black mortarboard with blue tassel.

# Faculty Colours

Humanities:

Business & Economic Sciences:

Health Sciences:

Law:

Education:

Science:

Engineering, the Built Environment and Information Technology:

Business School:

Yellow

Plum

Apple green

Grey blue

Orange

Dark green

Light blue

Black and magenta



Messrs T. Birch & Co (Pty) Ltd and its subsidiary, Croft Magill & Watson (Pty) Ltd, have been appointed as official robe maker to the University and as contracted suppliers of choice to students for graduation academic attire. Photos In Seconds has been appointed as the official photographer of the University.



# Congratulatory Message From The Alumni Association

Congratulations on your academic achievement! Welcome to the Nelson Mandela University family. You are now a Nelson Mandela University alumnus.

We would like to take this opportunity to introduce you to the Nelson Mandela University Alumni Association.

Once you have obtained your Nelson Mandela University certificate, diploma or degree you become an alumnus of the University and a member of the Nelson Mandela University Alumni Association. The Association is recognised by the University Council as a structure of the University. The Association supports and enhances the realisation of the University's vision and mission through maintaining and expanding positive relationships with its members.

## The Role of the Alumni Association Office

The Alumni Association Office is a public relations and projects department responsible for the day-to-day management and running of the Alumni Association, the University Shop and all matters related to alumni engagement. Primarily, we build relationships and maintain strong links with graduates, parents, friends and supporters of the University through events, networks, services, communications and community engagement.

## The Role of Nelson Mandela University graduate

We encourage you to attend the alumni engagement events, be an active alumni ambassador, support your alma mater in a variety of ways including sharing news, expertise, skills, and contributions in cash and kind. We encourage a culture

of giving back especially for student bursaries, which can be accessed on our alumni website.

## University Shop

Visit the University Shop situated at the Sanlam Student Village on University Way, Summerstrand, for all Nelson Mandela University branded clothing, corporate gifts, bags and memorabilia!

More info: **T** +27 41 504 4371 **E** [shop@mandela.ac.za](mailto:shop@mandela.ac.za)

Join us: **f** [UniversityShopMandelaUni](#) **in** [Universityshop\\_mandelauni](#)

[www.shop.mandela.ac.za](http://www.shop.mandela.ac.za) **@ShopMandelauni**

## Lifetime connection with Nelson Mandela University

We are proud of our alumni and value your connection. We encourage you to stay in touch by updating your graduate profile. We will keep you informed with University developments and graduate news through our event invitations, project and campaign updates, regular e-newsletters via our website and social media channels.

Your graduate profile link

<https://mandela.devman.co.za/Devman/alumni/findme/>

We welcome your visit to the Alumni Associates Centre on North Campus in Port Elizabeth.

More info: **T** +27 41 504 3935 **E** [alumni@mandela.ac.za](mailto:alumni@mandela.ac.za)

Join us: **f** [Nelson Mandela University Alumni](#) **in** [Nelson Mandela University Alumni](#)

[www.alumni.mandela.ac.za](http://www.alumni.mandela.ac.za) **@MandelaUni**

**Stay connected to your alma mater!**



# NATIONAL ANTHEM

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Nkosi Sikelel'i-Afrika,  
Maluphakanyisw'uphondo lwayo,  
Yizwa imithandazo yethu,  
Nkosi Sikelela, thina lusapho lwayo.

Morena boloka setjhaba sa heso,  
O fedise dintwa le matshwenyeho.  
O se boloke, O se boloke setjhaba sa heso,  
Setjhaba sa South Africa.

South Africa.

Uit die blou van onse hemel,  
Uit die diepte van ons see.  
Oor ons ewige gebergtes  
Waar die kranse antwoord gee.

Sounds the call to come together,  
And united we shall stand.  
Let us live and strive for freedom,  
In South Africa our land.

# Change the World

[mandela.ac.za](http://mandela.ac.za)

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