Ceremony 9

Faculty of Engineering, the Built Environment and Information Technology

- **School of Engineering**

Friday, 7 April 2017, 14:30
Vodacom NMMU Indoor Sports Centre, South Campus, Summerstrand

CONGRATULATORY MESSAGE

Graduation is a momentous occasion, representing the crowning moment of all your hard work and the many sacrifices that you and your loved ones have made to reach this milestone.

For us, graduation is the highlight of the university calendar as we witness successful students cross the stage to be capped and enter a new chapter in their lives. Each of you has a unique story to tell.

We salute and applaud your achievement and wish you all the best in your future endeavours. Your time here at the Nelson Mandela Metropolitan University (NMMU) was but a stepping stone towards your future.

We trust that NMMU has equipped you not only with an excellent academic qualification for the many challenges of life and work, but also with life-changing experiences to shape your future.

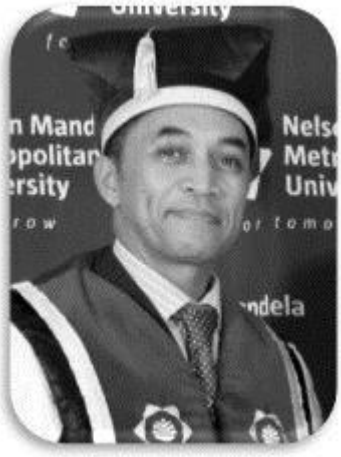
It is our wish that you will leave here today as proud NMMU graduates who will continue to champion social justice and equality, and be change agents in building a better society and a better world.

Thank you for offering us the privilege of making NMMU a part of your life. Your success is our success, and as NMMU alumni, we look forward to watching your story unfold.

Congratulations!

Ms Santie Botha
Chancellor

Prof Derrick Swartz
Vice-Chancellor



ABOUT NMMU

Nelson Mandela Metropolitan University (NMMU) is a new generation university, distinguished by a wide range of study options and access routes open to students. With 450 programmes from certificate through to doctoral level across 130 different career fields, NMMU truly is a comprehensive university.

Founded on more than a century of quality higher education, NMMU nurtures innovation, fosters creativity, embraces technology and develops people to meet the challenges of tomorrow. NMMU is a product of a merger of the University of Port Elizabeth and the PE Technikon in 2005. Prior to such a merger, the Vista University campus of Port Elizabeth was incorporated into the former University of Port Elizabeth.
The university has a strong track record of research, working extensively in partnership with business and industry, making NMMU a valued contributor to the socioeconomic development of the region and beyond.

This year (2017), the university has 24530 students and close to 4100 permanent and contract staff, based on seven campuses in Nelson Mandela Bay and George.

Leaders
NMMU's Vice-Chancellor is Professor Derrick Swartz, the Chancellor is Ms Santie Botha and the Chair of Council is Judge Ronnie Pillay.

Location
Six of NMMU's campuses are in Nelson Mandela Bay and one is in George on the Garden Route. The seven campuses are:
- South Campus in Summerstrand (within a 720-hectare private nature reserve)
- North Campus in Summerstrand
- Second Avenue Campus, home to the new "green" Business School, in Summerstrand
- Bird Street Campus which will be a new postgraduate arts hub in Central
- Missionvale Campus in Missionvale
- George Campus in George
- The Ocean Sciences Campus (recently purchased from CSIR)

Facilities and supportive teaching and learning environment
NMMU is privileged to have outstanding facilities. All students have access to well-equipped laboratories, some of which are open 24/7, and free Wi-Fi throughout all its campuses. All the lecture halls are equipped with the latest technology and students have the opportunity of using additional e-learning tools online. The campus libraries and information services network offers a state-of-the-art integrated online system. There are cafeterias, food courts and coffee shops.

A range of opportunities are provided to enhance the academic success of students. These include a first-year orientation programme, peer-facilitated learning opportunities (eg, Supplemental Instruction, e-PAL, tutorials, practicals, mentor programmes, 'Keys to Success' workshops and online resources). NMMU also promotes both in and outside of the class learning to enhance holistic student development. To recognise the learning that takes place outside of the class, NMMU has developed an innovative, electronic co-curricular record system.

The University also offers the finest sporting facilities in the Eastern Cape and numerous venues for conferences, meetings and other special events.

Faculties
NMMU has seven faculties. They are:
- Arts
- Business and Economic Sciences
- Education
- Engineering, the Built Environment and Information Technology
- Health Sciences
- Law
- Science

Academic focus areas
Though NMMU prides itself on its vast range of programme offerings, it has a number of strategic areas in terms of its core business of teaching and learning, research and engagement. They are:
- Health and wellness
- Economic and business development with a focus on job creation and entrepreneurship
- Materials and process development for industry and manufacturing
- Emerging information and communications technology for development
- Environmental and natural resource management
- Culture, communication and language
- Leadership, governance, democracy and justice
- Educational development in support of excellence in teaching, learning and curriculum
- Infrastructure and human settlement development

Strategic research areas

- Biodiversity conservation and restoration
- Coastal marine and shallow water ecosystems
- Cyber citizenship
- Democratisation, conflict and poverty
- Earth Stewardship Science
- Health and wellbeing
- Humanising pedagogies
- Manufacturing technology and engineering
- Nanoscale characterisation and development of strategic materials
- Science, Mathematics and Technology Education for Society
- Strategic energy technologies
- Sustainable human settlement development and management
- Sustainable local economic development

Research and Engagement entities

NMMU has 31 focused faculty based and 7 institution-wide entities (institutes, centres and units) that exist over and above the formal academic structures that are aimed at promoting engagement, research, technology transfer and innovation. They include the likes of InnoVenton; NMMU's Institute for Chemical Technology and Downstream Chemicals; eNtsa, an institute that focuses on seeking solutions through engineering; Earth Stewardship Science Research Institute (ESSRI); and Institute for Coastal and Marine Research. Many are award-winning entities.

'Green' endeavours

In line with its value of respect for the natural environment, NMMU is involved in a large number of "green" initiatives that will not only reduce its own carbon footprint but is also assisting others in seeking renewable energy resource solutions. The university's new Business School, for example, was the first in the country to be awarded four-star "green" accreditation for a public and education building by the Green Building Council of South Africa in 2013. The "green" agenda is supported by the Centre for Renewable Energy, which is recognised as a research leader in the field.

International links

Just over 8% of NMMU's student body comes from 64 different countries outside of South Africa. The Office for International Education fosters relationships and manages inter-institutional linkages to enrich both NMMU staff and students. These partnerships also foster our growing research. NMMU regularly sends students for study abroad opportunities.

Reasons to be proud:

- NMMU's diversity and multiculturalism. Our African students alone come from 34 countries on the continent.
- The High Resolution Transmission Electron Microscopy (HRTEM) Centre, which opened in 2011, is the only place in Africa where scientists can view atoms in line with NMMU's growing prominence for nanoscience.
- More than 40% of NMMU academic staff have doctoral degrees when compared to the national average of 33%.
- New infrastructure like the iconic Engineering block on North Campus and the new Human Movement Science Building complete with a 100m research sprint track on South Campus.
- NMMU has excellent links with industry and business, particularly within the pharmacy, tourism and automotive industries.
- NMMU's ongoing education partnership with Fifa, as one of only two presenters in Africa of an international sports management programme through the Centre International d'Etude du Sport (CIES).
- The success of being the first student racing team from Africa to successfully compete in the Formula Student event in Germany. NMMU students designed and built a racing car to exacting specifications.
- The university was selected in 2012 to facilitate the country's first electric e-mobility programme and technical centre, called the uYilo e-mobility programme.
- NMMU has extensive expertise within the field of friction processing which has resulted in numerous national awards for the patented technology, WeldCore®. This technology has also aligned the strategic partnership between NMMU and Eskom.
- NMMU's accounting and pharmacy students who continue to produce top results in their national external examinations.
- NMMU's international award-winning choir which continues to perform around the globe to wide acclaim.

ACADEMIC DRESS

Special academic attire was designed for office bearers at Nelson Mandela Metropolitan 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 especially selected to signify a particular office, in keeping with attire worn by academics at leading universities throughout the world.

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

Academic dress for graduates at NMMU 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

Arts:	Yellow
Business & Economic Sciences:	Plum
Health Sciences:	Apple green
Law:	Grey blue
Education:	Orange
Science:	Dark green
Engineering, the Built Environment and Information Technology:	Light blue
Business School	Black and magenta

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

The Image Factor has been appointed as the official photographer of the University.

2017 AUTUMN GRADUATION CEREMONIES APRIL 2017		
Friday, 31 March 2017		
Ceremony 1	***09:30***	*George Campus* *All Programmes*
Tuesday, 4 April 2017		
Ceremony 2	***09:30***	*Faculty of Arts (School of Architecture; School of Music, Art & Design and School of Language, Media & Culture)*
Ceremony 3	***14:30***	*Faculty of Education*
Wednesday, 5 April 2017		
Ceremony 4	***09:30***	*Faculty of Business and Economic Sciences (School of Management Sciences - excluding Undergraduate Diploma qualifications)*
Ceremony 5	***14:30***	*Faculty of Arts (School of Governmental & Social Sciences)*
Thursday, 6 April 2017		
Ceremony 6	***09:30***	*Faculty of Business and Economic Sciences (School of Economics, Development & Tourism)*
Ceremony 7	***14:30***	*Faculty of Business and Economic Sciences (School of Industrial Psychology & Human Resources, Graduate School and others)*
Friday, 7 April 2017		
Ceremony 8	***09:30***	*Faculty of Engineering, the Built Environment and Information Technology (School of the Built Environment)*
Ceremony 9	***14:30***	*Faculty of Engineering, the Built Environment and Information Technology (School of Engineering)*
Saturday, 8 April 2017		
Ceremony 10	***09:30***	*Faculty of Engineering, the Built Environment and Information Technology (School of Information & Communication Technology)*
Ceremony 11	***14:30***	*Faculty of Science (School of Computing Sciences, Mathematics, Physics & Statistics and School of Biomolecular & Chemical Sciences)*
Monday, 10 April 2017		
Ceremony 12	***09:30***	*Faculty of Science (School of Environmental Sciences)*
Ceremony 13	***14:30***	*Faculty of Law* *Faculty of Business and Economic Sciences (School of Accounting, Postgraduate qualifications including Bachelor of Technology degrees)*
Tuesday, 11 April 2017		
Ceremony 14	***09:30***	*Faculty of Health Sciences (School of Clinical Care Sciences and School of Medicinal Sciences)*
Ceremony 15	***14:30***	*Faculty of Health Sciences (School of Behavioural Sciences and School of Lifestyle Sciences)*
Wednesday, 12 April 2017		
Ceremony 16	***09:30***	*Faculty of Business and Economic Sciences (School of Accounting – Undergraduate qualifications)*
Ceremony 17	***14:30***	*Faculty of Business and Economic Sciences (School of Management Sciences – Undergraduate Diploma qualifications)*

OFFICE-BEARERS OF THE UNIVERSITY

CHANCELLOR
MS S BOTHA: BEcon, BEconHons(US)

CHAIRPERSON OF COUNCIL
JUSTICE R PILLAY: BA, LLB(UDW)

VICE-CHANCELLOR
PROF DI SWARTZ: BA(UWC), MA, DPhil, Doctor in Human Rights Law (hc)(Essex University, UK)

DEPUTY VICE-CHANCELLOR: INSTITUTIONAL SUPPORT
DR SW MUTHWA: BA(SW)(Fort Hare), BA(SW)Hons(Wits), MSc, PhD(London University, UK)

DEPUTY VICE-CHANCELLOR: RESEARCH AND ENGAGEMENT
PROF AWR LEITCH: BSc, BScHons, MSc, PhD(UPE)

DEPUTY VICE-CHANCELLOR: TEACHING AND LEARNING
PROF DM ZINN: BA, BAHons, HDE(UCT), MEd, DEd(Harvard University, USA)

EXECUTIVE DIRECTOR: FINANCE
MR MR MONAGHAN: BCom(UPE), BComHons(UNISA), Professional Accountant(SA)

EXECUTIVE DIRECTOR: HUMAN RESOURCES
MS VN BAM: BSocSc(UCT), PGDip(UFH), MBL(UNISA)

REGISTRAR
DR F GOOLAM: BSc, HDE, BEd, MEd(UDW), PhD(UP)

PRESIDENT OF ALUMNI ASSOCIATION
DR R JONAS: BA(UWC), HDE, BAHons(Unisa), MA(UPE), PhD(NMMU)

EXECUTIVE DEANS OF FACULTIES:

ARTS
PROF MJR BOSWELL: BSocSc, BSocScHons, MSocSc(UCT), PhD(Vrije Universiteit, Netherlands)

BUSINESS AND ECONOMIC SCIENCES
DR I LAGARDIEN: PGDip, MSc(London School of Economics), PhD(University of Wales)

EDUCATION
DR SF MOENG: BA, HDE, BEdHons(UPE), MSc(St Cloud State University, USA), DEd(NMMU)

ENGINEERING, THE BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY
DR OSW FRANKS: BSc MechEng, MInd Admin(UCT), Hons (B&A)(US), PhD (Engineering Science)(USF - USA), Pr Eng

HEALTH SCIENCES
PROF L PEPETA: MBChB (Unitra), FCPAED(SA), DCH(SA), MMed (Wits)

LAW
PROF A GOVINDJEE: BA, LLB(RU), LLM(UPE), LLD(NMMU)

SCIENCE
PROF A MURONGA: BSc,UED(UNIVEN), BScHons, MSc(UCT), PhD (University of Minnesota, USA)

DEAN OF TEACHING AND LEARNING
PROF CD FOXCROFT: BA, BAHons, MA, DPhil(UPE)

DEAN OF STUDENTS
MR LP JACK: NDip(PMA)(EC Technikon), BTech(PM)(PET), BAPhil(US), MCom(UKZN)

ORDER OF PROCEEDINGS

ENTRANCE OF ACADEMIC PROCESSION

(The congregation is requested to rise while the academic procession enters the hall)

MOMENT OF SILENCE

Director: Marketing and Corporate Relations
(The congregation is requested to remain standing)

CONSTITUTION OF CONGREGATION AND WELCOME

Vice-Chancellor
(The congregation is requested to be seated)

AWARDING OF QUALIFICATIONS

Vice-Chancellor

DISSOLUTION OF CONGREGATION

Vice-Chancellor

NATIONAL ANTHEM

(The congregation is requested to stand for the singing of the National Anthem)

DEPARTURE OF ACADEMIC PROCESSION

(The congregation is requested to remain standing until the academic procession has left the hall)

INFORMATION TO MEMBERS OF THE CONGREGATION

Members of the congregation are requested:

- *To rise and remain standing while the academic procession enters and leaves the hall.*
- *Not to leave the hall before the end of the ceremony.*
- *To switch off cellular phones or turn them on silent mode.*
- *Not to move around in the hall.*
- *Not to eat and drink in the hall.*
- *Not to get up and take photographs during the ceremony.*
- *To limit cheering and ululating to a minimum.*

❖ **The words C*um Laude* indicates in the text below that the diploma or degree is awarded with distinction to the candidate/s listed.**

NATIONAL DIPLOMA: ENGINEERING: CIVIL

ALI, Ibrahim Ali Abud
APPEL, Lyndon
BOOYSEN, Jade John
FUKUTWA, Siviwe
HEIN, Brendan
JUTA, Ayanda Lwazi
KAKA, Tumishang Bruce
MADIKIZA, Siyamthanda
MADZIVA, Blessing
MAKWEDINI, Sihle
MANGANYI, Vumboni Fortunate
MAPHETO, Thato Philly
MAQAM, Siphenathi Obed
MAYTHAM, Esjevan John-Edward
NAUDE, Barry Craig
NDARANA, Kanyisa Zikona
NDLAMLA, Anathi
NETSHIFHEFHE, Fulufhedzani
NONGALO, Mpumezo Siphelele
NTLAMA, Sifiso
POUOKAM KAMDEM, Ronald Fabrice
QUTU, Sikelelwa
SCHNAUTZ, Eugen
SOTSOPO, Nontyatyambo
VAN DER WESTHUYZEN, Rhys George
VAN ROOYEN, Daniel David
VAVA, Unathi
VENTER, Johan Georg
ZEKEVU, Thokozani

CUM LAUDE

NIEFTAGODIEN, Nurudeen
OBERHOLSTER, Jacobus Johannes

NATIONAL DIPLOMA: ENGINEERING: ELECTRICAL

ANDERSON, Douglas Thomas
APRIL, Ncubeko
BABU, Thembeka
BAHLANU, Vizicelo
BAZA, Athenkosi
BELLINGAN, Benjamin Johannes
BENGEZA, Siyanda
BOLTT, Adrian Jason
BOYA, Bayete Enoch
BRAND, Christopher Stephen
BRAND, Wynand
BUYS, Barend Rudolph
CAFU, Sinethemba Matthew
CHUANG, Yu Te
COETZER, Armand
DALIAH, Keshini Anshula
DEGI, Inala Edison
DU PREEZ, Deon
DYALA, Tulethu
ENGELBRECHT, Gert Nieuwoudt
FILA, Xabiso Edmond
FORTUIN, Sharidan Sadwin Aphrica
GCWABE, Yondela
GELDENHUIS, Matthew Martin
GONYELA, Simbulele
GROBLER, Jeandre
GROBLER, Luhan
GROSS, Heinrich
GWILIKANA, Siyabonga
HABIBIPOUR, Mohammad
HASSIM, Ziaudeen
HLATSHANENI, Siphiwo Vincent
JARA, Lukhanyo
JAROM, Andile
KALIPA, Lunga
KASA, Luthando
KEYA, Sixolile
KOEN, Jean-Pierre
LILLEY, Matthew Calvin
LUNGILE, Yamkela Siposethu
LUPHONGOLO, Vuyelwa
MAAMA, Reamohetse Raymond
MABONGO, Gcinizibele Mihlali
MABUZA, Bongane Treasure
MAKHARI, Muofhe Portia
MAKHUBELE, Rishongile
MAKINANA, Ayanda
MALUKA, Sayco
MANSOOR, Yusuf Rashid
MANZIYA, Ntsikelelo
MAPHOSA, Tinashe
MBEDZI, Tshiwanammbi Scott
MDINGWA, Lwazi
MFINI, Bonginkosi
MFONO, Banele Babalo
MHLALASE, Vuyisa Nceba
MNGOMEZULU, Phindile
MNOTOZA, Sinesipo
MNQWAZI, Ntombikhona
MOUNTAIN, Busisiwe Gloria
MPATI, Sinethemba
MQINA, Siyanda
MULLER, Roger Anthony
MVUSI, Ntsikelelo
MYATAZA, Yolisa
NCOBONDWANA, Bongani
NDISILE, Nyameko Fundile
NGQOBA, Nolubabalo Patience
NGQOLOWA, Mosuli Othello
NTALO, Yandisa
NTLOKO, Siziphiwe
OLIVIER, Dirk Wouter
OLIVIER, Hendré Alexander
PHASWANA, Azwihangwisi Cornelius
POTWANA, Zezethu Sinehlombe Confidence
PRAM, Nondiliseko Felicity
RAMPFUMEDZI, Tshambiluni Seth
RASMENI, Sihle
RETSHA, Abongile
ROETS, Walter Conrad
SAMUELS, Brendon Kurt
SATHEESH, Archith
SCHOEMAN, Christoffel Andreas
SIHELE, Vazi
SIRAYI, Lizo
SKONGWENE, Aphelele
TEDE, Xolisani
VAN DER MERWE, Pieter
VAN GREUNEN, Elandrié Daniël
VAN ROOYEN, Tertius
VAN VUUREN, Francois
WERRETT, Richard Graig
WOODBURN, Neal
YAMANI, Sinetemba

YAWA, Siyabonga
YOSE, Siphosihle
ZINJA, Nomfundo Jane

CUM LAUDE

LINDLEY, Brandon Patrick

MPAKA, Lukholo
NORAWANA, Nomalungisa Faith
PRATT, George Roelof
SCHWARK, Justin
STEADY, Michelle
VAN ANTWERPEN, Ryan Thorfinn

NATIONAL DIPLOMA: ENGINEERING: INDUSTRIAL

CEBA, Anele
CHARLES, Zenande Faith
COETZEE, Micheal
CUMMINGS, Hudson
DUBULA, Zingisa Khanyile
FEPHIWE, Nomathemba Deborah
GOLIATH, Dylan
KAFAAR, Shukry
KRITZINGER, Hano
KUHLANE, Anthony Lizo
LEUTLOA, Tshepang
MABANDLA, Mbalenhle Noluvo
MASEVHE, Ndalamo Adeleide
MAZANTSANA, Kwakhanya
MINNIE, Este-Lynn
MKONJENI, Sibongiseni
MOGOROSI, Zacharia Theko
MPHAPHULI, Livhuwani Ivonne
MUNYAI, Murendeni
MYATAZA, Sinetemba
NDLOVU, Tiyani
NENGOVHELA, Thama
NEWING, Brandon James
NGEJANE, Abongile Sinovuyo
NGODWANE, Bandiswa
NGOMANE, Kulani Trevor
NQETO, Sandisiwe
NTIKA, Phiwe
PIKE, Jon-Marc
RAMULONGO, Dzialwa
RATSHWEUNYANA, Oratile
SIBIYA, Siphelele
STEADY, Kyle
SUFEYAN, Waseemah
TSHISIKULE, Phindulo
TYUTU, Ziphozethu
VAN AARDT, Nadia
VAN DER LINDEN, Isabelle Joy
VAN RENSBURG, Chane
VOLSCHENK, Lelanie

CUM LAUDE

FANSEU KAMHOUA, Barakeel

NATIONAL DIPLOMA: ENGINEERING: MECHANICAL

BOTHA, Jaco Petrus
BRECHT, Tyler
BROWN, Robin
CLEGG, Gregory Jean
DE JONGH, Jan Hendrik
DE WIT, Jean
FLYNN, Dale
GANYILE, Busisiwe Phelokazi
GOMBA, Cuma
GRIGOR, Karla
GRONUM, Waldo
HUGHES, Jason Michael
JACOBS, Jon-Ross
JULYAN, David Henry
KORTE, Christopher Craig
LOUW, Pieter Myburgh
MAFUWANE, Sibusiso
MAGQAZOLO, Siphesande
MAJIJA, Vuyisanani
MAVUSO, Wandile Zamokuhle
MAXAMA, Mbongeni
MBAMBO, Anovuyo
MBELE, Gcina Thembinkosi
MERANA, Nathi Wandile
MKHENCELE, Vuyolwethu
MOJAPELO, Mamolapong Pheladi
MXHESHO, Okuhle
MYBURGH, Hendrik Christoffel
NCANANA, Ziphozonke Andile
NTONGANA, Philasande
ONVLEE, Justin Robert
PASSANAH, Chevon
QALINGE, Msindisi
ROUX, Sean
SAGWITYI, Mzimasi
SILOSINI, Phawu
SIMON, Khanyiso Lawrence
TITUS, Matthew Alfred
TYALALIPHELI, Luvo
VAN TONDER, Ruben Renier
ZIMELA, Luzuko
ZITO, Mzwanele

NATIONAL DIPLOMA: OPERATIONS MANAGEMENT

AHPEW, Shirley-Ann Yolanda
BAILES, Murray
BOSWELL, Rene Derick
BOTHA, Jacques
CAMNGCA, Nondwe Veronica
CARELSE, Kirk Xavier Roger
CLAASEN, Gilian Tamara
DAVIDS, Mogamat Razeen
DE VOS, Morne Gilbert
DINGELA, Masixole
FATAAR, Shurkie
FOUTIE, Marc Gerald John
GODFREY, Denzil Hugh
GODOLA, Nzondelelo Ernest
GOUWS, Jacques Andre
HENDRICKS, Ebrahiem

KEPE, Mkhuseli
KILIAN, Sheldon Anthony
KORTJAN, Siyabonga Abel
KROATES, Desmond Jerome
LAMANI, Andisiwe Ann
LEBATA, Tsepang
LEONARD, Neil
MADULINI, Lindani
MALOY, Siyabulela
MCMANUS, Donovan
MCOPELE, Mbulelo
MNYANDA, Thulisa Palesa
MQOPI, Nomthunzi
MULLER, Dianne Christelen
NEL, Francois
NTUNJA, Phathiswa Gloria
PAULSEN, Nehemia Benjamin
PEREIRA, Karl Hilton
PETERSEN, Jermaine Ryan
PETRUS, Ricardo Stephen
ROBERSON, Brian Paul
ROBERTS, Lenwor Charlton
SINGENI, Xolisa
TSHAM, Novuyolwethu Charlotte
TSHISEKA, Vulikhaya
WILLIAMS, Maurice Thomas
YAFELE, Mkululi

CUM LAUDE

ABRAHAMS, Kurt Lance
QUINN, Nicholas
RILEY, Mark Robert
VAN ROOYEN, Christo Edward

BACHELOR OF ENGINEERING IN MECHATRONICS

BRESLER, Anton
CHIKAMHI, Prince Philhelene
COETZEE, Charl
DAKA, Henry Linda
GREGAN, Justin David
GRIESSEL, Marthinus Ignatius
HASPATEL, Husain Ahmed
HASPATEL, Muhammad Talha
HORRMANN, Lloyd Ernest
HOWELL, Christopher John
JOHNS, Rhett Noel
KAROLIA, Ridwaan
KEYTER, Louis
LIEBENBERG, Bianca Nicolle
LIEBENBERG, Elbert
MABI, Unathi
MALINDA, Muema
MEYER, Gareth
ROBINSON, Riaan
ROOIBAARD, Lonwabo
SCOTT, Dillon Stewart
SEPHTON, Christopher John
STEMMET, Shakirah
THOMAS, Stithian Harry James
VAN DEN HEEVER, Jerusha
VAN EGMOND, Maurice
VAN STEIJN, Loukea Georgea
VENTER, Matthew
WAIT, Scott Cameron
ZITHO, Luvuyo Arthur

CUM LAUDE

WEYERS, Theo Johan

BACHELOR OF TECHNOLOGY: ENGINEERING: CIVIL

ADDAE, Nana (*Urban Engineering*)
BARNARDO, Peter Navine (*Urban Engineering*)
BRUCE, Abdul Ghaaliq (*Transportation Engineering*)
BUYS, Liaan (*Transportation Engineering*)
DUKUZA, Lebohang (*Transportation Engineering*)
FIHLANI, Xolani (*Urban Engineering*)
FLANAGAN, Kevin Henry (*Transportation Engineering*)
HEINE, Phillip Lloyd (*Urban Engineering*)
INTRONA, Jarryd Blake (*Urban Engineering*)
KELEMBE, Lwazi Templeton (*Transportation Engineering*)
KHALIMANE, Xoliswa Karina (*Transportation Engineering*)
KOMBELA, Luyanda Gift (*Transportation Engineering*)
MAGQO, Ongeziwe (*Urban Engineering*)
MAKHETHA, Boitumelo Johnson (*Urban Engineering*)
MAKWABE, Sebatane Cyliah (*Transportation Engineering*)
MAVIKELA, Ayanda (*Transportation Engineering*)
N'DRI, Ahou Linda Aurelie (*Transportation Engineering*)
NEL, Johannes Andries (*Urban Engineering*)
NEWCOMBE, Terray (*Urban Engineering*)
NYAKUSINGA, Andrew (*Urban Engineering*)
POTGIETER, Martin Jacobus (*Urban Engineering*)
SIQANGWE, Lindikhaya Santos (*Urban Engineering*)
VAN NIEKERK, Wouter Johan (*Urban Engineering*)
VAN VUUREN, Gerhard Johan (*Urban Engineering*)

CUM LAUDE

SHARMAR, Riyaaz (*Transportation Engineering*)
SOUTTER, Derek Grant Leslie (*Transportation Engineering*)
VAN DER NEST, Ashley (*Urban Engineering*)

BACHELOR OF TECHNOLOGY: ENGINEERING: ELECTRICAL

DELPORT, Eben Johannes
DIALLO, Thierno Mamoudou
DZALI DZALI, Gaetan Bricel
GERBER, Ruan Tobias
KIVIDO, Nathaniel Ignatius
LOUW, Jaco
MANGEMBE, Mandlakhe
MAPOTA, David Sello
MBANDAZAYO, Mondli
MOENG, Mpho Solomon
MOFOKENG, Mofota Ben
MOFOKENG, Nala Tiisetso

QUVILE, Timothy
RAMASILA, Lucky Wamlambo
VUDZIJENA, Takudzwanashe
ZUZANI, Sithembiso

CUM LAUDE

DE VOS, Timothy Michael
GROBLER, Llewelyn
HALL, Jeffrey Kenneth
NGUGI, Michelle Wanjiku
SHARE, Rudy

BACHELOR OF TECHNOLOGY: ENGINEERING: INDUSTRIAL

BLOU, Esihle Zukhanye
BUCWA, Mandilakhe Mazizandile
ENGELBRECHT, Juan
FANSEU TCHAMNDA, Abdiel
FLOOD, Nicholas Ross
FRANKEN, Jon-Pierre
JACOBS, Siphokazi
JONES, Lyle Michael
JORDAN, Stuart Michael
KAMBALE, Ngise Mulumbi
KOLANISI, Lubabalo
KRUGER, Jaco Krige
LE ROUX, Matt Elandre
LOTTER, Justin
MAHARAJ, Shreesti
MAKGALO, Nkgawo Prodence
MALATJI, Elisabeth Mapula
MLONYENI, Alpheon Mziwenene Ayanda
MOORE, Robert Martin
MPANGE, Zola
NOROLELA, Philasande Mzabalazo
NOTUNUNU, Sizwe Akhona
NTUNGWANA, Fikiswa
NYELEKA, Pikolomzi
PETROS, Bantu Chuma
PILZ, Ayrton Edward
RUITERS, Wazeer
THEMBA, Simphiwe Paul
WELMAN, Myron Ricky
WOOD, Brett Andrew

CUM LAUDE

COLLINS, Amber Nicolette
ELS, Ryno Christo
HORN, Rouxle Charni
VAN WYK, Robert Charles

BACHELOR OF TECHNOLOGY: ENGINEERING: MECHANICAL

BRAND, Arnold Christopher
CRONJE, Jean Pierre
ENABOR, Oseluole Tobi
MYBURGH, Aaron
PATSALOS, George Constantine
STEYN, Ryno

BACHELOR OF TECHNOLOGY: OPERATIONS MANAGEMENT

BAGLEY, Shawn
BARNARD, Tracey Lee
MNUNU, Sanelisiwe
NAKANI, Khayalethu
OOSTHUIZEN, Luke
PETERS, Lester Raymond
RAMASAMY, Neelan
SOLOMONS, Ricardo
VAN HEERDEN, Reniel Wesley

CUM LAUDE

JAPPIE, Gamiem
VENTER, Lourens Johannes

BACHELOR OF TECHNOLOGY: QUALITY

ADAMS, Nomphelo Pamela
COMBRINK, Dewald Andre
DAMONS, Michael John
DE KLERK, Yvonne Maria Christina
DELUBOM, Nonkululeko
DICKMOLO, Ntombozuko
FERREIRA, Aldridge Ferdinand
FILLIS, Marcel John
HOZA, Precious Siphokazi
KIRBY, Kim-Honie
LUBAMBO, Xolisa Mildred
MADONDILE, Sakumzi Tony
MBANGI, Nonkosinathi
MBEWANA, Bongiwe
MDLALANA, Ndileka
MKONTWANA, Nosipho
MKUMLA, Martin Siseko
MNTANYA, Bulelwa Nokuphiwa
NCANA, Bayanda
NDLUMBINI, Nomfundo
NELSON, Kurt Gradwill
NKONZO, Zilindile Michael
NOCANDA, Nolubongo Nightingale
NORRIS, Davian Denver
NORRIS, Enrico Enver
SKWEYIYA, Nezisa

CUM LAUDE

CANNON, Leoline Advardo
JACOBS, Warren Astan
MINNAAR, Michelle Charlotte

MASTER OF ENGINEERING (RESEARCH)

GREWAR, Stephen James – ***Cum Laude***
(*Mechanical*)
Title of dissertation:
MODELLING THE EFFECT OF GRAPHITIZATION ON THE FRACTURE TOUGHNESS (JIC) OF SERVICE EXPOSED ASTM A-515 GR. 65 MATERIAL BY THE SMALL PUNCH METHOD

Supervisor: Prof DG Hattingh

MASTER OF ENGINEERING IN MECHATRONICS (RESEARCH)

BARNARD, Morne – ***Cum Laude***
Title of dissertation:
NEURAL NETWORK FAULT DIAGNOSIS SYSTEM FOR A DIESEL- ELECTRIC LOCOMOTIVE'S CLOSED LOOP EXCITATION CONTROL SYSTEM

Supervisor: Prof TI van Niekerk

KOPI, Fundiswa
Title of dissertation:
ELECTROSTATIC DISCHARGE AND ROUGHNESS MODELLING IN DIAMOND TURNING OF CONTACT LENSES

Supervisor: Prof K Abou-El-Hossein

LIMAN, Muhammad Mukhtar – ***Cum Laude***
Title of dissertation:
DIAMOND TURNING OF CONTACT LENS POLYMERS

Supervisor: Prof K Abou-El-Hossein

MOMSEN, Timothy Benjamin – ***Cum Laude***
Title of dissertation:
HYBRID ADDITIVE MANUFACTURING PLATFORM FOR THE PRODUCTION OF COMPOSITE WIND TURBINE BLADE MOULDS

Supervisor: Prof RL Phillips
Co-supervisor: Prof TI van Niekerk

ODEDEYI, Peter Babatunde
Title of dissertation:
TOOL WEAR MONITORING IN MACHINING OF STAINLESS STEEL

Supervisor: Prof K Abou-El-Hossein

VAN ROOYEN, Ivan Jan-Richard – ***Cum Laude***
Title of dissertation:
INTELLIGENCE BASED ERROR DETECTION AND CLASSIFICATION FOR 3D MEASUREMENT SYSTEMS

Supervisor: Prof TI van Niekerk

MASTER OF TECHNOLOGY: ENGINEERING: ELECTRICAL (RESEARCH)

PANTSHWA, Athini
Title of dissertation:
ANALYSIS OF THE RELIABILITY FOR THE 132/66/22 kV DISTRIBUTION NETWORK WITHIN ESKOM's EASTERN CAPE OPERATING UNIT

Supervisor: Dr RT Harris
Co-supervisor: Mr AG Roberts

MASTER OF TECHNOLOGY: ENGINEERING: MECHANICAL (RESEARCH)

KALUA, Tisaye Bertram
Title of dissertation:
ANALYSIS OF FACTORS AFFECTING PERFORMANCE OF A LOW TEMPERATURE ORGANIC RANKINE CYCLE HEAT ENGINE

Supervisor: Prof RL Phillips
Co-supervisors: Messrs KH du Preez and G Kleyn

KOLOI, Nthatisi Dinah
Title of dissertation:
FRICTION HYDRO PILLAR PROCESSING OF ZIRCONIUM

Supervisor: Prof DG Hattingh

DOCTOR OF PHILOSOPHY IN ENGINEERING

POOLE, Sean Nicholas
(*Mechanical*)
Title of thesis:
OPTIMISATION OF A MINI HORIZONTAL AXIS WIND TURBINE TO INCREASE ENERGY YIELD DURING SHORT DURATION WIND VARIATIONS

Supervisor: Prof RL Phillips
Co-supervisor: Dr FJ Vorster

RALL, William Henry
(*Mechanical*)
Title of thesis:
THE ANALYSIS OF VARIABLE HEAT INPUT ON THE FRACTURE TOUGHNESS OF FRICTION STIR WELDED TITANIUM

Supervisor: Prof DG Hattingh

DOCTOR OF TECHNOLOGY: OPERATIONS MANAGEMENT

DAVIES, Edward
Title of thesis:
THE DEVELOPMENT OF A FRAMEWORK TO REDUCE WATER AND ENERGY CONSUMPTION THROUGH THE USE OF WATER AND ENERGY VALUE-STREAM MAPPING FOR THE SOUTH AFRICAN MANUFACTURING INDUSTRY

Supervisor: Dr KR van der Merwe

DOCTORAL DEGREE CITATIONS

THE DEGREE OF DOCTOR OF PHILOSOPHY IN ENGINEERING (MECHANICAL)

SEAN NICHOLAS POOLE

Previous qualifications:

2008 BEng (Mechanical) — Stellenbosch University
2013 MEng (Mechatronics) — Nelson Mandela Metropolitan University

Thesis:

OPTIMISATION OF A MINI HORIZONTAL AXIS WIND TURBINE TO INCREASE ENERGY YIELD DURING SHORT DURATION WIND VARIATIONS

Conventional analytical methods for designing wind turbines are usually based on the Blade-Element Momentum (BEM) theory. The optimization goal is usually to maximize the lift-to-drag aerofoil properties for the turbine blade. This research shows that in the case of small wind turbines operating in a very low Reynolds number regime (<500 000), the best optimization strategy may not necessarily be to maximize the lift-to-drag ratio.

The proposed design process aims to rather increase the Reynolds Number by increasing the chord length, while somewhat ignoring the lift-to-drag ratios. The benefits of this Reynolds Number-Optimised Design (RNOD) are a flatter power curve (power vs rotational speed) compared to the Lift-to-Drag Optimised Design (LtDOD). This flatter power curve makes the turbine less sensitive to accurately matching rotational speeds to the wind speed; and therefore, in turbulent and gusty conditions, the turbine produces more power with more consistency. Other benefits of the RNOD turbine include higher start-up torque and a lower required rotational speed.

Overall, the RNOD turbine has a higher energy yield and is quieter than traditionally designed small turbines, making it better suited to the urban environment.

THE DEGREE OF DOCTOR OF PHILOSOPHY IN ENGINEERING (MECHANICAL)

WILLIAM HENRY RALL

Previous qualifications:

1997	National Diploma: Mechanical Engineering	PE Technikon
2000	Baccalaureus Technologiae: Engineering: Mechanical	PE Technikon
2002	Magister Technologiae: Engineering: Mechanical	PE Technikon

Thesis:

THE ANALYSIS OF VARIABLE HEAT INPUT ON THE FRACTURE TOUGHNESS OF FRICTION STIR WELDED TITANIUM

With the modern day socio-economic pressures to deliver more cost-effective, higher-performance and energy-efficient mechanisms and structures, light-weight design is coming more to the forefront of design methodologies. These methodologies need to apply light-weight materials in unison with a defect-tolerant design strategy. Fracture mechanics allows modern-day designers and maintenance engineers to operate structures with an inherent-flaw safely margin. These flaws may be due to the geometric features of the design, fabrication defects or defects, such as cracks that have developed over time within an operational structure.

Initial studies applying the ***theory of critical distance in its current published form*** did not yield conclusive data for the samples evaluated; thus, more in-depth studies, which involved various sample widths, coupled with varying notch depths, were conducted on Ti-6Al-4V in a mill-annealed and friction stir-welded condition.

The results from this study indicated that wider samples yield similar apparent fracture-toughness results, as published; however, a common convergence point could still not be established. This prompted a more in-depth study, which involved various sample widths, coupled with varying notch depths. Sharper notches were also applied; and samples with controlled cracks were also included in the test matrix. The study conclusively showed that as the plastic-zone size increases, in relation to the ligament length of the sample, the critical distance becomes accordingly greater.

This research suggests that the best practice in using this theory would be achieved with a notch geometry, which allows for the fracture of the sample – before the net section stress reaches the material's yield strength.

THE DEGREE OF DOCTOR OF TECHNOLOGY: OPERATIONS MANAGEMENT

EDWARD DAVIES

Previous qualifications:

2004	ND (Electrical Engineering)	Cape Technikon
2005	BTech (Electrical Engineering)	Cape Peninsula University of Technology
2010	MTech (Electrical Engineering)	Cape Peninsula University of Technology

Thesis:

THE DEVELOPMENT OF A FRAMEWORK TO REDUCE WATER AND ENERGY CONSUMPTION THROUGH THE USE OF WATER AND ENERGY VALUE-STREAM MAPPING FOR THE SOUTH AFRICAN MANUFACTURING INDUSTRY

The purpose of this research was to develop a lean-based framework that can be utilised by manufacturers in South Africa to facilitate the reduction of water and energy consumption during each process that constitutes a value stream. Lean manufacturing techniques are now well-advanced, particularly with respect to improving flow and reducing cycle times in manufacturing environments. Current lean thinking places the emphasis on time as the crucial factor in reducing waste and improving competitiveness. Rising energy costs and water scarcity have, however, shifted the focus to these important manufacturing challenges.

Edward hypothesised that value-stream mapping techniques could be adapted to monitor the true manufacturing-consumption statistics that encompass value-adding processes, as well as idle and pre-production processes. He tested the validity of the framework in an actual industrial manufacturing environment; and he demonstrated the efficacy thereof in terms the reduction in water and energy consumption. Given the national scarcity of water and the rising costs associated with energy, this is clearly an important finding – both in terms of national water and energy security – as well as enhanced industrial competitiveness.

VISION

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

MISSION

To offer a diverse range of quality educational opportunities that will make a critical and constructive contribution to regional, national and global sustainability.

To achieve our vision and mission, we will ensure that:

- Our values inform and define our institutional ethos and distinctive educational purpose and philosophy.
- We are committed to promoting equity of access and opportunities so as to give students the best chance of success in their pursuit of lifelong learning and diverse educational goals.
- We provide a vibrant, stimulating and richly diverse environment that enables staff and students to reach their full potential.
- We develop graduates and diplomates to be responsible global citizens capable of critical reasoning, innovation, and adaptability.
- We create and sustain an environment that encourages and supports a vibrant research, scholarship and innovation culture.
- We engage in mutually beneficial partnerships locally, nationally and globally to enhance social, economic, and ecological sustainability.

VALUES

i. Respect for diversity

- We reflect and serve diverse regional, national and global communities
- We promote an open society where critical scholarship and the expression of a multiplicity of opinions and experiences are actively encouraged
- We foster an environment in which diversity is appreciated, respected and celebrated
- We are committed to accessibility, inclusivity and social justice

ii. Excellence

- We promote, recognise and reward excellence in our teaching, learning, research and engagement
- We promote, recognise and reward excellent service delivery to all our stakeholders
- We provide a supportive and affirming environment that enables students and staff to reach their full potential
- We adopt innovative approaches to promote excellence in our institutional policies, structures, processes and systems

iii. *Ubuntu*

- We are a people-centred university
- We respect the dignity of others
- We recognise our mutual interdependence
- We promote compassionate and responsible citizenship

iv. Integrity

- We act with integrity and accept responsibility for our actions
- We behave in an ethical and professional manner
- We conduct our activities in an accountable and transparent manner
- We ensure the integrity of our information, systems and processes

v. Respect for the natural environment

- We care about the environment and recognise our responsibility to conserve, protect and properly manage natural resources for ourselves and future generations
- We promote the integration of sustainability principles into our academic practices, institutional operations and design of physical infrastructure
- We encourage mutually beneficial and sustainable approaches to community service and engagement
- We inspire students and staff to embrace environmentally friendly practices

vi. Taking responsibility

- We acknowledge our personal responsibility for ethical behaviour towards others
- We assume responsibility for the achievement of personal and institutional goals
- We accept responsibility for our actions and the consequences thereof
- We provide an environment that encourages students and staff to take responsibility for their academic and professional endeavours

EDUCATIONAL PURPOSE AND PHILOSOPHY

- We provide transformational leadership in the service of society through our teaching and learning, research and engagement activities.
  - To achieve this we are committed to developing the human potential of our staff and students in the full spectrum of its cognitive, economic, social, cultural, aesthetic and personal dimensions in the pursuit of democratic citizenship.
- We adopt a humanising pedagogical approach that respects and acknowledges diverse knowledge traditions and engages them in critical dialogue in order to nurture a participative approach to problem-posing and -solving, and the ability to contribute to a multi-cultural society.
- We inspire our stakeholders to be passionate about and respectful of an ecologically diverse and sustainable natural environment.
- We will be known for our people-centred, caring, values-driven organisational culture that will allow all members of the university community to contribute optimally to its life.

CONGRATULATORY MESSAGE FROM THE ALUMNI ASSOCIATION

Congratulations on your achievement! You are now an alumnus of NMMU. We would like to take this opportunity to introduce you to the NMMU Alumni Association.

Once you have obtained your NMMU certificate, diploma or degree you become an alumnus of the university and a member of the NMMU Alumni Association. The Association is recognised by the NMMU 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 University can be supported in a variety of ways including sharing news, expertise, skills, networks and contributions in cash and kind. Cash donations to the Alumni Fund are used to fund bursaries, projects and the NMMU Capital and Endowment Campaign. Every contribution makes a difference. Donations can be made online as well.

Join our existing alumni chapters nationally and internationally or help establish new ones to maintain and build our networks. We encourage you to remain active NMMU ambassadors.

The role of the Alumni Relations Office
The Alumni Relations Office is responsible for the day-to-day management and running of the Alumni Association, the University Shop and all matters related to alumni relationship building.

We kindly request all alumni to ensure that we have your latest contact details to invite you to chapter socials and networking events as well as provide you with information regarding alumni and NMMU achievements. You are also requested to send us news regarding your or fellow alumni achievements and interesting experiences for publication in our newsletters and on the website.

Please visit our website for more information **http://alumni.nmmu.ac.za** or e-mail us at **alumni@nmmu.ac.za** or join our Facebook page **NMMU Alumni**. Other contact details include tel. +27 41 504 3935 and fax +27 41 504 1417. You are also most welcome to visit the Alumni Relations Centre on the North Campus in Port Elizabeth.

Remember to buy your memorabilia from the University Shop during graduation.

We look forward to hearing from you. Stay connected to your *alma mater!*

NATIONAL ANTHEM

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.