

SCHOOL OF AGRICULTURE

Bachelor of Science in Agriculture; Bachelor of Science in Food Science and Technology; Bachelor of Arts Honours in Rural Development; Master of Science in Agriculture; Master of Science in Food Science and Technology; Masters in Rural Development; Doctor of Philosophy in Rural Development.

SCHOOL OF EDUCATION

Bachelor of Education in Foundation Phase; Bachelor of Education in Further Education and Training; Postgraduate Certificate in Education; Bachelor of Education Honours in Educational Management; Master of Education, Doctor of Education.

SCHOOL OF ENVIRONMENTAL SCIENCES

Bachelor of Environmental Sciences; Bachelor of Earth Sciences in Hydrology and Water Resources; Bachelor of Earth Sciences in Mining and Environmental Geology; Bachelor of Urban and Regional Planning; Bachelor of Environmental Sciences Honours; Master of Earth Sciences in Mining and Environmental Geology; Master of Environmental Sciences; Master of Earth Sciences in Hydrology and Water Resources; Master of Urban and Regional Planning; Doctor of Philosophy in Environmental Sciences (Geology); Doctor of Philosophy in Environmental Sciences (Hydrology and Water Resources).

SCHOOL OF HEALTH SCIENCES

Diploma in Nursing Science; Bachelor of Nursing Science in Education, Management and Community; Bachelor of Psychology; Bachelor of Science in Nutrition; Bachelor of Science in Biokinetics; Bachelor of Science in Recreation and Leisure Studies; Bachelor of Science in Sport and Exercise Science; Master of Public Health; Master of Science in Public Nutrition; Master of Nursing; Doctor of Philosophy, Doctor of Philosophy in Public Health.

SCHOOL OF HUMAN AND SOCIAL SCIENCES

Higher Certificate in Music; Bachelor of Arts in Development Studies, Bachelor of Arts in International Relations; Bachelor of Arts in Media Studies; Bachelor of Arts in Language Practice; Bachelor of Arts, Youth in Development; Bachelor of Indigenous Knowledge Systems; Bachelor of Social Work; Bachelor of Arts Honours; Bachelor of Arts Honours in International Relations; Bachelor of Arts Honours in African Studies; Honours in Gender Studies; Master of Arts; Master of Arts in African Studies; Master in Gender Studies; Doctor of Philosophy; Doctor of Philosophy in African Studies; Doctor of Philosophy in Gender Studies.

SCHOOL OF LAW

Bachelor of Arts in Criminal Justice; Bachelor of Laws; Bachelor of Arts Honours in Criminal Justice.

SCHOOL OF MANAGEMENT SCIENCES

Bachelor of Administration in Public Administration; Bachelor of Commerce in Accounting; Bachelor of Commerce in Business Information Systems; Bachelor of Commerce in Business Management; Bachelor of Commerce in Cost and Management Accounting; Bachelor of Commerce in Economics; Bachelor of Commerce in Human Resources Management; Bachelor of Administration Honours; Bachelor of Commerce Honours; Master of Administration; Master of Commerce, Master of Public Management, Doctor of Philosophy.

SCHOOL OF MATHEMATICAL AND NATURAL SCIENCES

Bachelor of Science; Bachelor of Science Honours; Masters of Science, Doctor of Philosophy.

OFFICERS OF THE UNIVERSITY

Chancellor

Mr. Kgalema Motlanthe

Chairperson of the Council

Mr. Serobi Maja, B.A. (UNIN)

Vice-Chancellor and Principal

Dr. Bernard Nthambeleni, PhD (UJ)

Deputy Vice-Chancellor: Academic

Prof. J.E. Crafford, PhD (Pret)

Deputy Vice-Chancellor: Operations

Dr R.L. Martin, Dip Soc Work (UWC); DPLR (UNISA SBL); Adv Lab Law (Unisa Tax & Bus Centre); PG Dip Soc Dev, Plan & Mangmt (Swansea,UK); B Admin (Unisa); MAP (WITS BS); MBA (BSN); PhD (UP)

University Registrar

Prof. A.E. Nesamvuni, BSc.Agric. (University of Natal), BSc.Agric.Hons., M.Sc.Agric. (University of Fort Hare), MBA (Mancosa), PhD (Oklahoma State University), (Pr.Nat.Sci.)

President of Convocation

Mr. L.L. Ndou, BA, BA (Hons) (Univen), MA (Development and Management) North West University

Director: Student Affairs

Mr L.G Tshikhudo, BA, BA Honours (Psychology) (University of Venda), Post Graduate Diploma in Marketing (UNISA), MBA (Renesys Business School)

Dean: School of Agriculture

Prof. J.J.O. Odhiambo, BSc (Agric) (Hon), MSc (Agric) (Nairobi), PhD (University of British Columbia, Canada)

Dean: School of Education

Prof. M.P. Mulaudzi, JSTC (Venda College of Education), BAEd, B.Ed (Univen), M.Ed (Bowie State Univ. USA), DEd (Unisa)

Dean: School of Environmental Sciences

Prof J.O. Odiyo, BSc(Hons)(Egerton). MSc(Dar-es-Salaam) PhD (Wits)

Dean: School of Health Sciences

Prof. M.T. Mulaudzi, BA (Hons), UED, (Univen), BA (Hons) in HRD (RAU), Mphil (Stell), PhD (Univen), Postdoctoral MSc (Columbia University)

Dean: School of Human and Social Sciences

Prof. M.A. Makgopa, BA (Hons) (Unisa) MA (STELL), D Litt et Phil (Unisa) JSTC (Setotolwane)

Dean: School of Law

Prof. L. Ndlovu, Diploma in Secondary Education (UZ), LLB, LLM (Fort Hare), LLD (UNISA), Advocate of the High Court of South Africa

Dean: School of Management Sciences

Prof A. Kadyamatimba, MSc (Electronic Eng: Lvov-USSR), PhD (Comp Sci: Lancaster, UK), MZCS(Zim), MBCS, MIEE, & Chartered Eng (UK)

Dean: School of Mathematical and Natural Sciences

Prof. N. Potgieter, BSc (Biological Sciences) RAU, BSc Hons (Medical Virology) University of Pretoria, MSc (Medical Virology) University of Pretoria, PhD (Medical Virology) University of Pretoria



University of Venda
Creating Future Leaders

VISION

The University of Venda aspires to be at the centre of tertiary education for rural and regional development in Southern Africa

MISSION STATEMENT

The University of Venda, anchored on the pillars of excellence in teaching, learning, research and community engagement, produces, graduates imbued with knowledge, skills and qualifications which are locally relevant and globally competitive.

www.univen.ac.za

PROGRAMME

Director of Ceremony : Dr. Takalani Dzaga – APR
Director: Communications and Marketing

Date : Friday, 20 September 2019

Time : 09h00

Academic procession enters the Hall. Univen Choir sings Gaudeamus Igitur.

NB: The audience is requested to stand as the procession enters the Hall, and to remain seated throughout the ceremony.

Constitution of the Congregation: Dr. Bernard Nthambeleni
Vice-Chancellor & Principal

Welcome Address : Prof. Jan Crafford
DVC: Academic

Song : Univen Choir

Presentation of Graduandi : Deans of Schools

Song : Univen Choir

Congratulatory Message : Dr. Bernard Nthambeleni
Vice-Chancellor & Principal

Singing of National Anthem : Univen Choir

Dissolution of Congregation : Dr. Bernard Nthambeleni
Vice-Chancellor & Principal

Academic procession leaves the Hall. Univen Choir sings Gaudeamus Igitur.

NB: *The audience is requested to remain standing until the procession has left the Hall.*

GAUDEAMUS IGITUR

Let us live then, and be glad
While young life's before us!
After youthful pastime had,
After Old age hard and sad,
Earth will slumbe o'er us.

Brief is life, and brevity
Briefly shall be ended:
Death comes like whirlwind strong
Bears us with his blast long;
None shall be defended.

Live this University
Men that learning nourish!
Live each member of the same
Long live all that bear its name;
Let them ever flourish!

GAUDEAMUS IGITUR

Gaudeamus igitur, juvenes dum sumus (Rep)
Post jucundam juventutem, post molestam senectutem,
Nos habebit humus, nos habebit humus.

Vita nostra brevis est, brevi finietur (Rep)
Venit mors velociter, rapit nos atrociter,
Nemini parcetur, nemini parcetur.

Vita Academia, Vitat Professores, (Rep)
Vitat mebrum quodlibet, vivant membra wuaelibet,
Semper sint in flore, semper sint in

NATIONAL ANTHEM

Nkosi sikelel' iAfrika
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 Afrika – South Afrika.

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.

SEPTEMBER 2019 SESSION 1 GRADUATION CEREMONY

DIPLOMA IN NURSING SCIENCE

MANGANYE MUNENE SYLVIA

BACHELOR OF ADMINISTRATION (PUBLIC ADMINISTRATION)

APHANE	LAZARUS THABO
MALULEKE	XIHLAMARISO CYNTHIA
MASILANE	RIVONINGO BOITUMELO
MASWANGANYI	JUDITH
MATHAVHA	KHUTHADZO
MBOKAZI	MNCEDISI PARIS
MOKOLOKOTO	SHARON MAITE
MOLOTO	MAMOKGASA PRUDANCE
MSANE	ELEPO MBALI
NEPFUMBADA	ALUWANI
NKUNA	WINNIES NDZALAMA
PHAMPHE	MUKONAZWOTHE
SEKHAOLELO	THABANG KGADI

BACHELOR OF COMMERCE (ACCOUNTING)

GEGANA	RONWA
HLUNGWANI	MATHILDA MIHLOTI
MAKHUBELA	ARETHA NURSE
MANYONDE	NYANDANO
MASWANGANYI	MPFUMELO
MATSEBA	TEBOGO MARIA
MONAKHISI	MAHLATSIE EMITION
MOSOANE	DESMOND
MUDANALWO	MUDANALWO
MUTHOLINI	VISSION LESEDI
NDWAMATO	RENDANI
NENGOVHELA	MPHIRELENI
NGOBENI	NTIVISENI BREDON
PHOKU	SENZO PERCY
RAMACHELA	KHUTSO CHARITY
SIKHIPHA	ALIDZULWI
TSHIKHUDO	UNARINE
TSHIPEPELE	MBUELO

BACHELOR OF COMMERCE (BUSINESS INFORMATION SYSTEMS)

NETSHIA	KHULISO
TSHIVHANDEKANO	MULWELI

BACHELOR OF COMMERCE (BUSINESS MANAGEMENT)

NESENGANI	NDIVHUWO LUCIA
TSHIATE	MPHO
TSHIDUMO	VHULENDA BEATY
TSHIKWELA	TSHILIDZI

BACHELOR OF COMMERCE (COST AND MANAGEMENT ACCOUNTING)

CHIDI

NOKUPHELA VERONICA

BACHELOR OF COMMERCE (ECONOMICS)

CHAUKE

LINDUMUSA WILFRED

MAGUVHE

TSHIFHIWA EMMANUEL

MALWANE

CYNTHIA NELISIWE

MATSILA

LIVHUWANI SYLVESTER

MAWOYO

FADZAI MELLISHA ALLIE

MIYAMBO

SIZEKILE MILLICENT

MOLEPO

MASHAPULA KAGISO

MOLOTO

NKUDU CONFIDENCE

MUDAU

TSHILIDZI

MULATHI

PHETHANI

MUNDALAMO

THABELO

NETILI

NTONDENI JUSTICE

RABULANYANA

LINDELANI FELICIA

RAFUMA

MASANA

RAMABULANA

PRETTY

RAMULUVHANA

MBAVHALELO REVONIA

TSHANKOMA

PHATHUTSHEDZO

BACHELOR OF COMMERCE (HUMAN RESOURCES MANAGEMENT)

LEBESE

MAHLATSE MAPHUTI HERMAN

MAKARINGE

KULANI NCHUCHEKO

MUDZANANI

NDAEDZO

NEKHUMBE

OFHANI

BACHELOR OF SCIENCE

BOUNGUENDZA

NDONGO URSIE

BVUMBI

MAANO MOSES

CHILHANGO

TINYIKO PHANUE

KGETSEPE

LUCY MALOKANE

KHANGALE

PFANELO ROSE

KHOZA

SIKHULILE INNOCENTIA

KHOZA

PHUMLA SUCCESS EMMANUEL

LEBEPE

TEBATSO PICKY

LEDWABA

INNOCENT SBUSISA

LINDA

SIYABONGA PRINCE

LUKHELI

ELELWANI

MADISHA

KEDIBONE

MAENETJA

MAHLOMOLA RONNY

MAGUADA

SHUDUFHADZO

MAHADA

SILA

MAMBOKE

ADONEBANG MARCELLINE AUDREY

MAMPHAGA

THAMA JEDIDIAH

MATHIVHA

THILIVHALI GERALD

MATHYE	XILUVA LORRAINE
MATLOGA	AMY
MAUDA	IDANI
MLOCHE	MUSIC
MOHLABINI	SIPHO
MPHEPHU	ELELWANI
MPHUMA	MPHO
MUDAU	MURENDENI EL-GRACE
MUDAU	ROTONDWA
MUDAU	NDIVHUWO
MUDAU	KHATHUTSHELO CONFIDENCE
MUDOSENI	MASHUDU LAWRENCE
MUDUVHADZI	BRIAN
MUKHAVELE	ERNEST VUTOMI
MUKOSI	FULUFHELO
MULEYA	NDIVHUWO NAUME
MUSHADU	PIRTUNIA NYADZANI
MUSHEZHA	ONNDWELA
MUTHABI	MULISA
NEDUVHULEDZA	TIMMY
NEFALE	VHONANI
NEMAFHOHONI	THEMBULUWO
NEMAKONDE	RABELANI
NEMUDZIVHADI	ANZA IMANUEL
NEPHIPHIDI	MADZANGA
NETSHISWINZHE	MUKONDELELI
NETSHITHOTHOLE	RONEWA
NETSHITUNGULU	MUOFHE
NETSHITUNI	MATODZI DEMBE
NGOBENI	TSHIFHIWA
NKOKO	MABATHO MANCHA
NTHANGENI	PHUMUDZO
NTHATHENI	RONEWA GILBERT
PHOPHI	ROTONDWA EMMANUEL
RAMAVHUGELA	LUTENDO
RAMBAU	THIFHINDULWI MAXWELL
RAMOTHWALA	KARABO
RAMULIFHO	MULWELI
RAMUTHAGA	GUNDO MELTON
RATHARI	MICHAEL
SADIKI	GIRLY
SEKGOBELA	PUSANG KING
SIBANDA	MATIMU
SIKHITHA	RODZULA RIKHIPHITHENI
SINYEGWE	AWELANI WITNESS
THENGA	DEMBE
TSHAMANO	EDZISANI PHUMUDZO

TSHAMANO
TSHIDINO
TSHIGOLI

CLAUDIA
IDANI PATIENCE
MBUDZENI PERTUNIA

BACHELOR OF NURSING SCIENCE IN EDUCATION, MANAGEMENT AND COMMUNITY

NANGAMBI
TSHIKALANGE

LIVHUWANI MERCY
FHATUWANI CHADWICK

BACHELOR OF SCIENCE IN NUTRITION

HOPYANI
MAHASHA
MASINGA
MUNYAI
RAMULIFHO
TLAKULA

TINTSWALO MILLICENT
KATEKANI
DAVID FANUEL
RITSHIDZE
DZILAFHO
PUMZELE PORTIA

BACHELOR OF PSYCHOLOGY

MAHADA
MATLALA
MORABA
MURIDA
RAMALEPE
RUNGANI
SETHOLE
SIKHWETHA
THOKA

TSHISIKHAWE
ALPEUS
MMABALE ANGEL
NDIFELANI
SEBENZILE
HULISANI
NTHABISENG GERMINAH
MPHO
LEBOGANG RAMATHABATHE

DISTINCTION

BACHELOR OF SCIENCE IN BIOKINETICS

BALOYI
MOLOTO

PETER
MATSHWENE EMMA

BACHELOR OF SCIENCE IN RECREATION AND LEISURE STUDIES

BUDELI
LALAMANI
NEMUTANDANI
RAPHUNGA

NDIVHUHO
RAMUDZULI EVANS
AZWINNDINI
NDAMULELO

BACHELOR OF SCIENCE IN SPORT AND EXERCISE SCIENCE

LAMOLA
NOBELA

MATLOU ANNDROSE
KEVIN

BACHELOR OF ENVIRONMENTAL SCIENCES

GODZWANA
HLONGWANE
KALE
KGOMUMMU
MADALA
MAGADANI
MAGALA
MAHADA
MAKAHANE
MAKWARELA
MATHIBE

NDIVHUHO DUNCAN
TYRON LAVEKA
TIISHETJO JERMINA
FHATUWANI
ANZATSHILIDZI MICHELLE
NDAMULELO POWER
UMMPHE
ROLIVHIWA ALUWANI
MUKONDELELI PETRO
THABELO
ANDREW

MAVHULAVHULA	MULISA	
MOGOTSI	NHLANGANO NICOLINE CLIMATINE	
MPHEPJA	LEBOGANG ANGEL	
MUBVUMBI	LUDZULA	
MUDAU	HUMBULANI FREDERIC	
MUDAU	MUDZENI	
MUKHARI	HLAMALANI SHAREL	
NEMUGAVHINI	SEDZANI ADVOCATE	
NEMUTANDANI	ROFHIWA	
NGOBENI	SHICHAVO BORNWISE	
RAMUNASI	AZWINNDINI JUSTICE	(POSTHUMOUS)
SHIKWAMBANA	KINDNESS LUNGHANI	
THIDIELA	LUFUNO PHILADELPHIA	
TSEBE	MMAMOLATELO	

BACHELOR OF EARTH SCIENCES IN HYDROLOGY AND WATER RESOURCES

CHAUKE	LORRET
MATHULE	PHATHUTSHEDZO
MOTENE	ESINA MPAKAMELE
MUDAU	PHATHUTSHEDZO BRIGHTON

BACHELOR OF EARTH SCIENCES IN MINING AND ENVIRONMENTAL GEOLOGY

BUDELI	AWELANI JOHN
HLONGWANE	JURRY PRUDANCE
HLUNGWANI	KHAYIZENI DONALD
LISINGE	MALVIN LOKA ELINGOE
LURULI	MPHO MARTIN
MAFUNI	NANCY
MAGADANI	MAANDA
MALAZA	NHLANHLA KHUZULWANDLE
MAPHANGULE	PFUNZO
MASHILO	RENEILWE MOGOBE
MASIA	THAKHANI
MATHEKGA	CHUENE RUDOLF
MAVHUNGA	CLARA
MUDAU	FHUMULANI
MUNZHELELE	THABELO JOSHUA
NDWAMBI	ROTONDWA BARBRA
NKUNA	AMUKELANI VALENCIA
NTSHAVHENI	MPHO
RAMOKGOPA	TEBOGO GIFT MOTSHEKGEME
RATSHILI	ALUWANI
SIGONDE	AMPFARISAHO
SITHAGU	EDMOS
TSHAMANO	GIVEN NDIDZULAFHI

BACHELOR OF URBAN AND REGIONAL PLANNING

MAPHOLI	MARUBINI EDWARD
MATIBE	MULALO

BACHELOR OF PUBLIC ADMINISTRATION – HONOURS

MULAUDZI	AVHATAKALI NICHOLAS
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BACHELOR OF COMMERCE HONOURS

KGORUTLE	KHOLOFELO NOKANE	ECONOMICS
KHWATHISI	MPHULUSENI GODFREY	BUSINESS INFORMATION SYSTEMS
MAFUNA	MIHUVHO	ECONOMICS
MAFUNE	PHATHUTSHEDZO	ECONOMICS
RAMOKGOPA	LORRAINE	ECONOMICS
SKOSANA	MPHO PRUDENCE	ECONOMICS
MAKHUBELE	RIVONINGO MEMORATE	HUMAN RESOURCES MANAGEMENT

BACHELOR OF SCIENCE HONOURS

KHWATHISI	ADIVHAHO	MICROBIOLOGY
MABOGO	MUTSHIDZI	BOTANY
MAFELATSHUMA	PHATHUTSHEDZI	STATISTICS
MAGOMANE	MIKATEKO ETHEL	MATHEMATICS
MAGOBA	MMAPULA CATHRINE	MATHEMATICS
MAKHUBELA	TIYANI JOHNSON	MICROBIOLOGY
MARANDELA	MULALO VALENICA	PHYSICS
MASEKO	MONTLANTLA REGINA	CHEMISTRY
NNDWAMMBI	ANDANI ALICE TSHIFHIWA	BIOCHEMISTRY
SAYIMANE	TANANI	BIOCHEMISTRY
SUMBANA	VHULENDA	COMPUTER STUDIES
RSHIAFHULA	MULALO	CHEMISTRY
TSHIKOTA	THENDO	COMPUTER SCIENCE

BACHELOR OF ENVIRONMENTAL SCIENCES HONOURS

BALOYI	FORTUNE	GEOGRAPHY
CHAUKE	MARTHA RANGATO	GEOGRAPHY
DAVHANA	MURANGI	GEOGRAPHY
DAVHANA	TSHILIDZI CAROLINE	GEOGRAPHY
GADISI	TENDANI	GEOGRAPHY
KHAKHU	NNDWELENI PRINCE	GEOGRAPHY
KUTAMA	ROSHUDUVHALA	GEOGRAPHY
LUMADI	MUVHUSI	GEOGRAPHY
MADZOLE	PHATHUTSHEDZO	GEOGRAPHY
MAKATU	FULUVHELO LESEGO	GEOGRAPHY
MALULEKA	VALLEY	ECOLOGY AND RESOURCE MANAGEMENT
MANYOKA	ANZANI	GEOGRAPHY
MAREDI	MODUPI DORCUS	GEOGRAPHY
MASHELE	JOY WILNAH	GEOGRAPHY
MATSHAVHA	ZWIVHUYA	GEOGRAPHY
MBUBA	FHATUTSHEDZANI AUDREY	ECOLOGY AND RESOURCE MANAGEMENT
MBULAHENI	VHUTSHILO CHARLOTTE	GEOGRAPHY
MOKOENA	RAMATLADI OWEN	ECOLOGY AND RESOURCE MANAGEMENT
MONGWE	EMA	GEOGRAPHY
MSIMANGO	VUMBONI HARRY	ECOLOGY AND RESOURCE MANAGEMENT
MUFAMADI	NDIVHO INFORSIAR	ECOLOGY AND RESOURCE MANAGEMENT
MUKWEVHO	MATAMELA NONIE	ECOLOGY AND RESOURCE MANAGEMENT
MUNANDI	MUKOVHE	GEOGRAPHY
MUNYAI	RONWEA ROSE	GEOGRAPHY
MURUGE	THUSO	GEOGRAPHY
MUTHELO	PFUNZO PETUNIAH	ECOLOGY AND RESOURCE MANAGEMENT
NAKANA	MOHAO	ECOLOGY AND RESOURCE MANAGEMENT
NDALAMMBI	FHATUWANI	GEOGRAPHY

NDIITWANI	MUTSHIDZI	GEOGRAPGY
NEMAXI	ANZA	GEOGRAPHY
NEMBILWI	WAMASHUDU JOEL	GEOGRAPHY
NEMUKULA	INNOCETIA	GEOGRAPHY
NETHWADZI	SHUDUFHADZO	ECOLOGY AND RESOURCE MANAGEMENT
NETSHIPALE	VHONANI WALTER	ECOLOGY AND RESOURCE MANAGEMENT
NETSHITUNI	TAKALANI VINCENT	ECOLOGY AND RESOURCE MANAGEMENT
NKHABANE	MANESSANE FAST	ECOLOGY AND RESOURCE MANAGEMENT
RAMAVHUNGA	MUKONDELELI	GEOGRAPHY
RAMBAU	NKHUMBULENI	GEOGRAPHY
SHIBURI	WINNIE	GEOGRAPHY
SINGO	VHUKHUDO	GEOGRAPHY

MASTER OF PUBLIC MANAGEMENT

MALATJI	KHUTSO PEACE
MASINGI	NKATEKO TRACEY
MATLALA	LEBOGANG MAKGABO
NEMUKULA	LIVHUWANI ELLIOT

MASTER OF ADMINISTRATION

MBEDZI LANGANANI

(PUBLIC ADMINISTRATION)

Title : Critical Analysis of Job Creation Strategies in the Makhado Local Municipality

Supervisor : Prof. MP Khwashaba

Co-Supervisors : Dr E Mahole
: Prof. NW Nkuna

RAPHASHA NNGWEDZENI ERNIE

(PUBLIC ADMINISTRATION)

Title : The Public Protector and Ethical Conduct In Limpopo Local Government the Case of Vhembe District Municipality

Supervisor : Prof. NJ Vermaak

Co-Supervisor : Prof. NW Nkuna

MASTER OF COMMERCE

MAMPHEU VHUTHU

(BUSINESS MANAGEMENT)

Title : Entrepreneurial Success Factors of Immigrant Spaza-Shop Owners in Thulamela Local Municipality

Supervisor : Dr LG Nkondo

Co-Supervisor : Dr MH Dube

MIKIONI ANYWAY

(BUSINESS MANAGEMENT) DISTINCTION

Title : Black Tax and Micro-Entrepreneurship in Thulamela Local Municipality: Forms, Challenges And Coping Strategies

Supervisor : Prof. R Shambare

Co-Supervisor : Mrs NT Khohomela

NETSHIKULWE MATAMELA JULIET **(ECONOMICS)**
Title : Determining Optimal Social Assistance Level in African and
Organisation for Economic Co-Operation and Development
Countries

Supervisor : Dr G Dafuleya

MASTER OF SCIENCE
ADEBAYO OLUWAKEMI MONISOLA **(CHEMISTRY)**
Title : Isolation, Characterization and Antimalarial Activity of Four
Selected South African Plants.

Supervisor : Prof IDI Ramaite
Co-Supervisor : Prof T Van Ree

BANDA NTSUNXEKO THELMA **(MICROBIOLOGY)**
Title : Characterization of E. Coli Strains From Rural Communities In
The Vhembe District (Limpopo, South Africa)

Supervisor : Prof N Potgieter
Co-Supervisor : Prof AN Traore

CHERANE MOSIBUDI WENDY **(BOTANY)**
Title : Ethnomedicinal Survey of Invasive Alien Plant Species Used in
the Capricorn District, Limpopo Province, South Africa

Supervisor : Prof MP Tshisikhawe
Co-Supervisor : Dr K Magwede

DUBE-JOHNSTONE NHALO MICHAEL **(CHEMISTRY)**
Title : Determination of the Mineral Composition of Water and Soil
Samples From Tshipise Thermal Spring, Mphephu Thermal
Spring and Siloam Borehole Using Inductively Coupled Plasma
Mass Spectrometry And X-Ray Fluorescence Spectrometry

Supervisor : Dr SS Mnyakeni Moleele
Co-Supervisor : Mr LR Puka

MALULEKE AMANDA **(CHEMISTRY)**
Title : Characterization of Anti-Diabetic Ingredients of Bridelia
Micrantha Plant.

Supervisor : Dr SS Mnyakeni Moleele
Co-Supervisor : Dr M Tselanyane

MASHABELA MAHLAENG RETANG **(STATISTICS)**
Title : A Comparison of Some Methods of Modelling the Baseline
Hazard Function in Discrete Survival Models".

Supervisor : Dr A Bere
Co-Supervisor : Dr C Sigauke

MATODZI VHAHANGWELE (CHEMISTRY)
Title : Multi-Elemental Analysis of Heavy Metals Present In Dust Emitted From Cement Plants Located In Pretoria and Thabazimbi, South Africa

Supervisor : Dr MA Legodi
Co-Supervisor : Dr NT Tavengwa

MOKGEHLE TEBOGO (CHEMISTRY)
Title : Application of Functionalized Zeolites Derived From Coal Fly Ash for the Remediation of Acid Mine Drainage

Supervisor : Dr NT Tavengwa
Co-Supervisor : Prof WM Gitari

MUSARURWA HERBERT (CHEMISTRY) DISTINCTION
Title : Method development for the determination of residual pesticides and heavy metals in complex samples using modern pre-concentration techniques

Supervisor : Dr NT Tavengwa
Co-Supervisor : Prof L Chimuka

NETHAVHANI ZWANNDI (ZOOLOGY)
Title : Development of Minimum Intervention Techniques to Reduce Variability in Mopane Worms Supply for Harvesting.

Supervisor : Prof SH Foord
Co-Supervisor : Dr Ruan Veldtman (Sanbi)

RAMATSUI LEBOGANG (BIOCHEMISTRY)
Title : Investigation of the role of Hsp70 in the uptake of Granzyme B by Malaria Parasite-infected erythrocytes

Supervisor : Prof. A Shonhai
Co-Supervisor : Dr T Zininga

RANWAHA TSHIFHIWA STEVEN (PHYSICS)
Title : Density Functional Theory Study of Adsorption of Croconate Dyes on TiO₂ Anatase (010) and (100) Surfaces

Supervisor : Dr. NE Maluta
Co-Supervisor : Prof RR Maphanga

SADIKI TENDANI SANNAH (BOTANY)
Title : Investigating the Utilization Impact on *Pterocarpus Angolensis* DC Population in Gundani Village, Limpopo Province, South Africa

Supervisor : Prof. MP Tshisikhawe
Co-Supervisor : Ms MP Legodi

TAMBE LISA ARRAH MBANG

(MICROBIOLOGY)

Title : Evaluation of Adherence to Antiretroviral Therapy Using Efavirenz as a Marker.

Supervisor : Dr Lufuno G. Mavhandu-Ramarumo

Co-Supervisors : Prof. Pascal O. Bessong
: Prof. David Katerere (Tut)

TSHILANDE NEANI

(CHEMISTRY)

Title : Ab Initio and Dft Computational Study of Myristinin A and A Structurally-Related Molecule

Supervisor : Prof. L Mammino

Co-Supervisor : Dr C Ghio

MASTER OF PUBLIC HEALTH

CHAUKE	TINYIKO
DANGALE	TAKALANI MILLICENT
MOKWENA	TOBIAS JOHANNES
MUGUMBA	SUSAN
MUKHALELA	TATENDA
MUNYAI	LIVHUWANI
NDOU	PFARELO AGREEMENT
RAMASHALA	RAISIBE MARIA

MASTER OF SCIENCE IN PUBLIC NUTRITION

GAVHI	FHATUWANI
MAGOAI	MATLOU MARTINA

MASTER OF NURSING

MPHEPHU AVHAPFANI GLADYS

Title : Effects of Nursing Workload on Patient Safety in the Selected Public Hospitals in Vhembe District of Limpopo Province, South Africa.

Supervisor : Prof. ML Netshikweta

Co-Supervisor : Prof. MS Maputle

MUKHAWA CECILIA

Title : Assessment of the Use of Personal Protective Clothing among Health Care Workers in Selected Hospitals of Vhembe District in Limpopo Province, South Africa.

Supervisor : Dr NJ Ramakuella

Co-Supervisor : Prof. HL Nemathaga

MASTER OF ENVIRONMENTAL SCIENCES

DLAMINI NONHLAHLA

Title : Simulating South African Climate with a Super Parameterized Community Atmosphere Model

Supervisor : Dr H Chikoore

Co-Supervisors : Dr MM Bopape
: Dr NS Nethengwe

MATHAKHO KHODANI

Title : Investigation Of Municipal Solid Waste Management: A Case of Vhembe District Municipality, South Africa

Supervisor : Prof. JS Ogola

Co-Supervisor : Mr R Mulaudzi

MATIDZA MURENDENI

Title : Green Synthesis Of Geopolymeric Materials Using Musina Copper Mine Tailings: A of Beneficial Management Of Mine Tailings.

Supervisor : Prof. WM Gitari

Co-Supervisor : Mr C Muzerengi

MMBADI ELELWANI

Title : Water Security in Rural Limpopo in a Changing Climate: A Study of the Greater Giyani Municipality, South Africa

Supervisor : Dr H Chikoore

Co-Supervisors : Ms KH Netshisaulu

: Dr F Okaka (Moi University)

MPHIDI MOSIMA FLORINA

Title : The effectiveness of biosphere reserve as a tool for sustainable natural resource management in Vhembe District Municipality, Limpopo Province, South Africa

Supervisor : Prof. BDO Odhiambo

Co-supervisor : Mr MJ Mokgoebo

MUOFHE TSHIMBILUNI PERCY

Title : Characteristics of Deep Moist Convection and Rainfall in Cut-Off Lows over South Africa

Supervisor : Dr H Chikoore

Co-Supervisors : Dr MM Bopape (SAWS)

: Dr NS Nethengwe

MUNYAI LINTON FHATUWANI

Title : Remote Sensing of Harmful Algal Blooms (Habs) In Water Bodies of Vhembe District Area, Limpopo Province, South Africa

Supervisor : Prof. JR Gumbo

Co-Supervisor : Mr F Dondofema

NCUBE TISANG MANABALALA

Title : Rainfall Variability and Change in South Africa (1976-2065)

Supervisor : Dr H Chikoore

Co-Supervisor : Dr MM Bopape (SAWS)

NEMBILWI NDAMULELO

Title : Vulnerability and Adaptation to Drought Hazards in Mopani District Municipality, South Africa: Towards Disaster Risk Reduction

Supervisor : Dr H Chikoore

Co-Supervisor : Mr E Kori

NENGUDZA THENDO DENIS

Title : Clay Polymer Nanocomposites as Flouride Absorbent in Groundwater

Supervisor : Prof. WM Gitari

Co-Supervisor : Dr KI Diainabo (WITS)

NGWENYA SANDILE BLESSING

Title : Meteorological Influences on Malaria Transmission in Limpopo.

Supervisor : Dr NS Nethengwe

Co-Supervisor : Dr H Chikoore

NOVELA RIRHANDZU JEANETH

Title : The Characterization of Ambient Particulate Matter and Associated Atmospheric Transport at Thohoyandou

Supervisor : Prof. WM Gitari

Co-Supervisors : Dr H Chikoore

: Prof. J Wichmann (UP)

SIKHWARI THENDO

Title : The Characterization of Ambient Particulate Matter and Associated Variability and Long-Term Trends of Climate Extremes over the Limpopo, South Africa

Supervisor : Dr NS Nethengwe

Co-Supervisors : Dr H Chikoore

Dr C Sigauke

SINTHUMULE HANGWELANI

Title : Assessing the Effects of Locally Manufactured Fish Feed (Pigeon Pea Formula) on the Limnology of Small-Holder Aquaculture Systems during Tilapia Fish Feeding Trials, Vhembe District, Limpopo Province

Supervisor : Prof. JR Gumbo

Co-Supervisor : Mr MI Mokgoebo

MASTER OF EARTH SCIENCES IN MINING AND ENVIRONMENTAL GEOLOGY

MAGAKANE RONALD

DISTINCTION

Title : An Integrated Approach to Groundwater Exploration Using Remotely-Sensed Imagery and Geophysical Techniques in the Archean Basement and Karoo Sedimentary Basins of Limpopo Province, South Africa.

Supervisor : Dr MO Kataka
Co-Supervisor : Prof. JO Odiyo

MAWILA EDITH ELIZABETH TINTSWALO

Title : Variation of the Coal Stratigraphy and Characterisation of the Soutpansberg Coalfield, Limpopo Province, South Africa

Supervisor : Emeritus Professor, JS Ogola
Co-Supervisor : Dr JK Kirui

MUKATUNI SEDZANI

Title : Geology and Characterization of Coal at Mushithe Coal Occurrence, Soutpansberg Coal Fields, Limpopo Province South Africa

Supervisor : Emeritus Professor, JS Ogola
Co-Supervisor : Dr JK Kirui

MUNYAI PHUMUDZO GIFT

Title : Economic Potential Of Gold Mine Waste: A Case Study Of Consolidated Murchison Mine Waste

Supervisor : Emeritus Professor, JS Ogola
Co-Supervisor : Dr LR Kone

RAVELE REMBULUWANI SOLLY

DISTINCTION

Title : Investigation of the Environmental and Socio-Economic Impact of Coal Mining At Tshikondeni Exxaro Coal Mine

Supervisor : Prof. JS Ogola
Co-Supervisor : Ms HR Mundalamo

TSHILATE LINDELANI

DISTINCTION

Title : Evaluation of Suitability of Proposed Site for Construction of Photovoltaic Solar Facility at Kakamas in Northern Cape Province of South Africa

Supervisor : Dr F Amponsah-Dacosta
Co-Supervisors : Mr SE Mhlongo
: Mr C Muzerengi

MASTER OF URBAN AND REGIONAL PLANNING

THIBA MBENGENI CHRISTOPHER

Title : Evaluating the Criteria for Allocation of Development Projects in the Context of Spatial Development Frameworks in Thulamela Local Municipality

Supervisor : Prof. Peter Bikam

Co-Supervisor : Dr James Chakwizira

TLADI MAZWI THAPELO

Title : Investigating Prospects of Integrating Spatial Planning with Disaster Risk Reduction in Flood Prone Settlements of Greater Tzaneen District Municipality.

Supervisor : Prof Peter Bikam

Co-Supervisor : Mr Tendayi Gondo

DOCTOR OF PHILOSOPHY

TERERA SHARON RUVIMBO

(HUMAN RESOURCES MANAGEMENT)

Title : Organisational climate, psychological contract breach and employee outcomes among university employees in Limpopo Province: Moderating effects of ethical leadership and trust.

Promoter : Prof. SS Babalola

Co-Promoter : Prof NM Ochara

Citation:

Sharon Terera`s thesis focuses on organisational climate, psychological contract breach and their relation to employee work outcomes in two South African universities. She investigated the roles of ethical leadership in improving employee outcomes. Universities in South Africa have gone through transformation as a result of mergers, changes in technology and language policy in order to meet the expected international standards, despite operating in an environment where there are many changes in the socio-economic atmosphere. These dynamics shape the organisational climate, psychological contracts, ethical leadership, trust and ultimately employee outcomes. From the analysis conducted, it was found that a strong organisational climate results in more organisational citizenship behaviours and less intentions to leave among university employees. The findings further revealed that psychological contract breach results in more employees leaving the organisation. More evidence was also found that ethical leadership and trust predict positive influence on the practice of organisational citizenship behaviour. In her study, Sharon Terera recommends the establishment of ethical corporate climates in organisations through which only employees who meet the ethical standards of the organisation are promoted into leadership positions in order to improve the practice of organisational citizenship behaviour and in turn reduce employees` intention to leave the organisation.

BOUKANDOU MARLAINE MOUNANGA (MICROBIOLOGY)

Title : Investigation of Plant Extracts Used In Gabonese Traditional Medicine for the Treatment of Opportunistic Infections Caused By HIV

Promoter : Prof. AN Traore
Co-Promoters : Prof. N Potgieter
: Prof. M Van De Venter

Citation:

Since the introduction of Highly Active Antiretroviral Therapy (HAART), mortality and morbidity linked to HIV infection have dramatically decreased worldwide, although many toxic effects of HAART have been reported. People tend to turn to natural products / traditional medicine for alternative treatments. Medicinal plants have good antiviral reputation and are relatively safe. The study aimed at elucidating how 20 selected medicinal plants act in improving HIV infected people health by evaluating the *in-vitro* cytotoxicity, anti-inflammatory, antimicrobial, immunomodulatory activity and characterizing the chemical composition of the plants. Results showed that plant extracts could either control the oxidative stress generated by HIV infection and HAART, modulate the immune response via stimulation or suppression of various cytokine expression, inhibit HIV related opportunistic infections causing pathogens and inhibit HIV replication via inhibition of some essential enzymes and proteins or both mechanisms. A major finding worth mentioning is that this is the 1st time that *Coula edulis* has been characterized.

ELEGBELEYE IFE FORTUNATE (PHYSICS)

Title : Studies of Interaction of Dye Molecules with TiO₂ Brookite Clusters for Application in Dye Sensitized Solar Cells

Promoter : Dr NE Maluta
Co-Promoter : Prof. RR Maphanga

Citation:

This study was conducted in renewable energy focusing on materials for the dye sensitized solar cells (DSSCs) family of photovoltaics (PV). The use of the renewable energy technologies is now an undisputed alternative to the fossil fuel supply of energy. Solar energy supply technologies do not damage the environment and are easily accessible to all sectors of the society. Cost is a major challenge of the first- and second-generation PV technologies, hence the exploration of the cheaper DSSCs in third-generation which are expected to bring also high photon to energy conversion efficiency. By means of first principle methods the thesis reports on adsorption of different types of dye molecules on the TiO₂ brookite nanoclusters as a semiconductor material used in DSSCs. The findings illustrated that the brookite nanoclusters can be used as a semiconductor material in DSSCs and the adsorption reactions of dye molecules suggest that dyes remain very attractive sensitizers for DSSCs application. The use of TiO₂ nanocluster improves the efficiency of the solar cells.

MAGORO TSHIFHIWA

(MICROBIOLOGY)

Title : Characterization of Cholesterol 25-Hydroxylase Expression in Human Macrophages

Promoter : Prof. Pascal O Bessong

Co-Promoters : Prof. Young Shin Hahn

: Dr Lucas Jennelle

Citation:

The conversion of cholesterol to 25-hydroxycholesterol (25HC) by cholesterol 25-hydroxylase (CH25H) has been shown to exert broad antiviral properties. However, the molecular basis for the induction of CH25H in humans is not known. This study has demonstrated for the first time that pro-inflammatory cytokines such as 1L-1 β , TNF- α , and IL-6 induce CH25H expression. Additionally, this provides further understanding on the connection between innate immunity and sterol metabolism; and encourages the exploration of cytokines in antiviral immunity.

MAKUMIRE STANLEY

(BIOCHEMISTRY)

Title : Investigation of the Role of the Ggmp Motif of *Plasmodium Falciparum* Hsp70-1 on the Chaperone Function of the Protein and On Its Interaction with a Co-Chaperone, Pfhop

Promoter : Prof. A Shonhai

Co-Promoter : Dr T Zininga

Citation:

Malaria remains a deadly disease in Sab-Saharan Africa where it kills mostly young children and pregnant mothers. A protozoa, *Plasmodium falciparum* causes infections accounting for most malaria-related deaths. *P. falciparum* Hsp70-1 (PfHsp70-1) is an essential molecular chaperone that protects malaria parasites through its role as chaperone, that folds the parasite's proteins. For this reason, PfHsp70-1 is a promising antimalarial drug target. In his study, a segment on the protein characterized by glycine-glycine-methionine-proline (GGMP) residues was identified. The results showed that GGMP motif is a feature that is predominantly present in parasite Hsp70 proteins and is less represented in human proteins. The role of this motif in PfHsp70-1 was characterized. The findings suggest that ablation of the GGMP motif makes the protein less functionally competent with respect to its role as a molecular chaperone and its capability to bind protein network partners. By identifying this motif and elucidating its function, a chink in the armour of this medically important protein was identified and the findings pave the way towards possible design of antimalarial compounds that specifically bind to the protein.

MASHILE SHALOM PABALELO

(BOTANY)

Title : The Ethnobotanical Investigation of the Mapulana of Ehlanzeni District Municipality, Mpumalanga Province, South Africa

Promoter : Prof. MP Tshisikhawe

Co-Promoter : Dr NA Masevhe

Citation:

Ethnobotanical information still needs documentation as this will assist in the preservation of information for future generation. It becomes most important, particularly when considering neglected ethnic subgroups like Mapulana found in the Ehlanzeni District of Mpumalanga Province. This is the first comprehensive study done on the ethnobotany of the Mapulana plant group and through the investigation of their ethnobotany, a list of hundred and forty-eight plant species in four *main use* categories were identified. Traditional medicine was the main category with hundred and six plant species used in treatment of 50 different ailments. The results showed that *Sclerocarya birrea* subsp. *caffra*, a plant commonly known as Marula (use value of 0.86) was the most used species. *Peltophorum africanum* Sond., commonly known as African wattle, was investigated for its current population status in Bolla-Tau village because of being the most used native fuelwood species. After sampling a total of two hundred and fifty-six *P. africanum* individuals in 100m x 10m transect the data revealed an unhealthy population since the majority (82%) were harvested during the seedling stage showing poor recruitment.

MBAMBALA SIPHO GLEN

(BOTANY)

Title : An assessment of the impact of *Calotropis procera* on biodiversity within road verges in the former Mutale Local Municipality within the Vhembe Biosphere Reserve, Limpopo Province, South Africa

Promoter : Prof MP Tshisikhawe

Co-Promoter : Prof PJ Taylor

: Dr S Rahlao, Sanbi

Citation:

Road verges are some of the factors that drive the spread of invasive alien plant species. This study investigated the impact of *Calotropis procera*, a shrub species that is infesting the roadsides of Muswodi village and other parts of the former Mutale. Ecological data collected through quadrat method revealed that paved roads harbour a slightly higher percentage (75%) of alien species as compared to unpaved roads (73%). However, a strong correlation was observed between abundance of *C. procera* and proximity to human settlements, suggesting the role of human disturbance in its spread. The study also found that the species is mainly used in feeding of livestock, firewood, fencing and medicine. The presence of ants was used in determining the ecosystem health of areas infested with *C. procera*. A total of 10 573 ants distributed between 33 species were collected through pitfalls during the four seasons of a year. A positive statistical relationship between ant occurrence and *C. procera* abundance was found. Using Maximum Entropy Methods (Maxent) modelling, the existing Global Biodiversity Information Facility (GBIF) distribution data of *C. procera* was used to model *C. procera* distribution. The study concluded that human settlements, urbanization, rivers and road construction influence the current distribution of *C. procera* in the Vhembe Biosphere Reserve (VBR).

MULAUDZI TSHIMANGADZO SOPHIE

(PHYSICS)

Title : Evaluation of the Regression Coefficients for South Africa from Solar Radiation Data

Promoter : Dr NE Maluta

Co-Promoter : Dr JK Kirui

Citation:

This study was done in the renewable energy subsector of solar radiation as a source of all renewable energy technologies. The understanding of the availability of solar radiation data and cost of installation of the weather station in remote rural area is a challenge globally and especially for developing countries. Most parts of the South Africa do not have data for determining the amount of solar radiation available at any given place. Hence empirical models for obtaining solar regression coefficients is the logical route. This study has determined solar regression coefficients for South Africa with data from the South Africa Weather Service and the Agricultural Research Council. She used a modified linear Angstrom Prescott model. Her findings illustrated that the Angstrom Prescott models can be used to estimate the global solar radiation in rural areas where there are no measured data.

MUZARA HILLARY

(MATHEMATICS)

Title : Recent Numerical Techniques for Solving Differential Equations Arising From Fluid Flow Problems.

Promoter : Prof. S Shateyi

Co-Promoter : Dr GT Marewo

Citation:

This study was in the field of Computational Fluid Dynamics and was based on non-linear and systems of coupled non-linear differential equations which are fundamental in modelling fluid flow. The problems were solved using newly and recently developed numerical methods including the spectral quasi-linearization and the bi-variate spectral quasi-linearization. The results showed that the new methods are fast, accurate, reliable and computationally efficient. The study offers a new insight and adds much value to researchers in the Scientific Computational Community on how to achieve computationally efficient, accurate and reliable results using new non-linear solvers.

Title : Over-expression and structure-function characterization of HIV-1 subtype C reverse transcriptase and protease

Promoter : Prof. Pascal O Bessong

Co-Promoter : Prof. Addmore Shonhai

Citation:

Human immunodeficiency virus type 1 subtype C (HIV-1-C) is responsible for about 50% of infections worldwide. However, biologicals based on the genetic background of HIV-1-C to study its inhibition are limited. The current study describes the establishment of protocols to express two key enzymes of the virus: protease and reverse transcriptase. The study also demonstrated for the first time, through *in silico* analysis, that *Brugia malayi* pepsin inhibitor homolog Bm33 binds to, and potentially inhibits HIV-1-C protease.

Title : Conservation strategies of the red listed *Brackenridgea zanguebarica* Oliv. in Vhembe District Municipality, Limpopo Province, South Africa

Promoter : Prof. MP Tshisikhawe

Co-Promoter : Prof. ET Gwata

Citation:

The population status of *Brackenridgea zanguebarica* Oliv. [an important medicinal plant species endemic to Mafukani village of Thengwe and categorised as a critically endangered species] was assessed through belt transects and revealed a bell shape pattern. The population structure was dominated by juveniles due to selective harvesting of mature individuals which hinders fruit production leading to poor seedling recruitment. Phytochemical activities revealed a close similarity of various phytoconstituents from the three plant parts. Agar well diffusion and broth microdilution methods were used to evaluate the antimicrobial activity and minimum inhibitory concentrations (MIC) of plant extracts against three bacteria and four fungi species. Acetone extracts of the three plant parts exhibited varying degrees of antimicrobial activity against *Staphylococcus aureus* and *Candida glabrata* while none of the extracts showed any activity against *Escherichia coli*, *Klebsiella pneumonia*, *Candida albicans*, *Candida krusei* and *Candida parapsilosis*. Propagation was also conducted to assess efficient method of increasing availability of *B. zanguebarica*. Its seeds did not germinate whereas vegetative propagation showed a promising way to increase the availability of this species through stem cuttings. The morpho-anatomical analysis showed that seed coat and the presence of endosperm surrounding the embryo greatly delay seed germination of this species.

DOCTOR OF PHILOSOPHY IN PUBLIC HEALTH

LOWANE MYGIRL PEARL

Title : Strategy for Reducing the Missing of Appointments among Adults on Antiretroviral Therapy in Limpopo Province, South Africa

Promoter : Prof. RT Lebese

Co-Promoter : Prof. AK Tugli

Citation:

A cross-sectional qualitative research design was used to develop a strategy aimed to reduce the missing appointments among adults on ART. Nonprobability purposive sampling was used to sample Health Care Centers, HIV positive clients on ART, Professional Nurses and Community Health Workers in Limpopo Province. The study revealed various factors that contribute to the missing of appointments by HIV positive-clients on ART. Specific socio-economic, behavioral, environmental and health service-related factors appear to prevent adherence to appointments. These factors include a lack of family support and client engagement, cultural and religious beliefs. Lack of client involvement in planning their care and poor referral of clients to community health workers were ranked high as being the most contributing factors to clients missing their appointments. A strategy to reduce the missing of appointments was developed using SWOT analysis and was validated. Subsequently, the developed and validated strategy can be adopted by the Limpopo Provincial Health Department and passed on to the District Health Department and Sub-District facilities for their implementation.

DOCTOR OF PHILOSOPHY

MADZHIE MPHO

Title : A Model to Facilitate Language Development/Acquisition in Children between 0 To 3 Years in the Rural Communities of Makhado Municipality, Limpopo Province.

Promoter : Prof. MT Mulaudzi

Co-Promoter : Dr FJ Takalani

Citation:

The aim of the study was to develop a conceptualized model that will enhance language acquisition of children between 0 and 3 years. This study was qualitative in nature and it utilised an explorative design. Thirty participants from Makhado Municipality were selected through purposive sampling to participate in the study. The findings of this study show that there are a number of activities that can be used by caregivers and parents to foster the development of language in children. Those activities include, communicating with a child, reading of books, watching TV, naming of objects and explaining meaning of words. The study also identified several environmental factors that can be used to foster the development of language in children such as communication, parental level of education, home socioeconomic status, caregiver's personality and the availability of other children in the family. Lastly, the findings show that there are many disorders that may affect the development of language including expressive language disorder, dyslexia, and inability to understand spoken language. However, the study also revealed that these disorders can be

treated. The findings of this study lead to the development of a conceptualized model to facilitate language acquisition in children between 0 and 3 years. The meaning of one concept, namely reinforcement was explained in detail, in order for users of the model to understand its operational definition in the model. The model enabled the researcher to create a link between research and what is happening in a society. Model validation was done to verify if the developed model relates to practical life, research and language development. The model for this study was validated for its applicability and usability. The drafted model was given to psychologists, speech therapists and parents to determine its usability and applicability and was found to be applicable and user-friendly.

MATHEVHULA RIRHANDZU FRIDDAH

Title : Professional Nurses And Student Nurses' Perceptions Of Clinical Supervision In Training Hospitals Of Limpopo Province: South Africa.

Promoter : Prof. ML Netshikweta

Co-Promoter : Prof. LH Nemathaga

Citation:

The demand for quality of clinical supervision is a complex, formal interpersonal exchange process that remains an international issue for supporting student nurses in clinical areas. Professional nurses are responsible to supervision of student nurses to assist them in achieving learning outcomes, develop clinical skills and competencies. There are several factors and challenges related to effective performance of the supervisory role by professional nurses in training hospitals.

The purpose of this thesis was to determine the perceptions of both professional nurses and student nurses regarding clinical supervision in the training hospitals of Limpopo Province, in order to develop the guidelines for clinical supervision. The study was conducted in Mopani and Vhembe district using convergent parallel mixed methods to assess the knowledge of professional nurses, describe and explore the perceptions of student nurses regarding clinical supervision as well as developing clinical supervision guidelines from the study findings. The study findings revealed shortage of staff, high number of students allocated in clinical areas, heavy workload and insufficient material resources as challenges related to poor clinical supervision. To improve clinical supervision, the study recommended adoption of guidelines by Department of Health, to close the existing gap.

MOTHAPO KOBELA ELIZABETH

Title : Enhancing Effective Implementation of Recommendations for the Saving Mothers Report in Maternity Units of Limpopo Province, South Africa

Promoter : Prof. MS Maputle

Co-Promoters : Prof. NH Shilubane

: Prof. L Netshikweta

Citation:

Maternal Mortality Rate in South Africa was standing at 134.33/100 000 live births and Limpopo Province at 165.16/100 000 live births. The purpose of the study was to develop a strategy to enhance the implementation of the Saving Mothers' recommendations in the

maternity units of Limpopo Province. The study was conducted in all five (5) districts of Limpopo province. The convergent parallel research design which is a mixed method with both the qualitative and quantitative strands was used. Population comprised of maternal health care managers, registered midwives who were rendering maternal health services and postnatal mothers. The findings of the study indicated that registered midwives faced many challenges during the implementation of the recommendations of the Saving Mothers Report in maternity units, training programmes and in-service education for health care professionals were not adequately implemented. Strategy Development Process and Ernestine Wiedenbach's theory was used to identify SWOT, then the strategy was developed by **B**uilding on strengths, **O**vercoming weaknesses, **E**xploring opportunities and **M**itigating threats. The strategy was validated by maternal health care managers and registered midwives and their suggestions were incorporated in the developed strategy. Three articles are submitted for possible publication in accredited journals.

NETSHINOMBELO MUTHUPHEI

Title : Development of Guidelines for Post Abortion Care Management at Selected Hospitals of Kwazulu-Natal Province, South Africa

Promoter : Prof. MS Maputle

Co-Promoter : Prof. DU Ramathuba

Citation:

Despite measures to curb unwanted pregnancies and to sustain and expand abortion services, a high number of complications and deaths still occur. The purpose of the study was to develop guidelines for post abortion care management at selected Hospitals of KwaZulu-Natal Province, South Africa. The study was conducted in five (5) districts of KwaZulu-Natal province. The convergent parallel research design which is a mixed method with both the qualitative and quantitative strands was used. Population comprised of 23 women who accessed PAC services, 50 health care workers and observation of skills of 92 health care workers maternal health care managers, registered midwives who were rendering maternal health services and postnatal mothers. The findings indicated that health care providers lacked support from the management, shortage of staff, lack of training, burnout, unavailability of the guidelines or protocols and shortage of equipment. For women, the main concerns were lack of respect, privacy, sharing of bed and insufficient time with the health care provider. The development of the guidelines was in accordance with the WHO models, PICOS & GRADES. The study therefore recommends that measures should be taken to ensure the provision of quality PAC services. One article has been submitted for possible publication in an accredited journal.

DOCTOR OF PHILOSOPHY IN ENVIRONMENTAL SCIENCES (GEOGRAPHY)

UHUNAMURE SOLOMON EGHOSA

Title : Development of a Conceptual Framework for Adoption and Sustainable Utilisation of Biogas as Alternative Source of Energy for Emissions Reduction in Limpopo Province, South Africa.

Promoter : Dr Nthaduleni Samuel Nethengwe

Co-Promoter : Dr David Tinarwo

Citation:

Mr Uhunamure Eghosa Solomon PhD thesis focused on the development of a conceptual framework guiding the adoption and utilisation of biogas technology in selected rural areas of the Limpopo Province. The theoretical framing of the study emanated from the critical evaluation of models and work that privileged the technical design and optimisation of biogas system over the adoption and utilisation of the technology at the household level. Based on the empirical evidence, using Logistic regression analysis and other qualitative methodologies, the study highlighted that determinants of biogas technology adoption and utilisation in these communities are complex, context-dependent and spatially varied. Hence, the policy of biogas adoption and utilisation should be tailored based on *the principle of fit for purpose* instead of the existing *Unimodal approach* for all settings. Using the findings, Solomon developed a robust conceptual framework that harnesses the relationships between the influencing variables. The findings will be useful for policy makers and experts in the dissemination of biogas and similar technologies in the Limpopo Province and could be adapted for use in other South African provinces. The study has the potential to generate 3 DHET accredited journal publications, 2 of which are already published and 1 is in press, and one book chapter is also in press.

DOCTOR OF PHILOSOPHY IN ENVIRONMENTAL SCIENCES

AYINDE WASIU BABATUNDE

Title : Synthesis of Hybrid Biopolymer-Metal Oxide Nanoparticles Reinforced Composites for Fluoride and Pathogens Removal in Groundwater

Promoter : Prof. WM Gitari

Co-Promoter : Dr M Muchindu (Mintek)

Citation:

South Africa is classified as a water scarce-water stressed country and access to clean water remains high on the development agenda. SA-NDP & SDG 2030 recognizes the need for society to have access to potable water. Moreover SA-NWRS 2013 points out that surface water resources are limited. Majority of rural population in South Africa depends on groundwater as their main source of water. Groundwater has traditionally been perceived to be low in chemical species toxicity and microbiologically 'pure'. However, depending on the geological formations and anthropogenic activities, microbiological contamination and excess toxic chemical constituents can compromise its quality. Mr Ayinde's work sought to address this challenge through development of novel natural biopolymer-metal oxide nanoparticle reinforced composites for fluoride, pathogens and other toxic species in groundwater that could be applied in point-of-use water treatment devices for rural households. Mr Ayinde used

green synthesis methods to develop Ag-MgO nanohydroxyapatite, AgMgOnHaP nanoparticles supported on Chitosan and nanofibrous cellulose decorated Ag-MgO-nanohydroxyapatite. These biopolymer-nanoparticle composites have exhibited high capacity for fluoride and pathogen removal in groundwater in addition to other chemical species and have great potential for application in point-of-use water treatment devices suitable for rural households. It is for the first time a material having the dual property of chemical species removal and antimicrobial activity in groundwater is reported.

Mr Ayinde's work has produced 4 articles in DHET accredited journals, 6 conference proceedings, 4 manuscripts ready for submission to journals and 2 intellectual property applications

DUROWOJU OLATUNDE SAMOD

Title : Isotopic Signatures and Trace Metals in Geothermal Springs and Their Environmental Media within Soutpansberg.

Promoter : Prof. John Ogony Odiyo

Co-Promoter : Senior Professor Georges-Ivo Ekosse

Citation:

Olatunde Durowoju's thesis elucidates on isotopic and trace metals compositions of geothermal springs within Soutpansberg (Siloam, Mphephu, Sagole and Tshipise) in relation to their surrounding soils and vegetation. The physicochemical, geochemical and isotopic compositions of the geothermal springs, boreholes, soils and vegetation were analysed using any of the relevant equipment including ion chromatography, inductively coupled plasma-mass spectrometer, HTP-Elemental analyzer, Liquid water isotope analyzer and Liquid scintillation analyzer. His findings showed that rainwater is one of the major components of recharge of geothermal spring, which is isotopically depleted as it infiltrates through the soil. The signatures from soil-water are absorbed by the plants then evapotranspired via the leaves and barks to the atmosphere. This study has provided better comprehensive understanding of the geochemical processes, sources, ages, reservoir temperatures and suitability of these geothermal springs. Furthermore, the local meteoric water line was generated and compared with the continental and global meteoric water lines. This is a crucial component for depicting the source and flow path of the geothermal springs and boreholes; and could be used for future isotopic hydrological studies. Thus this is an eco-hydrological study that shows the interconnectivity of isotopic signatures among water (rainwater, geothermal springs and boreholes), soils and vegetation. From the assessment of potential human health risks associated with trace metals concentrations from geothermal springs and their surrounding soils; ingestion route was found to be the major contributor to excess lifetime cancer risk followed by the dermal pathway. Durowoju's thesis has contributed towards the advancement and enhancement of the existing knowledge of the geothermal systems, such that water resource management could be applied successfully in the respective areas with similar characteristics for the benefit of the local communities and society at large. The thesis has the potential to generate 8 research articles, 2 of which have already been published in DHET accredited journals, 1 has been published in conference proceedings and 5 are under preparation.

MUDZIELWANA RABELANI

Title : Synthesis And Potential Application Of Fe³⁺/Mn²⁺ Bimetal And Hexadecyltrimethylammonium Bromide (Hdtma-Br) Modified Clayey Soils For Arsenic Removal In Groundwater.

Promoter : Prof WM Gitari
Co-Promoter : Prof PG Ndungu (UJ)

Citation:

The presence of arsenic in groundwater has drawn worldwide attention from researchers and public health officials due to its effects on human health. The WHO has set a limit of 10 µg/L for arsenic in drinking water. The limit was also adopted by the South African National Standard (SANS) office. Mr Mudzielwana thesis aimed at evaluating arsenic concentration in groundwater in the Greater Giyani Municipality in Limpopo Province and developing novel adsorbents based on surface modification of clays using Fe³⁺, Mn²⁺ and cationic surfactants for arsenic removal. The study observed that groundwater in Greater Giyani municipality had As concentration beyond levels recommended by SANS and WHO, indicating an intervention was required to lower As content in the groundwater. Mr Mudzielwana's research work sought to address this challenge by developing cheap and novel adsorbents based on smectite rich and kaolin clays available in Limpopo that could be applied in household water treatment devices for As removal. The clays were tested either alone or modified with Fe³⁺/Mn²⁺ oxides/hydroxides and HDTMA-Br surfactant or a combination of both. The findings of this study showed that raw smectite and kaolin have moderate adsorption capacity for As at an acidic-circumneutral pH range and can be regenerated easily using Na₂CO₃ solution. Further to this the kaolin clay modified with Fe/Mn bimetallic oxide showed enhanced surface properties. The modification was observed to increase the As adsorption capacity, moreover the adsorbent could be regenerated for up to 6 cycles using K₂SO₄ solution, hence increasing its sustainable use. The study further observed that modification of the kaolin-Fe/Mn bimetallic oxide with HDTMA-Br surfactant enhanced even further its capacity to adsorb As from water in the circumneutral pH range of 4 to 8. This more advanced adsorbent could be regenerated for up to 7 cycles using HCl. In conclusion, adsorbents synthesized from this work showed better performance compared to previously evaluated adsorbents and have a potential for application in household water treatment.

This work has produced 4 articles in DHET accredited journals, 1 book chapter and 4 conference proceedings and 3 manuscripts are under review in DHET accredited journals.

NGULUBE THOLISO

Title : Removal of Cationic and Anionic Dyes from Aqueous Solution Using a Clay-Based Nanocomposite

Promoter : Prof. Jabulani Ray Gumbo,
Co-Promoters : Dr Vhahangwele Masindi (Csir)
: Prof. Arjun Maity (Csir)

Citation:

Some industries such as textiles, ceramics, paper and printing produce wastewater containing dyes which pollute the environment. In Ms Tholiso Ngulube's thesis, the potential of dye removal from wastewater by magnesite, halloysite and a nanocomposite made of these two minerals was evaluated. Characterization results showed that the materials were highly crystalline with magnesite, periclase, dolomite, and quartz as some of the crystalline

phases. The study proved that the three adsorbent materials were effective in the treatment of four different synthetic dye solutions recording a maximum adsorption capacity and percentage removal of 19.89 mg/g and 99.40 % respectively in a batch study and about 51.73 mg Direct Red 81 per gram adsorbent in a column study. The three tested adsorbents were also applied to the treatment of real wastewater effluent from a printing and ink industry. The adsorbents performed very well in terms of colour removal as recommended by the South African standards of wastewater discharge. However, in terms of pH, calcined magnesite and the nanocomposite produced a highly alkaline solution. Hence, wastewater neutralisation by an acid is recommended before discharge. These findings show that natural clay-based materials and their nanocomposite have a great potential for application in dye wastewater remediation, since they are inexpensive, abundant and require minimal modifications.

Ms Tholiso Ngulube has published 4 articles in DHET accredited journals, 1 book chapter and 2 peer reviewed conference proceedings. One complete patent has been applied in South Africa. Through this work, she has also won an intellectual property creator award from the Department of Science and Technology. Moreover, she has presented her work at eight national and international conferences.

STEYN JACOBUS NICOLAAS

Title : Alternative Practices for Optimizing Soil Quality and Crop Protection for Macadamia Orchards, Limpopo Province, South Africa

Promoter : Prof. Jan Ernst Crafford

Co-Promoters : Prof. Steven R Gliessman (University Of California, Santa Cruz)

: Prof. Schalk vdM. Louw (University of the Free State)

Citation:

The research undertaken for this thesis has demonstrated the potential to convert conventional agriculture to more sustainable agroecosystems. It demonstrated that by viewing crop fields, orchards and farms as ecosystems, agricultural practices may be redesigned, and farms managed sustainably as complex ecosystems, rather than as monocultures. In the context of a macadamia orchard, such an ecosystem requires integrated management of weeds and cover crops, alternative host plants for insect pests, and diverse arthropod complexes. Combined with other strategies to increase biodiversity in orchards, as well as careful choice of cultivar, unfavourable conditions for pests can be created, while growing conditions for the cultivation of the crop plant can be significantly increased by optimizing soil health through the addition of organic material produced on site. The research provided a viable and less capital-intensive alternative model for the cultivation of macadamias, which may benefit new entrants into this lucrative industry. The study attracted considerable interest from, and was partially funded by, the commercial macadamia growing industry body (SAMAC). One paper has been published in a peer-reviewed journal and two more are in progress.

DOCTOR OF PHILOSOPHY IN ENVIRONMENTAL SCIENCES (HYDROLOGY AND WATER RESOURCES)

MAKUNGO RACHEL

Title : Development of Risk-Based Groundwater Operating Rules: A Case Study Of Siloam Village, South Africa

Promoter : Prof. JO Odiyo
Co-Promoters : Prof. JG Ndiritu
: Prof. BM Mwaka

Citation:

Ms. R. Makungo in her PhD thesis developed operating rules for groundwater supply based on probabilistic (risk-based) approach. Risk-based approaches for developing groundwater operating rules comprehensively incorporate assurance of supply and account for uncertainties. A hydrogeological conceptual model for the delineated groundwater resource unit (GRU) indicated presence of faults and diabase dykes which influence preferential flow paths and storage of water in the aquifer. Aquifer Test Solver identified appropriate aquifer models and test solutions for estimating hydraulic characteristics. Output Error-Non-linear Hammerstein Weiner and non-parametric regression were used to infill and/or extend limited groundwater levels and rainfall data, respectively. A program coded in FORTRAN based on the revised version of the Pitman model was used for generation of monthly groundwater levels. A Variable Length Block bootstrapping model was used for simultaneous generation of stochastic inputs of the groundwater operating rules model. Hydraulic characteristics indicated limited storage with potential for local groundwater supply for private consumption. Superimposing the cumulative demands on the base yield curves and analysis of percentages of water demands that can be supplied indicated that the groundwater system could not meet the water demands at all times. Allocating water using priority classification was found essential to promote sustainable multipurpose use of water and enhance rural livelihoods. The operating rule curves indicated that if priority classification is used all water demands are met up to a maximum groundwater level of 25 m. The developed operating rule curves are expected to improve water supply to both domestic and productive water uses and hence improve livelihoods. The procedures followed in developing risk-based groundwater operating rules for Siloam Village were generalised for application in any GRU. Undertaking a study of this nature in other areas including those which are data-scarce could promote wide implementation of risk-based groundwater operating rules. The PhD contributed to 6 conference papers and will produce 8 peer reviewed papers, 1 of which has already been published and 1 is in press.

DOCTOR OF PHILOSOPHY IN ENVIRONMENTAL SCIENCES (GEOLOGY)

MUNDALAMO HUMBULANI REJUNE

Title : Investigation of the Geology, Structural Setting and Mineralisation of the Copper Sulphide Deposits in the Musina Area, Limpopo Mobile Belt, South Africa

Promoter : Emeritus Professor Jason S Ogola

Co-Promoter : Professor Dr Engin. Klaus Maas

Citation:

Ms Mundalamo's thesis focused on the investigation of the geology, structures and ore mineralisation in the Musina area. The motivation for the study was based on the fact that the origin, nature and mode of formation of the Cu-sulphide deposits in the Musina area have not been established with certainty. In solving the problem of ore genesis, Ms Mundalamo applied a range of scientific studies at local and international laboratories, which included remote sensing applications, petrology and geochemistry, isotope geochemistry, ore mineralogy and ore-microscopy, cathodoluminescence and fluid inclusion.

A genetic model was developed to unpack the processes of ore genesis. These deposits are of polymetallic vein type that are genetically associated with porphyry copper deposits. According to this model, copper ore bodies were formed from hydrothermal fluids originating from magma and were epigenetic in nature. Geological structures in the area acted as conduits for hydrothermal fluids that resulted in the alteration of the host rocks and mineralisation of copper sulphide ore. Thus, the Messina copper deposits are of magmatic hydrothermal origin in nature. The study identified future research areas that include new targets for sulphide mineralisation; identification of the magmatic body that was responsible for ore formation in the area; and dating of later intrusive rocks and the orebody.

The outcomes of the research work have been disseminated in 3 international and 3 national conferences. The findings will generate 6 DHET accredited journal articles, 2 of which have been published, 1 is in press and 3 are under preparation. The candidate received an Award for the Best Scientific Paper Presentation at the conference in Albena in Bulgaria.