



Postgraduate Research Opportunities



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Graduate Support Hub

For more information on postgraduate research opportunities at the University of Pretoria, contact the Graduate Support Hub in the Department of Research and Innovation Support.

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Message from the Vice-Principal: Research and Postgraduate Education



Greetings to all postgraduate and prospective postgraduates who may read this booklet to gain insight into the University of Pretoria as a place to study. I congratulate any student who considers studying for a higher degree – it is a real investment in yourself and your future career, and I encourage you to read further.

As a leading University in South Africa and the largest research-intensive university in the country, the University of Pretoria (UP) offers a world of opportunity for postgraduate study. Through our guiding strategic plan, UP 2025, we are committed to developing our research profile and our international stature, and postgraduate education is at the heart of these key objectives.

The University hosts and supports postgraduate study and research in a very broad and comprehensive range of fields, and all our postgraduate

students have the opportunity to be mentored by international leaders in their specific disciplines. Our research focus areas are positioned according to our strategic goals, our existing and developing expertise, and the national and international roles of our research leaders.

We actively encourage multidisciplinary collaboration. Within the University, certain research areas are clustered into Institutional and Faculty Research Themes – areas of unique research strengths that are designed to foster

strong multidisciplinary research. Opportunities for masters and doctoral study exist within, as well as alongside, these research themes in all of our nine faculties and more than 60 research institutes, centres and units. This booklet will provide some insight into these research focus areas and opportunities.

We are also proud to be able to provide an attractive and enabling environment for our postgraduate students, with excellent research facilities, very well-equipped laboratories, unique medical and veterinary clinical facilities, state-of-the-art libraries, Research Commons areas, postgraduate residences and a dedicated Graduate Support Hub. This environment is conducive to research excellence, which in turn impacts very positively on the postgraduate training we can offer. The Graduate Support Hub provides dedicated advisory support and offers customised skills development training related to postgraduate studies and research.

The University of Pretoria has many international collaborative networks and agreements in place with Universities abroad, providing opportunities for our postgraduates to be exposed to international expertise, theories and debates. Working with internationally recognised academics, UP postgraduates emerge highly skilled and capable of contributing to their individual countries' needs in a variety of contexts.

The University aims to increase its contribution in terms of the number

of postgraduates who achieve higher degrees in research and professional fields, becoming a part of our national and regional cohort of highly qualified and skilled experts.

I invite all interested students to consider pursuing postgraduate studies at the University of Pretoria. We particularly encourage international students to consider joining the University.

Prospective postgraduate students are encouraged to visit the University's website, www.up.ac.za, to learn more about postgraduate opportunities at the University of Pretoria.

Prof Stephanie Burton

Vice-Principal: Research and Postgraduate Education

UP at a glance

The University of Pretoria celebrated its centenary in 2008 and has seen its academic tradition and stature mature over the century. In 105 years, the University of Pretoria has delivered close to 215 000 alumni. The University currently has more than 61 000 registered students. Just over 13 000 of these are postgraduate students. Of these postgraduate students, more than 4 000 are international students, 67% of whom are from the Southern African Development Community (SADC) countries. The strong postgraduate student presence places UP at the forefront of academic training in southern Africa and the rest of the continent. In 2012, UP awarded 200 PhD degrees, contributing to the pool of highly skilled human capital.

The University has nine faculties and a business school, namely Economic and Management Sciences, Education, Engineering, Built Environment and Information Technology, Health Sciences, Humanities, Law, Natural and Agricultural Sciences, Theology, Veterinary Science (presently the only faculty in this discipline in South Africa) and the Gordon Institute of Business Science (GIBS). The academic programmes are offered in 140 academic departments and 85 research centres, institutes, units and bureaux.





Interested in postgraduate studies at UP?

For postgraduate studies based on research, it is recommended that students first identify their area of interest. Once an area of interest has been identified, prospective students should visit the University's website, relevant faculty and department. The departmental websites contain profiles of their staff members and areas of expertise. The academic staff members are the discipline experts, and provide the research supervision for postgraduate students. Apart from academic departments, many opportunities for aligning students' interests with existing research expertise at UP reside in the Institutional Research Themes (IRTs), Faculty Research Themes (FRTs), and many centres, institutes and units. The prestigious South African Research Chairs Initiative (SARChI) also provides excellent opportunities for students to work in their areas of research interest and to be mentored by academics at the forefront of their research areas. The University of Pretoria hosts several SARChI and other industry-sponsored chairs.

Once a student has identified a potential supervisor, he or she is encouraged to contact the academic to establish whether the necessary research capacity is available and whether the Faculty can accommodate the student in its research programmes. In the event that a student cannot identify a potential supervisor, the Graduate Support Hub will gladly assist in making contact with the relevant department and in identifying a supervisor before an application is even submitted.

Research excellence at UP



Research at the University of Pretoria encompasses a very broad range of disciplines across its nine faculties and one business school, and more than 60 research institutes, centres and units. The University of Pretoria's major and best-recognised research strengths are in the following areas:

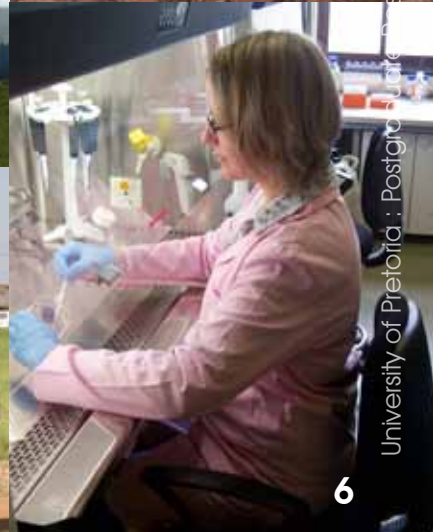
- Agricultural and biological sciences
- Medicine
- Engineering
- Biochemistry
- Genetics
- Molecular biology
- Plant and animal sciences
- Environmental science
- Earth and planetary sciences
- Computer sciences

Recognising these strengths and in keeping with international research trends, the University has established Institutional and Faculty Research Themes. These seek to foster multidisciplinarity in addressing global research challenges while capitalising on the areas of excellence in the University.

Institutional Research Themes:



Check the theme websites regularly for exciting new research developments and updates.



Animal and Zoonotic Diseases



Animal and Zoonotic Diseases: This theme is based on the University's current strengths and leading research capacity in the faculties of Health Sciences, Veterinary Science and Natural and Agricultural Sciences. It is a collaborative network of researchers from multiple disciplines, conducting research to achieve optimal health for people, animals and the environment, through 21st-century science and technology.

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Capital Cities Project

Capital Cities Project: Research on this theme recognises capital cities as seats of power; living symbols of a government in action. Monuments, government buildings, cultural landmarks, public spaces, schools, universities and the recreational facilities in a capital city tell countless stories about countries. A capital city is also an abstract space, a symbol, and a place studied by historians and ethnographers, narrated by novelists, analysed by sociologists and psychologists, interpreted and appropriated by artists, and contemplated by philosophers. All these aspects are the focus of the Capital Cities Project. The Capital Cities Project (CCP) is an initiative of the Faculty of Humanities, with collaborators in the faculties of Law, Health Sciences, Natural and Agricultural Sciences, Engineering, Built Environment and Information Technology, Theology, and Economic and Management Sciences.

Visit the website at www.up.ac.za/capitalcities.

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Energy

Energy: This research theme provides an optimal link between the University's current research activities in the Faculty of Engineering, Built Environment and Information Technology and the energy focus areas that are prioritised by national government, with an initial focus on electrical energy (production, distribution and optimisation). Advanced materials, policy, economics and society, as well as energy and the environment, form key sectors of this theme.

Visit the website at <http://web.up.ac.za/energy>.

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Food, Nutrition and Wellbeing

Food, Nutrition and Wellbeing: Research on this theme seeks to address the emerging societal challenges related to food insecurity, nutrition deficiencies and hunger, especially in Africa. Through this theme, research conducted in the faculties of Health Sciences, Veterinary Science and Natural and Agricultural Sciences is coordinated to support an intensive network of researchers and develop policy and solutions for Africa and the world.

Visit the website at <http://web.up.ac.za/ifnuw>.

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Genomics

Genomics: This theme was established with a strong core capacity for genomics, bioinformatics and computational biology research. Individual research groups at UP have embarked on, and completed many significant research projects on the vast amount of information that can be derived from viral, bacterial, fungal and plant genomes. The well-established Bioinformatics and Computational Biology Unit at UP currently has some of the most advanced genomics and transcriptomics analysis capacity in South Africa. This leading group of scientists is geared to make an important contribution to the health sciences, veterinary science and other life sciences in South Africa and internationally.

Visit the website at www.up.ac.za/genomics-IRT.

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Faculty Research Themes

Cellular and Molecular Medicine



The Institute for Cellular and Molecular Medicine has a solid research base in human health sciences, and is entering into a phase of rapid growth as it responds to the heavy national and regional burden of communicable and non-communicable diseases. The Institute's activities include several cross-cutting areas such as genetics/genomics, cell-based therapy, the neurosciences, bioentrepreneurship and the regulatory (legislative) environment.

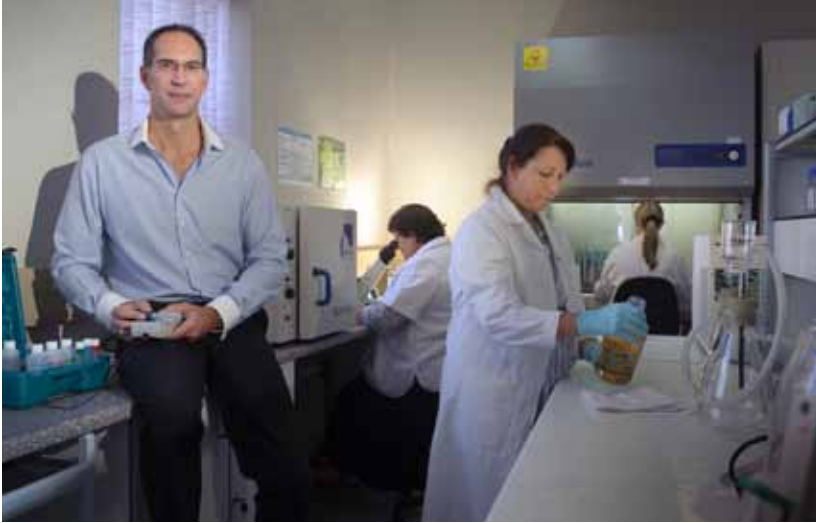
Visit the website at <http://web.up.ac.za/ICMM>.

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Centre for Sustainable Malaria Control

The Centre for Sustainable Malaria Control was established to promote collaborative research in the Faculty of Health Sciences on safer and sustainable malaria control and management. Research is focused on combating malaria effectively without risks to human health.

Visit the website at www.malaria.up.ac.za.

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Enhancing the well-being of vulnerable children

Enhancing the wellbeing of vulnerable children, as a research theme, focuses on vulnerable children, from birth to 18 years, in various resource-constrained environments in South Africa. In 10 to 20 years, these children will become the backbone of South African society and could be contributing substantially in all sectors. It would be short-sighted to neglect the majority of children growing up in South Africa.

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Human Economy Programme

The Human Economy Programme attracts scholars with backgrounds in sociology, history, anthropology, development studies, economics and education. Through case studies, research under this theme examines how people insert themselves into economic life and ways in which people engage with the economy and respond to institutional forms that perpetuate structures of inequality (creating, challenging, or even trying to ignore them). The human economy is conceived as being made and remade by people themselves, being based on a holistic conception of human needs and with the interests of humanity as a whole in mind.

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Institute for International and Comparative Law



The Institute for International and Comparative Law was established to generate knowledge and develop research capacity at the highest level across African territorial, legal and language limits within the parameters of international and comparative law.

Visit the website at www.up.ac.za/icla.

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Peace and conflict

Peace and conflict, as a research theme, addresses questions that include the following: what influences have informed and shaped the most prominent peacemaking approaches in southern Africa? What has been the impact on affected communities and/or societies? What attitudes have affected communities displayed towards peacemaking efforts and initiatives? How can we explain the psychology of peacemakers in southern Africa's conflicts? From what quarters has leadership emerged in the course of peacemaking initiatives conducted in southern Africa? Has South Africa provided leadership? And if so, how did it unfold? What was the role assumed by the African Union in these conflicts?

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Southern modernities

Southern modernities, as a research theme, focuses on southern modes of modernity based upon exchange and debate between thinkers in the southern hemisphere. Modernity is a largely self-referential term which Europe uses to define itself, while it simply negates others. The concept of modernity is used by certain cultures to castigate others for their non-modernity in order to constitute themselves as the very model of modernity. It becomes paramount then, for those cultures to extricate themselves from the toils of a notion of modernity that will always marginalise them. Research conducted under this theme focuses on a counter-offensive against such hegemonic and homogenising tendencies.

Contact details:

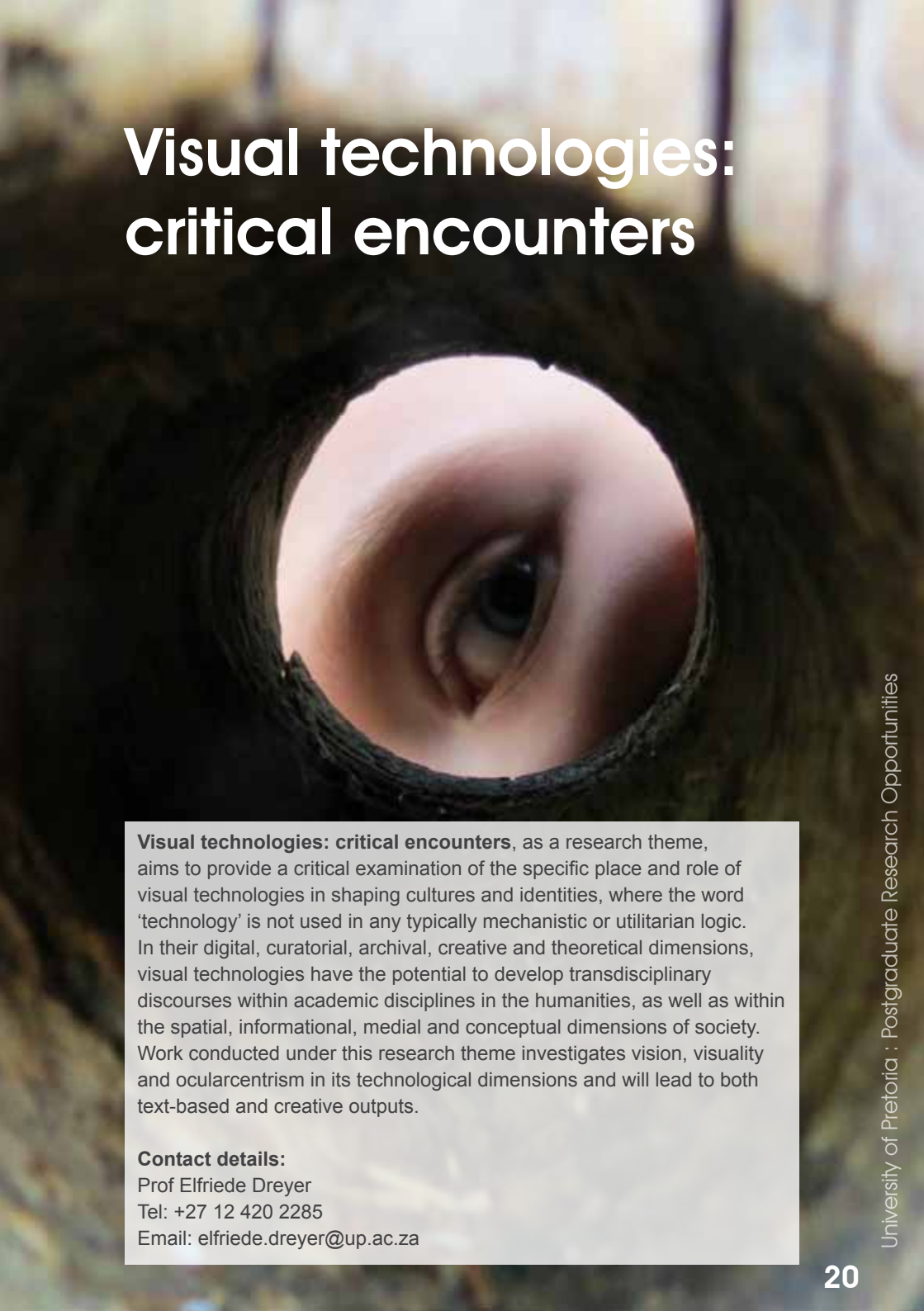
Prof Willie Burger and Prof Andries Visagie

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Visual technologies: critical encounters



Visual technologies: critical encounters, as a research theme, aims to provide a critical examination of the specific place and role of visual technologies in shaping cultures and identities, where the word ‘technology’ is not used in any typically mechanistic or utilitarian logic. In their digital, curatorial, archival, creative and theoretical dimensions, visual technologies have the potential to develop transdisciplinary discourses within academic disciplines in the humanities, as well as within the spatial, informational, medial and conceptual dimensions of society. Work conducted under this research theme investigates vision, visuality and ocularcentrism in its technological dimensions and will lead to both text-based and creative outputs.

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SARChI Chairs



International Development Law and African Economic Relations

Prof Frans Viljoen (Interim)

Faculty of Law

This research chair focuses on the global economic governance, and international legal aspects of sustainable and equitable development. Prof Viljoen's current scholarship focuses on global economic governance and the international legal aspects of sustainable and equitable development.

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Social Science Chair in Non-parametric, Robust Statistical Inference and Statistical Process Control

Prof S Chakraborti

Faculty of Natural and Agricultural Sciences

Among Prof Chakraborti's research interests are non-parametric statistical inferential methods, including practical applications in a variety of areas, such as statistical process control (SPC). He is the co-author of a well-known book, *Nonparametric statistical inference*, fifth edition (2010), with Jean D Gibbons, published by Taylor and Francis. He has been cited for his contributions in mentoring and collaborative work with students and colleagues from around the world.

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Artificial Intelligence

Prof Andries Engelbrecht

Faculty of Engineering, Built Environment and Information Technology

Prof Engelbrecht's main research focus is computational intelligence, with a particular emphasis on computational swarm intelligence, learning from zero knowledge using competitive coevolution and evolutionary algorithms. His research team developed an open-source library of computational intelligence algorithms, which is increasingly being used internationally. They were the first to provide convergence proofs of particle swarm optimisers (PSO) to develop PSO algorithms to find multiple solutions to optimisation problems and to use PSO for secondary RNA structure prediction.

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Fluoro-materials Science and Process Integration

Prof Philip Crouse

Faculty of Engineering, Built Environment and Information Technology

Prof Crouse's current research interests include the development of fluoro-polymer capability in South Africa, with a focus on polyvinylidene difluoride (PVDF), fluorinated ethylene propylene (FEP) and ethylene tetrafluoroethylene (ETFE). Other focus areas are the benchmarking processes against polytetrafluoroethylene (PTFE), the dry fluorination of inorganic materials for surface modification (inclusive of bulk metal silicides), the modelling of fluorine cells, the various Advanced Metal Initiative (AMI) projects relating to fluoro-chemical processing, and the development of alternative high-temperature processes for the production of hydrogen fluoride directly from fluorspar.

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Carbon Technology and Materials

Prof Brian Rand

Faculty of Engineering, Built Environment and Information Technology

Prof Rand has built a new, highly active group to research carbon materials. His research interests are in the field of carbon and graphite materials and the processing of ceramic (refractory) materials, specifically nuclear graphite, carbon fibres and carbon-carbon composites, liquid crystalline precursors to carbon.

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 Tel: +27 12 420 3549 (Prof Ncholu Manyala)
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Chair in Complex Systems

Prof Pavel Selyshchev

Faculty of Natural and Agricultural Sciences

Prof Selyshchev's specialisation is in theoretical physics, specifically complex non-linear systems and their evolution. He focuses on kinetic non-linear processes in materials under irradiation and has developed a theoretical approach to the self-organisation phenomena in irradiated materials.

His research focus areas are temporal and spatial self-organisation of defect density under irradiation, dimensional changes in irradiated materials as dissipative structures and different kinds of interactions as mechanisms of dissipative structure formation (such as force interaction between defects, thermo-concentration and thermo-elastic interdependence). Prof Selyshchev was also involved as a theorist in the development of post-Chernobyl strategies.

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Mathematical Models and Methods in Bioengineering and Biosciences (M³B²)

Prof Jean Lubuma

Faculty of Natural and Agricultural Sciences

This research focus is at the intersection of mathematical modelling of biological processes and a spectrum of mathematical specialisations. These include dynamical systems, partial differential equations and numerical analysis.

The biological processes to be considered are highly relevant to the needs of the country. These include mathematical epidemiology, which covers infectious diseases of humans (such as vector-borne tropical diseases and communicable diseases such as the HIV/AIDS pandemic and tuberculosis), zoonotic diseases of wildlife areas and livestock diseases (such as foot-and-mouth disease), food security versus pests, and invasive plants and animals.

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Sustainable Malaria Control

Prof Lyn-Marie Birkholz

Faculty of Natural and Agricultural Sciences

This research programme delivers biotechnological applications in infectious disease studies by combining expertise in biosciences and biotechnology. The specific focus will be on understanding the biology of gametocyte differentiation of malaria parasites, leading to transmission-blocking drugs that are anticipated to make a substantial

contribution to the alleviation of the morbidity and mortality caused by malaria.

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Tax Policy and Governance

Prof Riël Franzsen

Faculty of Economic and Management Sciences

The research activities of the Chair are aligned with the research strategies of the South African government's Department of Science and Technology. More specifically, National Treasury's fiscal policy seeks to support structural reforms of the South African economy consistent with long-term growth, employment creation and an equitable distribution of income. It aims to promote investment and export expansion, while enabling government to finance public services, redistribution and development in an affordable and sustainable budget framework. The chair is aligned with these objectives.

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Mammalian Behavioural Ecology and Physiology

Prof Nigel Bennett

Faculty of Natural and Agricultural Sciences

Prof Bennett's research is focused on ecology, animal physiology and animal behaviour. His work is predominantly on the sociobiology of African rodent moles (*Bathyergidae*) and, in particular, the extrinsic and intrinsic factors that have led to the development of sociality in this remarkable endemic African family. His research group is fundamentally interested in elucidating the modes and mechanisms that are responsible for reproductive suppression in non-reproductive females of the various social species.

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Advanced Sensor Networks

(To be appointed)

Faculty of Engineering, Built Environment and Information Technology

The main focus of this programme is building research capacity in the area of advanced sensor networks, a modern and growing field, which is strategic to the economy. The first five years of the programme will target research on the mathematical aspects of wireless sensor networks (WSN), while the subsequent five-year programme will focus on hardware, test-beds and implementation aspects. The applications to be considered will have major national interest, especially in the wildlife monitoring, soil and in-situ soil moisture analysis (for the viticulture), home security, infrastructure health monitoring and human healthcare.

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UP research and industry chairs			
Faculty	Name of chair	Chair	Contact details
Economic and Management Sciences	Chair in Logistics	Mr Wesley Niemann	012 420 4635 wesley.niemann@up.ac.za
	Chair in Entrepreneurship	Prof J Van Vuuren	012 420 3401 jurie.vanvuuren@up.ac.za
	South African Reserve Bank Chair in Monetary Economics	Prof Nicola Viegi	012 420 3820 nicola.viegi@up.ac.za
	SARCHI Chair in Tax Policy and Governance	Prof Riel Franszen	012 420 5538 riel.franszen@up.ac.za
	SARCHI Chair in Carbon Technology and Materials	Prof Brian Rand	012 420 4173 b.ca.rand@btinternet.com
Engineering, Built Environment and Information Technology	SARCHI Chair in Fluoro-material Science and Process Integration	Prof Philip Crouse	012 420 2856 philip.crouse@up.ac.za
	SARCHI Chair in Artificial Intelligence	Prof Andries Engelbrecht	012 420 3578 engel@cs.up.ac.za
	Chair in Railway Engineering	Prof Hannes Gräbe	012 420 2741 hannes.grabe@up.ac.za
	Sentech Chair in Broadband Wireless Multimedia Communication	Prof Sunil Maharaj	012 420 4636 sunil.maharaj@up.ac.za
	Exxaro Chair in Energy Efficiency		
	Chair in Maintenance Engineering	Prof Stephan Heyns	012 420 2432 stephan.heyns@up.ac.za
	Anglo-American Chair in Pyrometallurgy	Prof Andrie Garbers-Craig	012 420 3189 andrie.garbers-craig@up.ac.za
	Bateman Chair in Minerals Processing	Dr Natasia Naudé	012 420 4208 natasia.naude@up.ac.za

UP research and industry chairs			
Faculty	Name of chair	Chair	Contact details
Engineering, Built Environment and Information Technology	South African Institute of Welding (SAIW) Chair in Welding Engineering	Prof Madeleine du Toit	012 420 2187 madeleine.dutoit@up.ac.za
	Xstrata Chair in Modelling of Pyrometallurgical Processes	Dr Johan Zietsman	012 420 5919 johan.zietsman@up.ac.za
	Sasol Chair in Safety, Health and the Environment		
	Gijima AST Chair in Informatics	Dr Johan van Loggerenberg	012 420 3013 johan.vl@up.ac.za
	Chair in Electronic Defence Research (CEDR)	Prof Warren du Plessis	012 420 2951 wduplessis@up.ac.za
	CBI Electric Low Voltage Chair in Power Electronics		
	Rand Water Chair in Civil Engineering – Water Purification, Supply, Utilisation-related Science and Engineering	Prof Fanie van Vuuren	012 420 2438 fanie.vanvuuren@up.ac.za
	Rand Water Chair in Mechanical Engineering – Water Purification, Supply and Utilisation-related Science and Engineering	Prof Nico Theron	012 420 3309 nico.theron@up.ac.za
	Rand Water Chair in Water and Public Health	Prof Maureen Taylor	012 319 2358 maureen.taylor@up.ac.za
	Jean Monnet Chair in Regional Integration and Governance Studies	Prof Lorenzo Fioramonti	012 420 2696 lorenzo.fioramonti@up.ac.za
Law	SARCHI Chair in International Development Law and African Economic Relations	Prof Frans Viljoen (interim)	012 420 3228 frans.viljoen@up.ac.za

UP research and industry chairs			
Faculty	Name of chair	Chair	Contact details
Natural and Agricultural Sciences	SARCHI Chair in Statistics	Prof S Chakraborti	012 420 5055 schakrab@cba.ua.edu
	SARCHI Chair in Mammal Behavioural, Ecology and Physiology	Prof Nigel Bennett	012 420 2538 nigel.bennet@up.ac.za
	SARCHI Chair in Complex Systems	Prof Pavel Selyshchev	012 420 2455 pavel.selyshchev@up.ac.za
	SARCHI Chair in Mathematical Models and Methods in Bioengineering and Biosciences	Prof Jean Lubuma	012 420 2520 jean.lubuma@up.ac.za
	SARCHI Chair in Sustainable Malaria Control	Prof Lyn-Marie Birkholtz	012 420 2479 lynnmarie.birkholtz@up.ac.za
	Mondi Chair in Tree Pathology	Prof Mike Wingfield	012 420 3939 mike.wingfield@up.ac.za
	Sappi and Mondi Chair in Forest Genomics and Biotechnology	Prof Zander Myburg	012 420 4945 zander.myburg@up.ac.za
	SAFCOL Chair in Forestry	Prof Paxie Chinwa	012 420 3213 paxie.chinwa@up.ac.za
	Exxaro Kumba Chair in Geodynamics	Prof Wlady Altermann	012- 420 4137 wlady.altermann@up.ac.za
	Aon Benfield Chair in Geology		
	Absa Chair in Agribusiness Management	Prof Andre Louw	012 420 5772 andre.louw@up.ac.za
	Rand Water Chair in Water Microbiology	Prof Fanus Venter	012 420 4100 fanus.venter@up.ac.za

UP research and industry chairs			
Faculty	Name of chair	Chair	Contact details
Veterinary Sciences	Chair in Primary Animal Health Care (PAHC)	Prof Rebone Moerane	012 529 8464 rebone.moerane@up.ac.za
	Research Chair in Poultry Health and Production	Prof Celia Abolnik	012 529 8258 celia.abolnik@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Economic and Management Sciences	Centre for Inclusive Banking in Africa	Prof Gerhard Coetzee	012 420 5836 gerhard.coetzee@up.ac.za
	Centre for Communication Reputation Management	Prof Ronel Rensburg	012 420 3395 ronel.rensburg@up.ac.za
	Albert Luthuli Centre for Responsible Leadership	Prof Derick de Jongh	012 420 3386 derick.dejongh@up.ac.za
	African Tax Institute	Prof Riël Franszen	012 420 5538 riel.franszen@up.ac.za
	Unit for Forensic Accounting	Mr Danie du Plessis	012 420 3419 danie.duplessis@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Education	Centre for Evaluation and Assessment	Prof Sarah Howie	012 420 4131 sarah.howie@up.ac.za
	Interuniversity Centre for Education Law and Education Policy	Prof Rika Joubert	012 420 5514 rika.joubert@up.ac.za
	Joint Centre for Mathematics, Science and Technology Education (JCMSTE) – joint with Natural and Agricultural Sciences	Prof Max Braun	012 420 5621 max.braun@up.ac.za
	Unit for Education Research in AIDS (ERA)	Prof Liesel Ebersöhn	012 420 2337 liesel.ebersohn@up.ac.za
	Unit for Distance Education	Dr Lizelle Sambane	012 420 5699 de.admin@up.ac.za
	African Centre of Excellence in Information Ethics	Prof Theo Bothma	012 420 2293 theo.bothma@up.ac.za
	Centre for Advanced Sensor Networks	Prof Gerhard Hancke	012 420 2386 gerhard.hancke@up.ac.za
	Centre for Electromagnetism	Prof Wimpie Odendaal	012 420 3545 wimpie.odendaal@up.ac.za
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	Centre of New Energy Systems (CNES)	Prof X Xia	012 420 2165 xxia@up.ac.za
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	Centre of Excellence in Pyrometallurgy	Prof Andrie Garbers-Craig	012 420 3189 andrie.garbers-craig@up.ac.za
	Kumba Iron Ore Mine Design Centre	Prof Ronny Webber-Youngman	012 420 3763 ronny.webber@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Engineering, Built Environment and Information Technology	Specialist Centre in Plant Asset Management	Prof Stephan Heyns	012 420 2432 stephan.heyns@up.ac.za
	South African Institute for Welding (SAIW) Centre for Welding Engineering	Prof Madeleine du Toit	012 420 2187 madeleine.dutoit@up.ac.za
	Institute of Advanced Materials (jointly with Natural and Agricultural Sciences)	Prof Walter Focke	012 420 3728 walter.focke@up.ac.za
	Industrial Metals and Minerals Research Institute	Prof Roelf Sandenbergh	012 420 2440 roelf.sandenbergh@up.ac.za
	Institute for Technological Innovation	Prof Anastassios Pouris	012 420 5178 anastassios.pouris@up.ac.za
	Carl and Emily Fuchs Institute for Microelectronics (CEFIM)	Prof Sunil Maharaj	012 420 4636 sunil.maharaj@up.ac.za
	Eskom Power Plant Engineering Institute (EPPEI)	Prof Stephan Heyns	012 420 2432 stephan.heyns@up.ac.za
	Mining Resilience Research Institute (Anglo American, Sasol)	Prof Ronny Webber-Youngman	012 420 3763 ronny.webber@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Health Sciences	Applied Morphology Research Centre	Prof Resia Pretorius	012 319 2907 resia.pretorius@up.ac.za
	Comprehensive Physical Rehabilitation Centre	Dr Carina Eksteen	012 354 1249 carina.eksteen@up.ac.za
	Forensic Anthropology Research Centre	Prof Maryna Steyn	012 420 3256 maryna.steyn@up.ac.za
	UP Centre for Sustainable Malaria Control	Prof Tiaan de Jager	012 354 2072 tiaan.dejager@up.ac.za
	Institute for Molecular and Cellular Biology	Prof Michael Pepper	012 319 2190 michael.pepper@up.ac.za
	MRC Unit for Inflammation and Immunity	Prof Robert Pattinson	012 373 8041 robert.pattinson@up.ac.za
	MRC Unit for Maternal and Infant Health Care Strategies	Prof Ron Anderson	012 319 2425 ronald.anderson@up.ac.za
	Environmental Chemical Pollution and Health Research Unit	Dr Natalie Aneck-Hahn	012 354 1676 natalie.aneck-hahn@up.ac.za
	Centre for Augmentative and Alternative Communication (CAAC)	Prof Juan Borman	012 420 2001 juan.borman@up.ac.za
	Centre for Mediation in Africa	Prof Laurie Nathan	012 420 2464 laurie.nathan@up.ac.za
	Centre for Research in Politics of Language (CentrePol)	Prof Vic Webb	012 420 2332 vic.webb@up.ac.za
Humanities			

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Humanities	Centre for the Study of Governance Innovation	Prof Lorenzo Fioramonti	012 420 2696 lorenzo.fioramonti@up.ac.za
	Institute for Sport Research	Prof Ernst Kruger	012 420 6032 ernst.kruger@up.ac.za
	Institute for Strategic and Political Affairs	Prof Sandy E Africa	012 420 5182/2034 sandy.africa@up.ac.za
	Institute for Women and Gender Studies	Prof Elaine Salo	012 420 3898 elaine.salo@up.ac.za
	Unit for Academic Literacy	Prof Adelia Carstens	012 420 4957 adela.carstens@up.ac.za
	Unit for Creative Writing	Prof Henning Pieterse	012 420 2334 henning.pieterse@up.ac.za
	UP Cochlear Implant Unit (UPCIU)	Prof Bart Vinck	012 420 2355 bart.vinck@up.ac.za
	Centre for Advanced Corporate and Insolvency Law	Prof André Boraine	012 420 2055 andre.boraine@up.ac.za
	Centre for Child Law	Prof Ann Skelton	012 420 4502 ann.skelton@up.ac.za
	Centre for Human Rights	Prof Adem Kassie Abebe	012 420 4306 adem.kassie@up.ac.za
Law	Centre for Intellectual Property Law	Prof Steve Cornelius	012 420 3158 steve.cornelius@up.ac.za
	Centre for Law and Medicine	Prof Pieter Carstens	012 420 2415 pieter.carstens@up.ac.za
	Sports Law Centre in Africa	Prof André Boraine	012 420 2055 andre.boraine@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Law	Institute for International and Comparative Law in Africa (ICLA)	Prof Erika de Wet (Co-director) Prof Christof Heyns (Co-director)	012 420 6217 erika.dewet@up.ac.za 012 420 4957 christof.heyns@up.ac.za
	International Development Law Unit (IDLU)	Prof Adem Kassie Abebe	012 420 4306 adem.kassie@up.ac.za
Natural and Agricultural Sciences	African Centre for Gene Technologies (ACGT, with Council for Scientific and Industrial Research (CSIR) and the University of the Witwatersrand)	Dr John Becker	012 420 6147 jbecker@csir.co.za
	UP (Aon Benfield) Natural Hazard Centre Africa	Prof Andrzej Kijko	012 420 3613 andrzej.kijko@up.ac.za
	Centre for Environmental Economics and Policy in Africa (CEEPA)	Prof Rashid Hassan	012 420 3893 rashid.hassan@up.ac.za
	Centre for Environmental Studies (CFES)	Prof Willem Ferguson	012 420 2017 willemferguson@zoology.up.ac.za
	Centre for Geoinformation Sciences (CGIS)	Dr Serena Coetzee	012 420 3823 serena.coetzee@up.ac.za
	Centre for Microbial Ecology and Genomics (CMEG)	Prof Don Cowan	012 420 5873 don.cowan@up.ac.za
	Centre for Wildlife Management	Prof Michael Somers	012 420 6091 michael.somers@up.ac.za
	Joint Centre for Mathematics, Science and Technology Education (JCMSTE) – joint with Education	Prof Max Braun	012 420 5621 max.braun@up.ac.za
	SADC Centre for Land-related Regional and Development Policy	Prof Nic Olivier	012 420 5044 nic.olivier@up.ac.za
	DST/NRF Centre for Tree Health Biotechnology	Prof Mike Wingfield	012 420 3939 mike.wingfield@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Natural and Agricultural Sciences	Forestry and Agricultural Biotechnology Institute (FABI)	Prof Mike Wingfield	012 420 3938 mike.wingfield@fabi.up.ac.za
	Institute of Applied Materials (jointly with Engineering, Built Environment and Information Technology)	Prof Walter Focke	012 420 3728 walter.focke@up.ac.za
	Institute for Food, Nutrition and Wellbeing (IFNUW)	Prof Sheryl Hendriks	012 420 3811 sheryl.hendriks@up.ac.za
	Mammal Research Institute (MRI)	Prof Bob Millar	012 420 3776 robertpetemillar@gmail.com
	UP Water Institute	Prof Hannes Rautenbach	012 420 2173 hannes.rautenbach@up.ac.za
	Genomics Research Institute	Prof Don Cowan	012 420 5873 don.cowan@up.ac.za
	Bioinformatics and Computational Biology Unit	Prof Fourie Joubert	012 420 3613 fourie.joubert@up.ac.za
	Conservation Ecology Research Unit (CERU)	Prof Rudi Van Aarde	012 420 2753 rjvaarde@zoology.up.ac.za
	STATOMET (Bureau for Statistical and Survey Methodology)	Prof Andriette Bekker	012 420 2553 andriette.bekker@up.ac.za
	Biomath Forum	Prof Jean Lubuma	012 420 2520 jean.lubuma@up.ac.za
	Experimental Farms	Prof Edward Webb	012 420 3271 edward.webb@up.ac.za
	Laboratory for Microscopy and Microanalysis	Mr André Botha	012 420 2075 ajbotha@scientia.up.ac.za
	Postgraduate School of Agriculture and Rural Development	Prof Charles Machethe	012 420 3280 charles.machethe@up.ac.za
	Sci-Enza	Ms Rudi Horak	012 420 2865 rudi.horak@up.ac.za

Research entities at the University of Pretoria			
Faculty	Centres, institutes and units	Director	Contact details
Theology	Centre for Contextual Ministry (CCM)	Dr Stephan de Beer	012 420 4951 stephan.debeer@up.ac.za
	Centre for Public Theology	Dr Vuyani Vellem	012 420 6518 vuyani.vellem@up.ac.za
	Excelsus (Dutch Reformed Church:Centre for Continuing Ministerial Development)	Dr Andre Bartlett	012 420 4441 andre.bartlett@up.ac.za
	Institute for Missiological and Ecumenical Research (ISWEN)	Dr Attie van Niekerk	012 420 2780 attie.vanniekerk@up.ac.za
	NOVA – Institute for Research and Development for Prevention of Poverty	Dr Attie van Niekerk	012 420 2780 attie.vanniekerk@up.ac.za
Veterinary Sciences	Centre for Veterinary Wildlife Studies	Dr Richard Burroughs	012 529 8508 richard.burroughs@up.ac.za
	Equine Research Centre	Prof Alan Guthrie	012 529 8068 alan.guthrie@up.ac.za
	UP Biomedical Research Centre	Prof Vinny Naidoo	012 529 8082 vinny.naidoo@up.ac.za
	Orderstepoort Veterinary Genetics Laboratory	Dr Cindy Harper	012 529 8450 cindy.harper@up.ac.za



Faculties

Faculty of Economic and Management Sciences

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Visit our website at www.up.ac.za.

The Faculty of Economic and Management Sciences is the largest at the University of Pretoria in terms of student numbers. It comprises nine departments specialising in financial sciences, economic sciences, management sciences and public management, and offers 90 postgraduate programmes. The departments are as follows:

- Accounting
- Auditing
- Business Management (including the Communication Management Division)
- Economics
- Financial Management
- Human Resource Management
- Marketing Management (including the Tourism Management Division)
- School of Public Management and Administration
- Taxation

“My experience as a postgraduate researcher at UP has been awesome. As a first-time student at the University, I received excellent guidance from my supervisors. I also found the library staff really helpful in making my research easier through their excellent online resource system and by simply assisting me when needed. I’m looking forward to another good year of research.”

Faculty of Education

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Faculty postgraduate contact

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Visit our website at www.up.ac.za.

The Faculty of Education is one of the largest and most diverse facilities in South Africa for the initial and advanced training of education professionals from across the world. The faculty has five departments:

- Humanities Education
- Science, Mathematics and Technology Education
- Education Management and Policy Studies
- Educational Psychology
- Early Childhood Education

“ The University of Pretoria is the place of the leading scientists of the future. At UP, the main focus is on developing the students’ skills and helping them discover their weaknesses and turn them into strengths. Since I started at UP three years ago, my views for the future have changed and I am now empowered to be a person who’s willing to change the world. At the end I just want to add that UP is a home away from home. ”



Faculty of Engineering, Built Environment and Information Technology



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The Faculty of Engineering, Built Environment and Information Technology is divided into three schools. The faculty is also home to the Graduate School of Technology Management and has various institutes and research centres. All the research within the Faculty is aligned with the strategic imperatives and industry. The schools and departments are as follows:

- **School of Engineering**
 - Department of Chemical Engineering
 - Department of Civil and Biosystems Engineering
 - Department of Electrical, Electronic and Computer Engineering
 - Department of Industrial and Systems Engineering
 - Department of Materials Science and Metallurgical Engineering
 - Department of Mechanical and Aeronautical Engineering
 - Department of Mining Engineering
- **School for the Built Environment**
 - Department of Architecture
 - Department of Construction Economics
 - Department of Town and Regional Planning
- **School of Information Technology**
 - Department of Computer Science
 - Department of Informatics
 - Department of Information Science
 - Graduate School of Technology Management





“Through my research and the support I had from UP, I had access to state-of-the-art equipment. The mentorship I received has been invaluable. Through my research I’ve become part of the national, as well as international, teams working in our field.”

Faculty of Health Sciences

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The Faculty of Health Sciences strives towards merging clinical service delivery, health professions education and world-class research. The Faculty is divided into four schools, encompassing more than 40 academic departments.

Schools:

- School of Medicine
- School of Dentistry
- School of Health Systems and Public Health
- School of Health Care Sciences



Faculty of Humanities

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The Faculty of Humanities is one of the most comprehensive humanities faculties in the country, with 18 different academic departments and two teaching units:

- Department of African Languages
- Department of Afrikaans
- Department of Ancient Languages
- Department of Anthropology and Archaeology
- Department of Biokinetics, Sport and Leisure Sciences
- Department of Communication Pathology
- Department of Drama
- Department of English
- Department of Historical and Heritage Studies
- Department of Journalism
- Department of Modern European Languages
- Department of Music
- Department of Philosophy
- Department of Political Sciences
- Department of Psychology
- Department of Social Work and Criminology
- Department of Sociology
- Department of Visual Arts



“ I completed my MMus (Performance) at the University of Pretoria. The experience changed my life and enriched my practical work as voice lecturer and my research and presentation of Voice Method. I have received a bursary from UP to complete my postgraduate studies. During my research, I have established valuable contacts and networking channels with expert colleagues in Canada and the USA. This was made possible by the generosity of UP (upon recommendation of my Head of Department, Prof Wim Viljoen), which sponsored my trip to read a paper on my research in Vocal Pedagogy and presenting a lecture recital on South African indigenous art and folk music at an international singing symposium in Newfoundland in 2011. My gratitude and appreciation go to all persons at UP who assisted me with my postgraduate studies. **”**

Faculty of Law

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Visit our website at www.up.ac.za/law.

The Faculty of Law at the University of Pretoria ranks among the top law faculties in South Africa and is often described as a global law faculty in Africa. Through their research and scholarly activities, the academic staff in the Faculty contribute significantly to various fields of law. Some participated in the drafting of the final South African Constitution, while some alumni of the Faculty serve as judges in high courts, the Supreme Court of Appeal and the Constitutional Court.

- Jurisprudence
- Mercantile Law
- Private Law
- Procedural Law
- Public Law

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law

Faculty of Natural and Agricultural Sciences

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The Faculty of Natural and Agricultural Sciences prides itself in producing highly skilled graduates and generating new scientific knowledge through world-class research. Some 40% of all rated researchers, as well as A-rated researchers at the University of Pretoria, are members of this faculty, an indicator that the academic staff are at the forefront of their respective disciplines.

The departments within the Faculty are as follows:

- Agricultural Economics, Extension and Rural Development
- Anatomy
- Animal and Wildlife Science
- Biochemistry
- Chemistry
- Consumer Science
- Food Science
- Genetics
- Geography, Geoinformatics and Meteorology
- Geology
- Insurance and Actuarial Science
- Mathematics and Applied Mathematics
- Microbiology and Plant Pathology
- Physiology
- Physics
- Plant Production and Soil Science
- Plant Science
- Statistics
- Zoology and Entomology





Faculty of Theology

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Visit our website at www.up.ac.za/theology.

The Faculty of Theology is the largest of its kind in South Africa. It has a strong research culture with an inquiry-led and research-intensive approach. The Faculty is committed to nurturing transformative leaders, promoting peace and justice, and engaging with people on the margins of society.

The Departments in the Faculty are:

- Church History and Church Polity
- Dogmatics and Christian Ethics
- New Testament Studies
- Old Testament Studies
- Practical Theology
- Science of Religion and Missiology

“ My postgraduate experience at UP is an exciting journey of discovery and pushing the limits to the extreme. UP provides a support basis to pursue my dream and also opportunities to accumulate knowledge and skills in and beyond my field of study. ”

Faculty of Veterinary Science

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Visit our website www.veterinary.up.ac.za.

The Faculty of Veterinary Science at Onderstepoort is the only one of its kind in South Africa and the second oldest of the 46 such faculties in Africa. An online-based MSc in Veterinary Tropical Diseases is offered by the Faculty and attracts a range of national and international postgraduate students.

The Faculty has five academic departments:

- Anatomy and Physiology
- Companion Animal Clinical Studies
- Paraclinical Sciences
- Production Animal Studies
- Veterinary Tropical Diseases

The Graduate Support Hub @ UP

The Graduate Support Hub is a support-oriented virtual and physical space that serves as a central hub to facilitate and coordinate the functions and processes that impact on postgraduate students and postdoctoral fellows of the University. The Graduate Support Hub is part of the Department of Research and Innovation Support and works in close cooperation with the Client Service Centre, faculty administration offices, Study Finance and the International Students Division. It coordinates postgraduate and postdoctoral processes, provides academic research support and is committed to the provision of broad-based skills developmental activities.

Postgraduate resources:

The Research Commons is a dedicated advanced space for postgraduate students at master's and doctoral level, as well as researchers and academic staff at the University of Pretoria. It combines research and social space that contributes to social dialogue, scholarly exchange and intellectual development. The space includes work stations, study carrels, seminar and group discussion rooms equipped with top-end PCs, WiFi connectivity, printers, scanners and copiers. A separate lounge area is available for relaxation.

Funding your postgraduate studies

Various bursaries, scholarships and fellowships are available through a number of agencies and within the University of Pretoria. The Client Service Centre (CSC) (www.up.ac.za) will assist with all the administrative processes linked to bursary applications. In addition, the Graduate Support Hub offers assistance with funding applications. A list of funding opportunities for which students can apply is regularly updated on the University website, www.up.ac.za/feesfunding, as well as the Graduate Support @ UP Facebook page.

“Unique experience, had a great opportunity to contribute to the science body of knowledge through unparalleled research at UP during my MSc study. This set me up for my current doctoral research on innovative anthrax vaccinology/immunological responses in selected species.”

