

# The Faculty of Veterinary Science

# REVIEW

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UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

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# The Faculty of Veterinary Science at Onderstepoort, University of Pretoria

## Introduction by the Dean, Prof Gerry Swan

The Faculty of Veterinary Science, as the only faculty of its kind in South Africa, has the sole responsibility to train veterinarians and veterinary nurses that are indispensable to the country. It is a national asset and it is expected in future to play a leading role in veterinary education in the SADC region and further afield in Africa. The Faculty gives credibility to the notion of the University that it wishes to be locally relevant and globally competitive.

Veterinary training in South Africa has a history of close to 100 years. During this time, the Faculty has acquired the competency to train veterinarians and veterinary nurses of international standard. Our degree has reciprocity with the degrees (those offered by six veterinary faculties) administered by the Royal College of Veterinary Surgeons in the United Kingdom, and with the degree offered by Massey University in New Zealand. In addition, our degree allows automatic registration, for the purpose of general practice, in Australia, New Zealand, and Malaysia. Our students are highly competitive and gain access with ease to academic programmes in Europe, Scandinavia, the UK, and the USA. Veterinary specialists trained at our Faculty, successfully pass examinations of specialist colleges in the USA and Europe.

It has been broadly stated that the environment of veterinary science is one of profound change. Major demographic, political, environmental, disease, technological, and economic influences are driving these changes. The scope of veterinary training is consequently expanding and the relevance of the various sectors of the profession is changing. Emphasis is increasingly placed on the contributions (or the lack thereof) made by the profession in the fields of globalisation, veterinary public health, international trade, import and export control, border control, research, bioterrorism, diagnostics, and the certification of products of animal origin for local and international consumption. These changes will have a major impact on the policies of governments from a funding perspective, and on the ongoing change in the content of the Faculty's undergraduate curriculum, and in postgraduate, research and continuing education programmes. They are also being considered in the current review of the veterinary undergraduate programme.

Our postgraduate training programmes are becoming increasingly competitive and they offer opportunities to study to the level of PhD. Post-doc programmes are improving and adding value to the broad strategic drive to improve the postgraduate and research programmes of the Faculty. Its specialist training compares well with those internationally, and its science-based training attracts partners and funding from across the world. A number of our facilities and training programmes are recognised as specialist training centres for candidates

that wish to sit specialist examinations in Europe and the United States of America. An increasing number of our 100 academic staff members are NRF-rated and they are competing successfully in South Africa for funding to sustain their research programmes. Increasing numbers of professionals from abroad join our clinical and preclinical programmes and the postgraduate student body reflects a good mix of local, other African and European students.

Veterinary training is notoriously expensive. This is a global phenomenon and it is recognised that a veterinary faculty requires funding which is in excess of that of most, if not all other faculties at universities. The perceived excessive expenditure is the direct result of the need to have access to a training (academic) hospital, farm animals, diagnostic and research laboratories, satellite clinics and mobile services to allow adequate experiential training, services and a platform for research related to postgraduate training and community programmes. This state of affairs has a marked impact on the way in which the Faculty can conduct its affairs and the ease with which it can sustain its programmes at levels that will ensure its continuing international recognition. Expansion of the activities of the Faculty to take the needs of the sub-region into consideration will further have a major financial impact. Substantial additional state funding has been provided for the Academic Veterinary Hospital and to support clinical training.

The small number of black veterinarians trained in the past is a major constraint on the ease with which employment equity targets will be met now and in the foreseeable future. Similar problems, for a variety of reasons, are influencing the ease with which black students are attracted into the course. An ongoing recruitment and awareness programme has been implemented to change the current inadequate performance of the Faculty in these areas; this programme should be sustained over a period of at least 10 years.



## Vision and Mission of the Faculty of Veterinary Science

The Faculty is an integral part of the University of Pretoria and it conducts its affairs within the context of the institutional mission, vision, policies and value system of the University of Pretoria. The driving force of the Faculty is embodied in its strategic vision:

The Faculty aims to be an internationally accredited seat of veterinary excellence. We strive to be globally competitive, regionally pre-eminent, and locally relevant. Through extensive networking and partnerships, we provide an effective veterinary interface to Africa. Our training programmes, research and services are innovative, sustainable, relevant and of high quality. All activities are managed within a well-regulated, efficient, and value-driven system. Our graduates are well rounded and innovative, and equipped with essential academic and general life skills

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Mission:

- ◆ Providing relevant and excellent formal training
- ◆ Providing opportunities for lifelong learning
- ◆ Rendering appropriate high quality service
- ◆ Attracting sustainable funding through budget innovation
- ◆ Increasing research outputs through effective postgraduate programmes
- ◆ Actively promoting employment equity and student diversity
- ◆ Recruiting and retain the “best people”
- ◆ Negotiating competitive remuneration packages
- ◆ Maintaining a suitable infrastructure, and
- ◆ Initiating community service and development programmes



## The Faculty within a strategic context

Veterinarians and veterinary services are indispensable to the health and wellbeing of animals and humans and play an important role in the economy of South Africa. Veterinarians attend to the veterinary needs and general welfare of animals, both those with commercial importance and those kept as companion. They contribute to production of sustainable sources of safe protein of animal origin and the prevention of transmission of diseases from animals to humans. The economy is supported and wealth created by controlling epidemic diseases of animals and by increasing the profitability of commercial and small scale farming enterprises.

Veterinarians certify the disease (or disease-free) status of animals and the safety of products for local and international trade. Diseases such as foot-and-mouth disease, SARS, and BSE (bovine spongiform encephalopathy, or better known as mad cow disease) constitute effective international trade barriers to manipulated international trade to the benefit of specific markets and countries. The ability to diagnose and contain these diseases is critical to the certification of the disease status of animals and of the safety for export of various agricultural products (of animal and plant origin).

It is clear that numerous issues must be attended to, to sustain the activities of the Faculty at current levels and to improve performance in those areas where its activities are less than satisfactory. Sustained training at recognised levels is required to maintain the competency of countries to control diseases of economic importance and to sustain the credibility of its certification. This situation is no different for South Africa.

Increasing numbers of questions are being raised about the relevance of the activities of the veterinary profession. Policy that outlines the strategic direction of the veterinary profession and data on the needs of the local veterinary profession seen against the background of common international trends are important and needed since they would define the content and levels of expertise needed to structure the veterinary curriculum.

There is increasing international pressure to develop the Faculty as a regional veterinary training centre. The Faculty is positioned to play a leading role in veterinary education in the SADC region and in Eastern Africa. For this reason it has established links with most of the faculties of veterinary science in the SADC region. It has formal links with a number of eminent faculties of veterinary science in Europe, Scandinavia, and the USA as well as with faculties within the sub-region. It is attracting increasing numbers of postgraduate students out of Africa from as far as Eritrea and Ethiopia.

The Faculty is in a unique position to play a leading role in the provision of suitable training, research and services in veterinary wildlife programmes linked to the activities of other role players in this expanding industry. The Centre for Veterinary Wildlife Studies (CVWS) facilitates the Wildlife Programme in the Faculty. These activities comprise formal and informal training programmes, research and community engagement, and are supported by formal agreements with SANParks and the Peace Parks Foundation.



## Academic offering and training

Currently the Faculty offers a two-year undergraduate diploma programme in Veterinary Nursing (DipVetNurs) and a four-year professional degree programme in Veterinary Science (BVSc). The Faculty is also involved in presenting certain modules in the pre-requisite three-year BSc (Veterinary Biology) degree programme. The current six-year programme will be systematically phased out as the new programme was introduced in 2003.

The BSc (Veterinary Biology) degree is a directed programme with a number of specific compulsory components required for the subsequent BVSc degree. This approach adds value to the already well-established degree programme by extending its science base. It is also expected to increase the number of postgraduate students who may be interested in pursuing further studies in the Faculty and thus expand the postgraduate and research programmes. Provision is also made for students who may not qualify for direct admission through the extended 4-year programme which will be offered at the Mamelodi campus of the University.

Whereas the above statement remains valid, a number of concerns have been expressed as a result of which, together with international tendencies, the Faculty is currently engaged in a re-curriculum exercise which will see the introduction of a shorter single degree programme while still retaining the existing recognition of the degree.

The Faculty is also in the process of developing a three-year degree programme in Veterinary Nursing to replace the existing diploma programme. Approval from the Department of Education has already been obtained.

Postgraduate programmes include honours, masters' and doctorate programmes. Postgraduate programmes are generally linked to

the various research focus areas identified by the Faculty as well as the various specialist categories recognised by the South African Veterinary Council.

The professional programmes (DipVetNurs, BVSc, and MMedVet) are all recognised by the South African Veterinary Council, while the BVSc degree is also recognised by the statutory registering authorities in Australia, Malaysia, New Zealand and the United Kingdom, allowing automatic registration as a veterinary practitioner.

The honours programme covers all disciplines in Veterinary Science and can be structured on a discipline or species basis, or as a combination of the two options. The MMedVet programmes provide specialist training for veterinarians and currently provide for 21 specialities across all disciplines and species. These MMedVet degrees allow graduates to register with the South African Veterinary Council as veterinary specialists.

The Faculty also offers two recently approved web-based MSc programmes in Veterinary Tropical Diseases and Industrial Pharmacology which should attract a range of national and international students in future. It is also in the process of developing a similar programme in Veterinary Epidemiology.



## Student Profile

As the only Faculty of its kind in the country, it has accepted the challenge of providing veterinary and para-veterinary training to meet the country's needs, taking into account the historical problems of access to all racial groups. The Faculty views student selection as a key component in its endeavors to fulfill this aim and satisfy the specific requirements of higher education legislation. To this end, the Faculty states its intent to actively recruit and select students to ensure that the student body will ultimately reflect national demographics.

The undergraduate student profile reflects a growing international component, which was 10.8% of all its undergraduate students in 2006. These students originate primarily from the southern African region, but a growing number are requesting transfers from other faculties. There is also a steady increase in international postgraduate students at the Faculty. During the year under review, 24.9% of all postgraduate students were from outside South Africa

### Gender distribution of students registered in the Faculty of Veterinary Science as well as those registered for BSc (Veterinary Biology) III:

	2007		2006	
	Undergraduate	Postgraduate	Undergraduate	Postgraduate
Male	212	113	192	105
Female	454	121	432	100
Total	666	234	624	205

### Racial distribution of students registered in the Faculty of Veterinary Science as well as those registered for BSc (Veterinary Biology) III:

	2007		2006	
	Undergraduate	Postgraduate	Undergraduate	Postgraduate
White	605	132	565	120
Coloured	4	0	5	2
Indian	19	13	21	9
Black	38	89	33	74
Total	666	234	624	205

## Student support programmes

The Faculty of Veterinary Science offers a number of student support programmes to ensure that students are able to cope with the demands of the academic and social environment in which they find themselves during their studies.

- ◆ Orientation programmes for new students are offered at the beginning of each academic year.
- ◆ A mentor system, run by students and staff, provides social support to new students at the Onderstepoort campus – especially during the initial period of adaptation for the time required to find their way around the campus and its facilities.
- ◆ A student tutor system is in place for students in the first year of the professional veterinary component as well as in the first year of the veterinary nursing programme. The tutors are senior students who assist fellow students in specific academic courses under supervision of the relevant Heads of Department. Additional assistance in time management, study methods, etc. is available as required.
- ◆ Counselling and medical services are available on the campus by appointment.
- ◆ An annual leadership and management awareness workshop is offered by the Faculty in conjunction with sponsors from the private sector to improve “people skills” in order to achieve the desired quality of interaction with colleagues and customers.

The student body, in liaison with Academic Administration, and Marketing and Communication is responsible for orientation, social, cultural and sporting activities.



## Reaching out to the community

The Faculty of Veterinary Science of the University of Pretoria's involvement in the commercial and non-commercial agricultural sectors must be seen against the background of its community engagement programmes that are fully integrated with the training programme of the Faculty at under- and postgraduate levels. These activities are deemed essential as part of the training programme and in terms of rendering a service to the broad community that this Faculty serves. Formal activities include referrals from all over the country and from neighbouring countries as well as specialist diagnostic services and consultations at specialist level.

The other component of community service relates to the Faculty's involvement in resource-poor communities by way of rural clinics, short courses, and continuing education. Students and staff engage with previously-disadvantaged communities in a holistic, collaborative and sustainable manner, resulting in the empowerment of communities, so that they become the centre of their own development. Through these activities students learn and staff members are encouraged to apply their professional knowledge and research skills to practical situations.

Activities in this regard include the following:

- ◆ Sponsored activities in the Moretele and Hammanskraal areas to assist small-scale livestock farmers
- ◆ Vaccination programmes in low-income areas
- ◆ Visits to local schools in resource-poor communities linked to academic mentoring
- ◆ A weekly ambulatory service to Makapanstad, Moretele, Radijpan and Hammanskraal

- ◆ Ambulatory visits to Oskraal and Winterveld
- ◆ Specific campaigns to assist companion animal owners with vaccination programmes, sterilisation and animal welfare
- ◆ Exposure of disabled children to animals, specifically horses with riding sessions on the Onderstepoort campus
- ◆ Newsletters
- ◆ Adult education activities sponsored by the K. Birch Trust such as nutrition of dairy cattle for small-scale dairy farmers and workshop and skills training for pony owners at Malalea in Lesotho.

Committed to doing socially relevant research, the Faculty believes this increases both local relevance and international competitiveness. A number of research programmes have been registered to address the problems of resource-poor communities.

Apart from Rand Merchant Bank who donated R40 000 for outreach activities, the Faculty also had R30 000 donated by Absa Bank in 2006 for an ongoing donkey cart project in conjunction with, among others, the Engineering Department of the Tshwane University of Technology (TUT). With a view to the 2010 Soccer World Cup, the project is specifically aimed at the provision of alternative transport in the rural areas as well as job creation.



# Research

The Faculty has developed a comprehensive strategic plan that is structured to stimulate future research in the various disciplines it encompasses. This plan also contains a detailed guideline according to which research will be managed to ensure optimal utilisation of the Faculty's scarce resources to achieve its goals.

The Faculty aims to develop dynamic, innovative research programmes that are globally competitive and locally relevant and will ensure a continuous high-quality output so that its researchers are able to attract sustainable outside funding to further develop its programmes. This plan aims to facilitate the development of multi-disciplinary teams aligned to the various focal areas, foster strategic alliances with other local and international institutions and attract increasing numbers of local and international postgraduate students.

The following six focus areas serve as the driving force behind all research and postgraduate programmes:

- ◆ Veterinary aspects of food safety and food security
- ◆ Wildlife and Environmental Health
- ◆ Molecular studies on infectious and parasitic diseases of animals
- ◆ Phytomedicine and ethno-veterinary medicine
- ◆ Equine and companion animal health and welfare
- ◆ Anatomical and physiological studies on animals.

These focus areas were chosen to establish, achieve and project an African uniqueness and to bond with external expertise and technology. They are reviewed and refined on an ongoing basis.



## Critical strategic issues for 2008 and beyond

There are a number of critical issues which have been identified by the Faculty in pursuit of its vision and mission. These issues are contained within the strategic plan of both the University and the Faculty. They include the following:

- ◆ Development of a new shorter veterinary curriculum with a core-elective approach
- ◆ Recruitment, in-care and after-care of students from the designated groups
- ◆ Recruitment, in-care management and supervision of post graduate students, post-doctoral students and Research Fellows
- ◆ Recruitment and retention of clinical staff, in particular equine surgeons, small animal surgeons, a clinical pathologist and in veterinary public health. In this regard serious consideration to the promotion criteria for clinicians and the provision of market-related salaries for veterinarians
- ◆ Cost effectiveness and sustainability of experiential training
- ◆ Stimulation and increasing quality research outputs. Continued effort for the application of NRF research chairs will be pursued
- ◆ Further development of the Centre for Veterinary Wildlife Studies
- ◆ Optimisation and improvement of infrastructure and facilities
- ◆ Strengthen alliances with OVI, OBP, NDA and provincial veterinary services
- ◆ Effective management of Faculty interfaces.
- ◆ Development of the curriculum of a 3-year degree programme in veterinary nursing





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