Veterinary Science

TRAINING PRODUCTS | ADVISORY SERVICES

Shifting knowledge to insight
Shifting knowledge to insight

The rapid and vast changes we are beginning to experience in both our personal and professional lives call for a drastic shift in our thinking patterns and the way in which every industry will need to conduct business in the near future. Not only will business models in each and every trade need to transform in order to meet the growing needs and demands of consumers, but – more importantly – we will need to make a shift in the way we see and experience the world.

We are on the brink of the Fourth Industrial Revolution that will no doubt change the way humankind lives, works and relates to one another. We are experiencing change at a speed unlike anything the world has experienced before, that compels us to live and create realities that were previously unthinkable.

As a means of contributing to the overall growth of the global market and anticipating future shifts in the way we then have to do business, Enterprises University of Pretoria (Enterprises UP) provides specialised training programmes and short courses for skills development as well as research and advisory services for critical business insights to both our clients and individuals in South Africa and beyond.

What better way to remain on top of global changes in every walk of life and industry than through a partnership with a leading training and research provider that is backed by a solutions-driven approach and experts from the University of Pretoria.

We not only ensure that you increase productivity and enhance service excellence in your line of business, but also that you continuously engage in groundbreaking knowledge transfer in an ever-changing world by always shifting knowledge to insight.
Our solutions present a multifaceted value proposition aligned with organisational objectives, personal growth and skills development goals – either as a combination of Training Solutions and Research Solutions or as distinct solutions on their own. This also means that your company can optimise on B-BBEE scorecard points with a combination of our offerings that support the following outcomes:

1. **Work readiness development.**
   - Let entry-level employees acquire the right skills to help them integrate into the world of work more easily.

2. **Workplace Skills Plan (WSP) activation.**
   - Develop capacity and equip designated employees with professional skills aligned with industry needs.

3. **Community engagement.**
   - Ignite change in communities through experiential training and innovative business opportunities.

4. **Enterprise and supplier development.**
   - Invest in small business entities and start-ups that aspire to be more effective, efficient and sustainable.

**WHY PARTNER WITH US?**

- A single point of entry for all training, research and advisory services.
- Access to all knowledge outputs from the University of Pretoria.
- Personalised services to achieve unique business and professional development goals.
- Innovative solutions for targeted training and critical business insight.
- An extensive international footprint spanning six continents.
- Draw from leading industry experts and South Africa’s finest thought leaders.

**SOLUTIONS-DRIVEN APPROACH**

- We provide a service offering that spans 50 plus areas of functional expertise and capability. Within each of these areas the total service offering is well balanced between applied research, advisory services and specialised business units. Most of our projects are highly customised and the solutions contained within each project draws on the latest best practice as informed by science and evidence.

- Make business decisions informed by scientific evidence.
  - Science and scientific methods are embedded within our total solution offering.

- Implement solutions that are shaped by and applicable to real-world challenges.
  - The strong symbiotic relationship between science and application enables us to generate solutions that are both innovative and practical.

- Enrich your perspective by allowing multidisciplinary project teams to generate 360 degree insights.
  - We deploy various knowledge experts on the same project to generate enriched perspectives and diverse views.

- Be a beneficiary of our creative journey with new ideas and solutions.
  - We are a breeding ground for new ideas, solutions and innovations – and only after they have been tested and applied do we put them into practice.

**COMPANY OVERVIEW**

We make business decisions informed by scientific evidence. Science and scientific methods are embedded within our total solution offering. Implement solutions that are shaped by and applicable to real-world challenges. The strong symbiotic relationship between science and application enables us to generate solutions that are both innovative and practical. Enrich your perspective by allowing multidisciplinary project teams to generate 360 degree insights. We deploy various knowledge experts on the same project to generate enriched perspectives and diverse views. Be a beneficiary of our creative journey with new ideas and solutions. We are a breeding ground for new ideas, solutions and innovations – and only after they have been tested and applied do we put them into practice.
For more information about our full range of available training programmes and short courses, visit www.enterprises.up.ac.za/training-solutions.

Also enquire with us about possible CPD points on any of our courses, or visit www.enterprises.up.ac.za/cpd-courses for an updated list.

See a range of relevant research and advisory services at the end of this section.
For millennia animals have been humans’ closest companions providing food, clothing, and medicine – but never has over-exploitation, habitat destruction, global climate change and other pressures been more rivalled in history than it is today.¹³ The line between biology and technology is blurring more and more, and so also is the natural world being pressured and degraded by human activities as the global population and technological advances grow beyond measure. For veterinarians and para-veterinary staff it has also never been more important to play a significant role in the effort to save species in the 21st century.³

What we need is competent veterinarians who can contribute towards both national health and economic growth through the practice of modern veterinary technology.¹ Collaborative initiatives that require equal partnership and collaboration between medical and veterinary practices are therefore indispensable in not only the conservation of species in the wild, but also our livestock and animal companions.² Our products and services in Veterinary Science will provide you with the requisite skills and knowledge to make sure that advances in animal health technology can be translated into new diagnostics, therapeutics and – most importantly – preventive strategies for the most common challenges in the protection of our biodiversity.


52%  
The average decline in vertebrate species populations around the world.³

100 years  
The Faculty of Veterinary Science at the University of Pretoria – the only one of its kind in South Africa – is established in the 1920s.⁴
Animal Health Management

The short course in Animal Health Management provides you with the requisite knowledge to develop effective strategies for disease prevention and control that are most suited and functional in the environment you operate in as animal health manager. During the course, you will acquire some of the basic management skills required for the successful implementation of identified strategies based on the topics of environmental issues influencing animal health management, livestock production systems and the aims and interests of various role-players, epidemiological features of diseases, principles of disease control, science-based animal health management strategies, and supporting the trade in livestock commodities.

Cytology of Body Cavity Effusions

The Cytology of Body Cavity Effusions workshop focuses on the cytology of body cavity effusions and includes a wetlab with slides and clinical cases for real-life application. During this workshop, you will gain the knowledge and skills required to prepare and handle effusion samples for analysis in practice. You will also learn to understand the pathogenesis behind the formation of various effusions and how this relates to the classification of effusions, use the cellularity, protein concentration and other appropriate chemistry tests to classify effusions, and become familiar with the cytological change associated with transudates, exudates, neoplastic effusions, chyle and uroperitoneum.

Back to Basics: Cytology

The Back to Basics: Cytology workshop focuses on the basic principles of cytology, which include the collection and preparation of both cytologic and histopathologic samples. During this workshop, you will learn to collect and prepare cytology samples (including samples for histologic evaluation), recognise normal and abnormal cytology responses (i.e. inflammation, reactivity and neoplasia), interpret cytologic changes in different samples based on knowledge of physiology and the changes that can occur in various diseases, and understand the indications for cytology versus histopathology for different samples. Topics include basic cytology principles, comparisons between cytologic and histopathologic findings on samples and sample collection.

Cytology of the Spleen and Lymph Nodes

The Cytology of the Spleen and Lymph Nodes workshop focuses on the cytology of the spleen and lymph nodes, and include a wet lab with slides and clinical cases for real-life application. During this workshop, you will learn to recognise the cytologic appearance of normal lymph nodes and spleen, recognise the cytologic changes associated with reactive or inflamed lymph nodes and spleen, recognise the cytologic changes associated with neoplastic lymph nodes and spleen (including metastatic changes), and come to understand the basic principles of immunocytochemistry, when it should be used for lymphoid tissue, including the significance of the different results.
Preliminary Course in Early Canine Development

The Preliminary Course in Early Canine Development provides you with the prerequisite handling and training skills if you have no prior experience in the training of dogs – regardless of size, age or breed. The course provides you with an intense but practical learning experience by focusing on general handling skills, dog training and restraint equipment and practical assessments, during which you will learn to work with and properly train puppies. You will also be encouraged to do as much practice as possible to develop your skills in order to reach the required standard for assessment in the Hills Puppy Handler examination.

Introductory Course in Early Canine Development

The Introductory Course in Early Canine Development provides you with the necessary knowledge as dog trainer (or veterinary nurse or assistant) – with limited prior experience in working puppies – to develop the skills in handling or training puppies appropriately. During the course, you will gain invaluable exposure to canine domestication, dog breeds, anatomical terms, behavioural aspects, how dogs learn and practical training skills. You will also be introduced to the importance of puppy training in preventing and correcting behavioural problems with the aim to assist you in being able to teach puppies basic commands and run your own puppy school successfully.

Intermediate Course in Early Canine Development

The Intermediate Course in Early Canine Development provides you with progressive skills in the training and handling of puppies once you have acquired some basic skills as dog trainer, veterinary nurse or assistant. During this course, you will gain a better understanding of the different training methods, behavioural aspects (including the prevention and correction of behaviour problems) and dealing with aggressive dogs during practical handling and training sessions. You will also have the opportunity to design and create your own puppy training course that can presented in your puppy school by applying the knowledge and skills set acquired during the course.

Advanced Course in Early Canine Development

The Advanced Course in Early Canine Development provides you with the final skills set necessary as dog trainer, veterinary nurse or assistant in order to offer puppy classes to clients of the highest standard – specifically in the veterinary practice environment. The course provides you with progressive insights to the behaviour of puppies, training exercises for puppies and dealing with the human client. During the course, you will be able to explain the concept of social learning in dogs and apply it to the puppy school context, compare appropriate teaching methods for different learning styles and design a SMART puppy course.
High-Impact Diseases

The short course in High-Impact Diseases provides you with the requisite insights as animal health technician to report on and assist in the management of animal health problems. The course aims to improve your understanding of the epidemiology, diagnosis and control or eradication of high-impact diseases prevalent in the southern African region. You will also learn how to apply sound methods to assess the disease status of a livestock population, report on the disease situation in a particular area and collect field data or specimens, with diseases that range from foot-and-mouth and bovine pleuropneumonia to African horse sickness and theileriosis.

Introduction to Artificial Insemination in Cattle

The Introduction to Artificial Insemination in Cattle short course will provide you with practical knowledge of artificial insemination (AI) by examining the basic anatomy and physiology of the female bovine reproductive system. The course also covers basic endocrinology and the reproductive cycles in bovines and is specifically aimed at equipping dairy managers, dairy and beef cattle farmers, herdsmen, students of animal production, as well as agricultural technicians and extension officers with the requisite skills to successfully administer AI in cattle. After successfully completing this course, you will be able to register as a certified inseminator with the Department of Agriculture.

See also: Agriculture and Food Security

Manufacturing and Registering Complementary and Herbal Medicines

The short course in Manufacturing and Registering Complementary and Herbal Medicines introduces you to the requisites of manufacturing, registering and selling Complementary and Alternative Medicines (CAMs) in South Africa - with a specific focus on the production of herbal medicines prepared from plant materials. During the course, you will become familiar with the relevant industrial medicine production theories and practices, and gain insights to the governance of the pharmaceutical industry in general. You will also develop the skills and knowledge to compile and file registration dossiers in the Common Technical Document (CTD) format to be able to supply new medicinal products.

See also: Health and Health Care

Online Course in Medical Terminology

The Online Course in Medical Terminology provides you with a better understanding of the basic features of modern medical terms with regard to structural units derived from Greek and Latin. Decoding medical terms is an important process in accurately describing medical conditions and associated components, prognoses and diagnoses. During the course, you will gain insights to basic principles of term usage and how they combine to establish scientifically interpreted meanings, develop the ability to interpret medical terms used in reports and health records, and come to appreciate related vocabularies of proto-zoology, medical entomology, aspects of botany, pharmacology, biochemistry and endocrinology.

See also: Health and Health Care
Online Course in Non-Radiological Diagnostic Imaging of the Horse

The Online Course in Non-Radiological Diagnostic Imaging of the Horse provides you with a good working knowledge of the methodology and diagnostic capabilities of various non-radiological imaging modalities by focusing on diagnostic ultrasonography and the physical factors involved in diagnosing pathological conditions in horses. You will gain a better understanding of the physical principles of diagnostic ultrasound, correct equipment selection, scanning techniques, interpretation of images, limitations of the imaging technique and the making of an ultrasonography diagnosis. During the course, you will be able to apply your acquired skills by making diagnoses and stating relevant prognoses of specific pathological conditions.

Online Course in the Radiology of the Horse

The Online Course in the Radiology of the Horse provides you with a thorough knowledge of specific radiographic techniques and radiologic descriptions, diagnoses, prognoses and conclusions on pathological conditions of the horse. During the course, you will become familiar with various forms of equine health issues, care and treatment that the veterinarian will encounter in order to provide the highest quality of treatment for their patients and reassurance of the horse owner. As such, the course focuses on film and digital radiography and the radiology of pathological conditions that you will be able to successfully implement in your veterinary practice.

Primary Animal Health Care

The Primary Animal Health Care short course provides you with a common methodology and structured approach to a primary animal health care training programme for farmers. The knowledge and skills gained through this course will guide you in developing a structured training programme that can be deployed in aid of farmers, farm managers and farm workers based on the basic principles of and approach in primary animal health care. Throughout the course, you will be familiarised with the latest concepts and methodologies available while gaining the necessary skills to also effectively develop and implement a training programme for your clients.

See also: Agriculture and Food Security

Research Ethics in Health and Health Care

The two-day workshop in Research Ethics in Health and Health Care provides you with a guided process in the exploration of theoretical frameworks for conducting ethically sound research in the medical and health sciences industry. The workshop specifically focuses on ethical aspects of the scope and need of research ethics, risks to people, animals and the environment versus benefits of research, legislative and regulatory provisions for ethical research, as well as the exportation and importation of research materials. Through case studies and integrated practice, you will also gain insights to scientific integrity, controversial research and misconduct, publication ethics and data management.

See also: Health and Health Care
Tick Identification

This short course in Tick Identification provides you with a practical training experience to gain indispensable skills in identifying the most prevalent ticks of sub-Saharan Africa. During the course, you will gain an in-depth understanding of the taxonomy, biology, ecology, lifecycle, distribution, control and sampling methods of ticks in order to provide you with a full scope of specifically identifying the Ixodidae (hard ticks or scale ticks) and Argasidae (soft ticks) families of the tick species for medical and veterinary purposes. The course is also beneficial to those who are interested in or work with the characterisation/cataloguing of tick identification.

Basic Course in Toxicology

The Basic Course in Toxicology introduces you to the key role that toxicology plays in identifying, estimating and controlling the benefits and adverse effects of substances in hazard and risk assessment. As toxicology has evolved from the traditional science of poisons into an extensive discipline that participates in scientific decision making around technical, political and social aspects of hazard and risk assessment, this course equips you with further knowledge and insights to DNA-damaging agents in the environment, defence mechanisms that preserve genetic integrity, biological consequences of non-repaired DNA damage, and the mechanisms by which DNA damage causes genetic alterations and cancers. You will also become familiar with cellular processes that protect humans and animals from harmful effects.

See also: Health and Health Care

Update on Small Animal Dermatology and Endocrinology

The Update on Small Animal Dermatology and Endocrinology short course provides you with the latest updates, trends and research in the approaches, diagnostics and treatment options of the various syndromes and conditions that are treated in small animals. The course looks at topics of diagnostic imaging of the endocrine abdomen, interpretation of endocrine laboratory tests, diagnosis and medical treatment of Cushing’s disease (including surgical options) and canine hypothyroidism. You will also update your knowledge of Addison’s disease, the approach to pruritus and otitis, treatment of canine pyoderma, canine and feline diabetes mellitus and insulinoma, as well as feline hyperthyroidism.
Update on Small Animal Medicine and Surgery

**COURSE CODE**
P005703

**MODE OF DELIVERY**
Contact sessions

**DURATION**
5 contact days

**CERTIFICATE**
Attendance

The **Update on Small Animal Medicine and Surgery** short course provides you with the latest updates and research on small animals in terms of internal medicine, surgery, anaesthesiology and clinical pathology. During the course, you will gain a better understanding of the newest approaches, diagnostics and treatment of various syndromes and conditions, including lameness, babesiosis, gastric ulcers and murmurs, enterectomies, splenectomies and fractures. You will also become familiar with the latest anaesthetic techniques in horses and dogs, the latest developments in GIT disease and ICU in dogs, as well as the latest breakthroughs in seizure management and inflammatory CNS disease.

Advanced Course in Wildlife Chemical Immobilisation and Field Practice

**COURSE CODE**
P002974

**MODE OF DELIVERY**
Contact sessions

**DURATION**
4 contact days

**CERTIFICATE**
Successfully completed

The **Advanced Course in Wildlife Chemical Immobilisation and Field Practice** provides you with a unique opportunity to enhance your skills and knowledge with more progressive insights to wildlife care as veterinarian working in the field. The course is presented in the Kruger National Park where you will be able attend lectures, undertake practical sessions, and participate in discussions and problem-based learning exercises. Themes include applied physiology, pharmacological principles, chemical immobilising agents, rational drug use in field medicine, monitoring immobilisation and anaesthesia, managing complications during capture, immobilising challenging species, field equipment, first-aid in the field, and local and international drug regulations.
We deploy multifaceted teams of experts that provide customised and innovative research and advisory services for a competitive edge shaped around our ability to put science into practice.

Our operating paradigm is shaped around solutions applications in relation to real-world challenges experienced by our clients, as well as daily challenges in our communities and society. With this in hand, we offer a diverse range of empirical, business-to-business Research Solutions across the full lifecycle of projects:

### ANIMAL HEALTH
- Anatomical and physiological research studies on animals
- Animal and wildlife production, health and nutrition
- Animal pathology and analytical services
- Bio Safety Level 3 (BSL-3) poultry vaccine clinical efficacy trials
- Biomedical research, including toxicology and nuclear medicine (post-mortem)
- Companion animal skin allergy testing
- Development of wildlife and environmental health management plans
- Equine and companion animal health and welfare research studies
- Molecular studies on infectious and parasitic diseases of animals
- Phytomedicine and ethno-veterinary medicine research studies
- Research on veterinary aspects of food safety and food security
- Rhino poaching predictive modelling
- Wildlife genetic laboratory services

### WILDLIFE BODY AND HORN METRICS (PVX)
- The biggest priority in the wildlife industry is the wellbeing of animals. Accurate monitoring of animal health and growth with minimal disturbance to the animal is thus of the utmost importance. We developed a globally unique photogrammetric system to allow for accurate 3D measurement of various body size parameters, body condition and horn size. Therefore, we are able to supply the wildlife industry with accurate scientific data to improve both short-term valuation of game, and long-term monitoring and management in the breeding of high-quality trophy animals.
- Creation of 3D replicas of wild animals (most mammal species) with technologically advanced 3D modelling
- Scientific and accurate wildlife health monitoring without immobilisation of the animal
- Providing wildlife farmers on the size and quality of wildlife animals
- Body metrics:
  - Body mass/body volume
  - Shoulder height
  - Standard length
  - Back length
  - Chest circumference
- Horn metrics:
  - Individual horn length
  - Tip to tip measurements
  - Horn ring measurements
  - Horn base measurements
  - Horn volume estimate

For more information about our full offering of research and advisory services, visit [www.enterprises.up.ac.za/research-solutions](http://www.enterprises.up.ac.za/research-solutions)
The following credit-bearing courses provides you with an entry point to formal degree programmes exclusively presented by the University of Pretoria with credits afforded towards the specified degree modules:

<table>
<thead>
<tr>
<th>Faculty of Economic and Management Sciences</th>
<th>Module code and credits</th>
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</thead>
<tbody>
<tr>
<td>Advanced Programme in Labour Relations Management</td>
<td>ABV700</td>
</tr>
<tr>
<td>Basic Course in Financial Investigation</td>
<td>FRA710 (20 credits)</td>
</tr>
<tr>
<td>Economic Crime Schemes</td>
<td>FRA701 (20 credits)</td>
</tr>
<tr>
<td>Fraud Risk Management</td>
<td>FRA702 (20 credits)</td>
</tr>
<tr>
<td>Interviewing Skills for Fraud Examiners and Auditors</td>
<td>FRA708 (20 credits)</td>
</tr>
<tr>
<td>Investigation and Management of Cyber and Electronic Crime</td>
<td>FRA707 (20 credits)</td>
</tr>
<tr>
<td>Investigation of Financial Crime</td>
<td>FRA703 (20 credits)</td>
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<tr>
<td>Labour Relations</td>
<td>ABV520 (20 credits)</td>
</tr>
<tr>
<td>Law for Commercial Forensic Practitioners</td>
<td>FRA704 (20 credits)</td>
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<tr>
<td>Module in Advanced Module in Basic Taxation (Graduate Level)</td>
<td>BEL300 (40 credits)</td>
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<tr>
<td>Module in Advanced Module in Basic Taxation (Postgraduate Level)</td>
<td>BEL751 (40 credits)</td>
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<tr>
<td>Module in Basic Taxation</td>
<td>BEL200 (40 credits)</td>
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<tr>
<td>Money Laundering Investigation and Detection</td>
<td>FRA705 (20 credits)</td>
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<tr>
<td>Prevention and Detection of Procurement and Contract Fraud</td>
<td>FRA709 (20 credits)</td>
</tr>
<tr>
<td>Programme in Empowering Responsible Leaders in Local Government</td>
<td>OBS781 (20 credits)</td>
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<tr>
<th>Faculty of Health Sciences</th>
<th>Module code and credits</th>
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<tr>
<td>Online Course in Higher Exercise Science and Personal Training</td>
<td>FLG331 (18 credits)</td>
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<tr>
<td>Online Course in Neuroscience Visual Skills Testing and Training</td>
<td>FLG211 (12 credits)</td>
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<tr>
<td>Online Course: Introduction to Neuroscience Coaching</td>
<td>FLG327 (30 credits)</td>
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<tr>
<th>Faculty of Humanities</th>
<th>Module code and credits</th>
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<tr>
<td>Advanced Course in Employee Assistance Programmes</td>
<td>UPO923 (15 credits)</td>
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<tr>
<td>Cross-Cultural Communication</td>
<td>LCC715 (20 credits)</td>
</tr>
<tr>
<td>Sport Facilities and Events Management</td>
<td>MBK709 (27 credits)</td>
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<tr>
<th>School of Public Management and Administration</th>
<th>Module code and credits</th>
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<tr>
<td>Executive Development Programme for the Public Sector</td>
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<td>Executive Leadership Municipal Development Programme (ELMDP)</td>
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<td>Executive Public Management Development Programme</td>
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<td>Knowledge and Information Management for Senior Managers</td>
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<tr>
<td>People Management and Empowerment for Senior Managers</td>
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<tr>
<td>Public Management Development Programme (PMDP)</td>
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<tr>
<td>Strategic Capability and Leadership for Senior Managers</td>
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Successful completion of credit-bearing short courses entails that a candidate who otherwise complies with all the admission requirements for corresponding formal degree programmes – as published annually in the respective year faculty year books of the University of Pretoria – may upon registering for the formal programme obtain credits for the corresponding degree modules. Normal application processes for admission to formal programmes at the University of Pretoria must be followed. Certificates of successful completion of credit-bearing short courses issued by Enterprises University of Pretoria must be submitted during the application for recognition of allocated credits.

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**Training Solutions**
- Training programmes and short courses
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- Customised courses for corporate training
- Earn a certificate from the University of Pretoria

**Research Solutions**
- Applied research
- Advisory services
- Specialised business units
- Direct access to experts from the University of Pretoria

You have a plan. We have a way to make it happen. Ask us how.

**Shifting knowledge to insight**

+27 (0)12 434 2500 | info@enterprises.up.ac.za | enterprises.up.ac.za