

**FACULTIES OF THE UNIVERSITY
OF PRETORIA**

HUMANITIES
NATURAL AND AGRICULTURAL SCIENCES
LAW
THEOLOGY
ECONOMIC AND MANAGEMENT SCIENCES
VETERINARY SCIENCE
EDUCATION
HEALTH SCIENCES
ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY

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**FACULTY OF VETERINARY SCIENCE
ACADEMIC PERSONNEL AS ON 30 SEPTEMBER 2013**

DEAN

Prof. G.E. Swan, BVSc(Hons) MMedVet(Pharm et Tox)(Pretoria) PhD(Potchefstroom)

DIRECTOR: TEACHING AND LEARNING

Prof. L van Ryneveld, BAEd , Bed(NFL) MEd(CBE) PhD(CBE) (Pretoria)

**DEPUTY DEAN: RESEARCH, POSTGRADUATE STUDIES AND
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DIRECTOR OF CLINICAL SERVICES

Dr. C. H. Annandale, BCom BVSc(Hons) MMedVet(Gyn)(Pretoria) MBA(GIBS) DipACT

Department of Anatomy and Physiology

Groenewald, H.B., BVSc PhD(Pretoria).....	Professor (Head)
Booth, K.K., BSc(Youngstown State University) MSc.....	Professor
PhD(Iowa State University)	
Ganswindt, A., Eng(Biotech)(Berlin DE) PhD(Biology)(Münster)	Professor
Madekurozwa, M.N., BVSc(Zimbabwe) PhD(Glasgow).....	Professor
Soley, J.T., BA(Hons)(Unisa) MSc(Witwatersrand) PhD(Pretoria).....	Professor
Brand, T.S., BSc Agric(Stellenbosch), PhD Agric(Stellenbosch).....	Extraordinary Professor
Meintjies, R.A., BSc(Witwatersrand) BVSc(Hons) PhD(Pretoria)	Associate Professor
Van der Merwe, N.J., BVSc DVSc(Pretoria).....	Associate Professor
Chamunorwa, J.P., BSc(Hons) BVSc(Zimbabwe) PhD(Liverpool).....	Senior Lecturer
PGCHE(Pretoria)	
Cornelius, S.T., BSc(Hons)(Witwatersrand) BVMCh(Medunsa).....	Senior Lecturer
BVSc(Hons)(Pretoria) SEP(Witwatersrand/Harvard)	
Crole, M.R., BVSc(Hons) MSc(Vet Science) PGCHE(Pretoria)	Senior Lecturer
Hornsveld, M., BVSc PhD(Pretoria)	Senior Lecturer
Mabeta, P.L., MSc PhD(Pretoria).....	Senior Lecturer

Department of Companion Animal Clinical Studies

Schoeman, J.P., BVSc MMedVet(Med)(Pretoria) PhD(Cambridge).....	Professor (Head)
DSAM(RCVS-London) CertEntrepStud(Cantab) DipECVIM-CA	
Kirberger, R.M., BVSc MMedVet(Rad) DVSc DTO(Pretoria) DipECVIM	Professor
Leisewitz, A.L., BVSc(Hons) MMedVet(Med)(Pretoria).....	Professor
PhD(Open, UK) DipECVIM-CA	
Morley, P.S., DVM(Washington State) PhD(Saskatchewan) DACVIM..	Extraordinary Professor
Carstens, A., BVSc MMedVet(Chir) MMedVet(Diaglm).....	Associate Professor
DTO(Pretoria) MS(TexasA&M), PhD(Pretoria) DipECVIM	
Coetzee, G.L., BVSc(Hons) MMedVet(Chir)(Pretoria)	Associate Professor
Dzikiti, T.B., BVSc(Zimbabwe) MSc(Vet Anaes)(Utrecht)	Associate Professor
PhD(Pretoria)	
Goddard, A., BVSc(Hons) MMedVet(ClinLabDiag)(Pretoria).....	Associate Professor
Stegmann, G.F., BVSc(Hons) MMedVet(Anaes).....	Associate Professor
DTO(Pretoria) DipECVA	
Bester, L., BVSc MMedVet(Anaes) DTO(Pretoria)	Senior Lecturer
Burchell, R.K. BSc(Rhodes) BVSc(Hons) MMedVet(Med)(Pretoria).....	Senior Lecturer
Cassel, N., BSc BVSc MMedVet(Diaglm)(Pretoria)	Senior Lecturer
Goodhead, A.D., BSc (Pietermaritzburg) BVSc.....	Senior Lecturer
MMedVet(Ophth)(Pretoria)	

Lyle, C., BVM&S MSc(Edinburgh) DipECEIM	Senior Lecturer
Mahne, A., BVSc(Hons) MMedVet(EqSurg)(Pretoria)	Senior Lecturer
Marais, H.J., BVSc(Hons) MSc(Vet Science)(Pretoria).....	Senior Lecturer
Mukorera, V., BVSc(Zimbabwe) MMedVet(Med)(Pretoria)	Senior Lecturer
Nevill, B., BVSc, MMedVet(Surg)(Pretoria).....	Senior Lecturer
Page, P.C., BVSc(Hons) MMedVet(Med)(Eq)(Pretoria).....	Senior Lecturer
Pazzi, P., BVSc(Hons) MMedVet(Pretoria)	Senior Lecturer
Scheepers, E., BSc(Hons) BVSc(Hons) MSc(Vet Science)(Pretoria) ...	Senior Lecturer
Steenkamp, G., BSc BVSc MSc(Zoology)(Pretoria)	Senior Lecturer
Van Schoor, M., BVSc(Hons) MMedVet(Med)(Pretoria)	Senior Lecturer
Venter, I.J., BVSc MMedVet(Ophth)(Pretoria)	Senior Lecturer
Boucher, C., BVSc(Pretoria) Cert SA Surgery(ECAVS).....	Lecturer
Hartman, M.J., BVSc(Hons) MSc(Pretoria)	Lecturer
Kafka, U., BVSc(Hons)(Pretoria).....	Lecturer
McClure, V., BVSc BVSc(Hons) MMedVet(Med)(Pretoria).....	Lecturer
Sonntag, Q., BVSc(Hons)(Pretoria) PGCHE(Pretoria)	Lecturer
Van Vollenhoven, E., BVSc LLB(Pretoria).....	Lecturer
Venter, F.J., MSc(Agric)(UOFS) BVSc(Pretoria) MBA(Pretoria).....	Lecturer
Zeiler, G.E., BVSc(Hons)(Pretoria).....	Lecturer
Tordiffe, A., BVSc MSc(Zoology)(Pretoria).....	Extraordinary Lecturer

Department of Paraclinical Sciences

Botha, C.J., BVSc(Hons) MMedVet(Tox)(Pretoria) PhD(NSVS)(Oslo) .	Professor (Head)
Eloff, J.N., BSc(Hons)(Botany) MSc(Chemistry).....	Professor
DSc(Plant Biochemistry)(Potchefstroom)	
Prozesky, L., BVSc MMedVet(Path) PhD(Pretoria)	Professor
Kriek, N.P.J., BVSc MMedVet(Path)(Pretoria).....	Emeritus Professor
Guillette, L.J., BS(New Mexico) MA PhD(Colorado).....	Extraordinary Professor
Lawrence, J.A., BSc DTVM(Edinburg) DPhil(Rhodesia).....	Extraordinary Professor
Meissner, H.H., BSc(Hons) MSc(Stellenbosch) PhD(Port Elizabeth)...	Extraordinary Professor
Duncan, N.M., BVSc(Hons)(Pretoria) MMedVet(Aves)(Medunsa).....	Associate Professor
DipACVP	
Williams, M.C., BVSc MMedVet(Path)(Pretoria).....	Associate Professor
Naidoo, V., BVMCh(Medunsa) MSc PhD(Pretoria).....	Associate Professor
Botha, F., BSc(Hons) MSc(Potchefstroom) PhD(Pretoria).....	Senior Lecturer
Clift, S.J., BVSc MSc(Vet Science)(Pretoria).....	Senior Lecturer
Karama, M., DMV(Lubumbashi) MMedVet(VPH)Pretoria PhD(Guelph)	Senior Lecturer
McGaw, L.J., BSc(Hons) PhD(KwaZulu-Natal).....	Senior Lecturer
Meyer, L.C.R., BVSc(Pretoria) PhD(Witwatersrand).....	Senior Lecturer
Myburgh, J.G., Dip Pasture Management BVSc(Hons)(Pretoria).....	Senior Lecturer
MMedVet(Med)(Medunsa)	
Steyl, J.C.A., BVSc MSc(Vet Science)(Pretoria).....	Senior Lecturer
Williams, J.H., BVSc(Pretoria).....	Senior Lecturer
Le Roux-Pullen, L., BVSc(Pretoria)	Lecturer
Odendaal, L., BVSc(Hons)(Pretoria)	Lecturer
Qekwana D.N., BVSc MMedVet(VPH)(Pretoria).....	Lecturer
Elgorashi, E.E., BSc(Agric)(Khartoum) MSc(MACh)(Crete).....	Extraordinary Lecturer
PhD(Natal)	
Govender, D., BVSc MSc(VTD)(Pretoria).....	Extraordinary Lecturer
Huchzermeyer, F.W., DrMedVet(Hannover) PhD(Pretoria)	Extraordinary Lecturer
Joubert, K.E., BVSc(Hons) MMedVet(Anaes)(Pretoria).....	Extraordinary Lecturer
Neser, J.A., BVSc MMedVet(Path)(Pretoria).....	Extraordinary Lecturer

Njiro, S.M., BVM MSc PhD (Nairobi).....	Extraordinary Lecturer
Ntshabele, B.R., BVMCh(Medunsa) MBA(Uniwest).....	Extraordinary Lecturer
Oberholster, P.J., BSc BA MEM MSc(UOFS) PhD(Pretoria)	Extraordinary Lecturer

Department of Production Animal Studies

Irons, P.C., BVSc(Pretoria) Dipl Am Coll Therio	Professor (Head)
MMedVet (Gyn)(Pretoria) PhD(Utrecht)	
Fosgate, G.T., BSc(Animal Science) DVM(Cornell) PhD(California).....	Professor
DipACVPM	
Nöthling, J.O., BVSc MMedVet(Gyn) MBA(Pretoria) PhD(Utrecht).....	Professor
Bath, G.F., BVSc(Pretoria).....	Emeritus Professor
Bertschinger, H.J., BVSc(Pretoria) Dr MedVet(Zürich) PhD(Utrecht)....	Emeritus Professor
Diplomate European College of Animal Reproduction	
Lourens, D.C., BVSc MMedVet(Med)(Pretoria)	Emeritus Professor
Rautenbach, G.H., BVSc(Hons) MMedVet(Med)(Pretoria)	Emeritus Professor
Petty, K.P., BSc(Hons)(Witwatersrand) BVSc(Pretoria).....	Associate Professor
Schulman, M.L., BSc(Witwatersrand) BVSc(Hons)	Associate Professor
MMedVet(Gyn)(Pretoria)	
Shakespeare, A.S., BSc(Eng)(Natal) BVSc(Hons)	Associate Professor
MMedVet(Med)(Pretoria)	
Thompson, P.N., BVSc MMedVet(Med)(Pretoria) PhD(Utrecht).....	Associate Professor
Annandale, C.H., BCom BVSc(Hons) MMedVet (Gyn)(Pretoria)	Senior Lecturer
MBA(GIBS) DipACT	
Blight, D.J.C., BVSc(Pretoria)	Senior Lecturer
Botha, A.E., Dip Cur Anim THED(Pretoria) MSc(Pretoria).....	Senior Lecturer
Fasina, F.O., DVM(lb) MSc(Pretoria) PhD(Pretoria).....	Senior Lecturer
Harmse, J.G., BVSc(Pretoria)	Senior Lecturer
Heise, A., VetMed(Leipzig) Dr MedVet(Zurich) MSc(Pretoria)	Senior Lecturer
DipACT	
Holm, D.E., BVSc MSc(Vet Science)(Pretoria).....	Senior Lecturer
Kock, M.D., BVSc(Univ London),	Senior Lecturer
MSc in Preventive Medicine (Univ California)	
Leask, R., BSc(Agric)(Natal) BVSc(Pretoria) MMedVet(CaprOv)	Senior Lecturer
Moerane, R., BVMCh(Medunsa)	Senior Lecturer
Petzer, I.M., BVSc MSc(Vet Science)(Pretoria).....	Senior Lecturer
Smith, P.W., BVSc(Pretoria)	Senior Lecturer
Wandrag, D.B.R., BVSc(Hons) MMedVet PhD(Pretoria).....	Senior Lecturer
Brown, G., BVSc(Pretoria).....	Lecturer
May, K., BVSc(Pretoria).....	Lecturer
Tshuma, T., BVSc(Zimbabwe) MMedVet(Bov)	Lecturer
Gummow, B., BVSc(Hons) MMedVet(Pharm)(Pretoria) PhD(Utrecht).....	Extraordinary Professor
Stout, T.A.E., MA VetMB PhD MRCVS Dip ECAR KNMvD	Extraordinary Professor
Van Leengoed, L., PhD(Utrecht)	Extraordinary Professor
Abolnik, C., BSc BSc(Hons) MSc PhD(Pretoria)	Extraordinary Lecturer
Bischopp, S.P.R., BVSc(Hons) MSc(VetSci)(Pretoria)	Extraordinary Lecturer
Buss, P.E., BVSc MMedVet(Pharm)(Pretoria).....	Extraordinary Lecturer
Gerber, D., VetMed(Zurich) MMedVet(Gyn)(Pretoria)	Extraordinary Lecturer
Harper, C.K., BVSc(Pretoria) MSc(Pretoria).....	Extraordinary Lecturer
Lesosky, M., PhD.....	Extraordinary Lecturer
Mitchell, G., BSc(Wits) BVSc(Pretoria) PhD(Wits) DVSc(Pretoria)	Extraordinary Lecturer
Steckler, D., VetMed(Zürich) DipACT.....	Extraordinary Lecturer

Department of Veterinary Tropical Diseases

Abernethy, D.A. BVSc(Pretoria) MSc(Belfast) PhD(London).....	Associate Professor (Head)
Michel, A.L., DVM Dr.med.vet. (Munich) PhD(Utrecht).....	Professor
Neves, L.C. BVSc(Univ Eduardo Mondlane, Mozambique) MVSv(Univ Liverpool, UK) PhD(Univ Liverpool, UK)	Professor
Van Vuuren, M., BVSc MMedVet(Micro)(Pretoria).....	Professor
Venter, E.H., BSc(Hons) MSc(Free State) PhD(Pretoria).....	Professor
Knobel, D.L. BVSc MSc(Pretoria) PhD(Edinburgh).....	Associate Professor
Oosthuizen, M.C., BSc(Agric) BSc(Agric)(Hons) MSc PhD(Pretoria)....	Associate Professor
Penzhorn, B.L., BVSc BSc(Hons)(Pretoria) MAgric(Texas A&M).....	Emeritus Professor
DSc(Wildlife Management)(Pretoria) Dip EVPC	
Godfroid, J.X.L., DVM(Liège) MSc(Brussels) PhD(Namur).....	Extraordinary Professor
Horak, I.G., BVSc DVSc(Pretoria) PhD(Natal) DSc(Free State).....	Extraordinary Professor
Jongejan, F., BSc(Biol)(Amsterdam) MSc(Med Biol).....	Extraordinary Professor
PhD(Vet Micro)(Utrecht)	
Latif, A.A.I., BVSc MVSc PhD(Khartoum).....	Extraordinary Professor
MacLachlan, N. J., BVSc(Massey University, New Zealand).....	Extraordinary Professor
MS(Missouri) PhD(California) DipACVP	
Majiwa, P.A.O., BS(Jarvis) MS(University of Texas, Dallas).....	Extraordinary Professor
PhD(Brussels)	
Marcotty, T., DVM PhD(Liège).....	Extraordinary Professor
Musoke, A.J., BVSc(Nairobi) MSc PhD(Michigan State).....	Extraordinary Professor
Penrith, M-L., BSc(Hons)(Zool) PhD(Cape Town).....	Extraordinary Professor
BVSc(Hons) DSc(Pretoria)	
Perry, B., OBE BVM&S DTVM MSc DVM&S(Edinburgh) FRCVS.....	Extraordinary Professor
Rutten, V.P.M.G., BSc MSc(MedBio/Hons) PhD(Immunol)(Utrecht)....	Extraordinary Professor
Thomson, G.R., BVSc(Pretoria) MSc(Birmingham) PhD(London).....	Extraordinary Professor
Vosloo, W., BSc(Hons) MSc(Micro)(Pretoria) PhD(Cape Town).....	Extraordinary Professor
Crafford, J.E., BVSc MSc(Vet Science)(Pretoria).....	Senior Lecturer
Quan, M., BVSc MSc(Pretoria) PhD(Edinburgh).....	Senior Lecturer
Schwan, E.V., VetMed(Hannover) MVSc(Appl Parasitology)(Liverpool).....	Senior Lecturer
Dr med.vet(Hannover) PhD(Pretoria) CertIAVH	
Sibeko-Matjila, K., BSc(Hons) MSc(Biotech)(Limpopo) PhD(Pretoria).....	Senior Lecturer
Stoltz, W.H., BVSc(Pretoria) MSc(Vet Science)(Pretoria).....	Senior Lecturer
Van Heerden, H., BSc(Biol) BSc(Hons) MSc(Free State).....	Senior Lecturer
PhD(Pretoria)	
Jenkins, A.O., DVM(Ibadan), MSc(Vet Science)(Pretoria).....	Lecturer
Morar, D., BSc(Hons)(Microbiology) MSc(Vet Science) PhD(Pretoria).....	Lecturer
Collins, N.E., BSc(Hons) PhD(Witwatersrand).....	Extraordinary Lecturer
Fehrsen, J., BSc(Hons)(Cape Town) MSc(Witwatersrand).....	Extraordinary Lecturer
PhD(Rhodes)	
Koekemoer, J.J.O., MSc PhD(Potchefstroom).....	Extraordinary Lecturer
Madder, M., BSc(Biol)(Antwerp) MSc(Biotechnology) PhD(Ghent).....	Extraordinary Lecturer
Mans, B.J., BSc(Hons) MSc PhD(Pretoria).....	Extraordinary Lecturer
Maree, F.F., BMedSci BSc(Hons) PhD(Pretoria).....	Extraordinary Lecturer
Matjila, P.T., BSc(Medunsa) MSc(Vet Science).....	Extraordinary Lecturer
PhD(Pretoria)	
Morgan, E.R., VetMB BA MA(Cambridge) MRCVS PhD(Warwick).....	Extraordinary Lecturer
Pretorius, A., BSc(Hons) MSc PhD(Pretoria).....	Extraordinary Lecturer
Sabeta, C., BSc(Hons) MPhil(UZ, Harare) PhD(Pretoria).....	Extraordinary Lecturer
Van Kleef, M., BSc(Hons) MSc(Pretoria) PhD(Rhodes).....	Extraordinary Lecturer

Van Rensburg, L.J., N.Dip(Micro)(TUT),..... Extraordinary Lecturer
BA(Volkekunde)(UNISA), (BSc(UNISA). BSc(Hons)(Pretoria)
Van Wyk, J.A., BVSc(Pretoria)..... Extraordinary Lecturer
Venter, G.J., BSc(Hons)(Free State) MSc(Free State) PhD(Free State) Extraordinary Lecturer
Wallace, D.B., BSc(Hons) MSc(Cape Town) PhD(Pretoria) Extraordinary Lecturer
Van Rooyen J., BSc(Agric)Animal.Sci BSc(Hons)Wildlife..... Research Officer
Management MSc(Agric)Animal.Sci(Pretoria)

Equine Research Centre

Director: Guthrie, A.J., BVSc(Hons) MMedVet(Phys)(Pretoria) Professor
PhD(Louisiana State)

Centre for Veterinary Wildlife Studies

Director: Centre for Veterinary Wildlife Studies:
Burroughs, R.E.J., BVSc (Pretoria) Senior Lecturer

Student Administration

Vhengani, M.J., BA (Admin)(Hons)(Venda) Head

GENERAL INFORMATION

The rules for degrees and diplomas here published are subject to change and may be amended prior to the commencement of the academic year in 2014.

Admission

Any person who wishes to register at the University for the first time, or after an interruption of studies, should apply or reapply for admission. Application for admission to all undergraduate programmes in the Faculty closes on 31 May. For information on application for postgraduate programmes: Consult the relevant head of department.

BVSc degree programme

The BVSc degree programme has been reviewed and a new core-elective single degree structure has been developed. The first year of study of the new six-year programme commenced in 2011. The first year of the new programme will be presented at the Hatfield Campus of the University and the remainder at the Onderstepoort Campus from 2012 onwards. The majority of students will be selected for admission to the first year of study. A small number will also be selected for admission to the second year of study provided they have completed the necessary first-year modules.

Intake into the BSc (Veterinary Biology) programme was terminated in 2010 and delivered its last graduates at the end of 2011. These students were the last ones to progress to the first year of the four-year BVSc programme in 2012. They are due to graduate at the end of 2015. This programme will be phased out over time as the new programme is implemented.

University Diploma in Veterinary Nursing

A limited number of students will be admitted to the first year of the programme which is presented, together with the second year of study, at the Onderstepoort Campus.

Statement of symbols

When registering at this University for the first time, a candidate has to submit a record of symbols obtained for each subject in the Grade 12 examination.

National Senior Certificate (NSC)

All undergraduate students who register at the University of Pretoria for the first time, must show their original National Senior Certificate at the Student Administration section of their faculty before the end of the first semester.

Language of instruction

In conducting its business, the University uses two official languages, namely Afrikaans and English. However, since 1997, English is the only medium of instruction in the Faculty of Veterinary Science, although undergraduate students may answer tests and examinations in Afrikaans. A proficiency test in English may be required as part of the selection procedure.

In respect of administrative and other services, a student has the right to choose whether the University should communicate with him or her in Afrikaans or English.

Bursaries and loans

Particulars of bursaries and loans are available on request.

Residence accommodation

Allocation of accommodation in the residence at Onderstepoort will only be confirmed after admission to the BVSc degree programme or DipVetNurs diploma programme. Details concerning accommodation fees are available on request. Due to the high demand for accommodation in the Onderstepoort residence, preference will be given to BVSc students from the second year of study onwards as well as first-year diploma students.

Application for accommodation in the Onderstepoort residence should be submitted as part of the application form for admission as from 1 April of the preceding year. A number of places will be reserved for students in the first year of the BVSc degree programme who are already using residence accommodation at the Hatfield campus.

Academic Orientation Programme

This programme is presented annually for all first-year students on the Hatfield campus. Attendance is compulsory. A scaled-down version is also presented to second-year BVSc students on the Onderstepoort campus at the start of the academic year. Attendance is compulsory.

A similar programme is presented annually for all new diploma students on the Onderstepoort campus. Attendance is compulsory. Parents of diploma students may attend the first day of the programme, details of which will be provided in the documentation sent to all successful candidates at the end of the selection process.

Leadership and Management Awareness Programme

The programme is presented annually for all new diploma and BVSc II (old programme) students. It takes place before lectures start and forms part of the academic orientation programme of DipVetNurs students. Attendance is compulsory.

Hospital Orientation Programme

The programme is presented annually for all BVSc III (old programme) students. It takes place during the week before the clinic rotation programme starts in September. Attendance is compulsory.

Prescribed books and instruments

Students are requested not to purchase any books or instruments before they start with their chosen programme. Specific requirements will be provided during the academic orientation programme as well as in the relevant study guides.

Amendment of regulations and fees

The University retains the right to amend the regulations and to change fees without prior notification.

NB The fees advertised and thus levied in respect of a module or study programme represents a combination of the costs associated with the formal services rendered (for example lectures, practicals, access to laboratories, consumables used in laboratories, etc) as well as associated indirect overheads such as the provision of library and recreation facilities, security and cleaning services, electricity and water supply, etc.

Therefore, the fees in respect of a module or study programme cannot simply be reconciled with the visible services that are rendered in respect of such module or study programme.

Dress code

Special instructions regarding dress must be adhered to. Details will be furnished when students are notified that they have been selected for the programme. Provision is made during the orientation programme for the acquisition of protective clothing.

Excursions

As it is essential to gain practical experience outside the Faculty, students are reminded to make provision for an adequate amount of money to cover expenses for excursions throughout their period of study. Details are provided in the relevant study guides.

Vaccinations

It is expected of every student to complete the required vaccination protocol against rabies as arranged by Student Administration. The protocol is for the student's own account. Provision is made for the availability of documentation to facilitate claims with medical aid schemes.

Leave of absence

If it is impossible for a registered student at the University of Pretoria to continue with his/her studies/research in a specific year, but he/she intends to continue in the following year, the student must apply in writing to the dean of the relevant faculty for **leave of absence**. The application must include: full names, student number, address, reasons and period for leave of absence, for example the whole year, first semester (January to June) or second semester (July to December), name of supervisor (where applicable), and the student's intentions for the period after his/her leave of absence. However, in accordance with the policy of the University of Pretoria, leave of absence is not granted for more than two years. Any outstanding fees should be paid in full upon the student's return from his/her leave of absence.

Definition of terms

The following terms are generally used in all faculties.

academic year: the duration of the academic year as determined by the University Council.

capita selecta: a specific component or combination of components of an existing module.

certificate of satisfactory preparation: satisfactory preparation also implies satisfactory attendance at practical classes and clinical work.

core module: a compulsory module for a specific study programme.

module: an independent, defined learning unit, designed to result in a specific set of learning outcomes, and which is a component of a programme.

credit (or credit value): a value unit linked to particular learning activities and the total number of learning hours needed to complete a module successfully.

curriculum: a series of modules grouped together over a specified period of time and in a certain sequence according to the regulations.

elective module: a module that can be selected on an elective basis.

examination mark: the mark awarded to a student in a module on the basis of an examination, including practical and clinical examinations where applicable. If necessary, the examination mark is finalised after ancillary examinations have been completed.

final mark: the mark calculated on the basis of the semester/year mark and the examination mark awarded to a student in a module, using a formula which is determined from time to time by means of regulations for each module with the proviso that should no semester/year mark be required in a module, the examination mark serves as the final mark.

grade point average based on module credits: an average mark that is calculated by multiplying the final mark achieved in a module with the credit value of that module and then dividing the sum of these values by the total of the credit values of all the modules for which a student was enrolled. The result of these calculations is a weighted average based on module credits.

regulation for admission: a regulation approved by a faculty concerning the admission of students to the faculty and which includes a provision regarding the selection process.

SAQA: South African Qualifications Authority

semester module: a module that extends over one semester

semester/year mark: the mark awarded to a student on the basis of tests, class-work, practical work or any other work which was done in a particular module

specialist module: major module (speciality) in MMedVet programmes

syllabus: the division of the study material for a specific module, according to the regulations.

year module: a module that extends over one year (two semesters)

REGULATIONS AND CURRICULA: DEGREE AND DIPLOMA PROGRAMMES

1. Admission to undergraduate studies

1.1 General

1.1.1 To register for a first bachelor's degree at the University, a candidate should, apart from the required National Senior Certificate, comply with the particular requirements prescribed in the admission procedures and the faculty regulations of the respective faculties and departments for admission to particular modules and programmes.

1.1.2 The following persons may also be considered for admission:

- (i) A candidate who is in possession of another certificate that is accepted by the University as equivalent to the required National Senior Certificate with admission for degree purposes.
- (ii) A candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution.

1.1.3 The Senate may limit the number of students allowed to register for a programme, in which case the Dean may, at his or her own discretion, select from the students who qualify for admission those who may be admitted.

2. Admission to diploma studies

Students will only be admitted to an undergraduate diploma programme if they comply with the specific requirements for admission to specific modules and programmes as stipulated in the admission procedures and faculty regulations of the various faculties and departments.

3. Academic literacy

It is expected of all new undergraduate students to complete the prescribed academic literacy module(s) as contained in the academic curriculum of the relevant Faculty.

4. Academic information management

It is expected of all new undergraduate students to complete the following module: AIM 101 Academic information management 101.

5. Registration for a particular year of study

At the beginning of an academic year, students register for all the modules they intend taking in that specific year (whether these be first-semester, second-semester or year modules).

6. Module credits for unregistered students

There are students who attend lectures, write tests and examinations and in this manner earn 'marks', but have either not registered for modules or have not registered as students at all. These marks will not be communicated to any student before s/he has provided proof of registration. Students cannot obtain any credits in a specific academic year for a module 'passed' in this manner during a previous academic year and for which they were not registered. This arrangement applies even where students are prepared to pay the tuition fees.

7. Examination and pass requirements

A final mark of at least 50% is required to pass a module. Students are also referred to the Faculty approved *Guidelines for Examinations and related matters in the Faculty of Veterinary Science* as well as individual study guides.

7.1 Subminima in examinations

Subminima required in modules or subdivisions of modules appear in the study guides issued annually for these modules.

7.2 Examinations (Reg G.12)

The examinations for modules offered in the first semester, take place in May/June, while all other examinations (for second-semester modules and year modules) take place from August to November.

7.3 Ancillary examinations (Reg G.12.3)

After completion of an examination and before the final examination results are announced, the examiners may offer an additional evaluation opportunity on certain aspects of the work of the module as provided for in the *Guidelines for Examinations and related matters in the Faculty of Veterinary Science*.

7.4 Re-marking of examination papers (also consult Reg G.14)

After an examination, departments provide feedback to students concerning the framework that was used by the examiners during the examination. The manner in which feedback is given is determined by the heads of department.

Students may apply for re-marking of an examination paper after perusal of the paper and payment of the prescribed fee. **This should take place within 5 working days after the announcement of the results of the primary examination and within 3 working days after the announcement of the results of the supplementary examination.** The examiner will be appointed by the head of the department concerned. Re-evaluation of oral examinations is not allowed.

7.5 Supplementary examinations (Reg G. 12.4)

Supplementary examinations in first-semester modules take place as provided for in Reg V.1(d)(1)(ii)(aa), and V.14(i)(i)(bb), while those for year modules take place before the beginning of the first semester of the following year, or otherwise as stipulated in the study guide for that module.

7.6 Statutory requirements

Registration requirements contained in V.1 (a)(3) and (4) and V.14(a)(iii) and (iv).

8. Promotion requirements

Promotion to a subsequent year of study in all undergraduate programmes offered by the Faculty is subject to the successful completion of all modules of the relevant year of study. Students are specifically referred to V.1(c) (iii), (iv), (v), (ix) and (x) as well as V.14 (d), (e), (g) and (h).

DEGREES AND DIPLOMAS CONFERRED/AWARDED IN THE FACULTY OF VETERINARY SCIENCE

The following degrees and diplomas are conferred/awarded in the Faculty (minimum period of study in brackets):

- (a) Bachelor of Veterinary Science – [BVSc]
(old programme – 4 years; new programme – 6 years)
- (b) Bachelor of Veterinary Science Honours – [BVSc(Hons)] (1 year)
- (c) Master of Veterinary Medicine – [MMedVet] (3-4 years)
- (d) Master of Science in Veterinary Science – [MSc (Veterinary Science)] (1 year)
- (e) Master of Science in Veterinary Industrial Pharmacology – [MSc (Veterinary Industrial Pharmacology)] (1 year)
- (f) Master of Science in Veterinary Tropical Diseases – [MSc (Veterinary Tropical Diseases)] (1 year) – no new intake from 2012 onwards
- (g) Master of Science – Option: Animal/Human/Ecosystem Health (1 year)
[MSc Option: Animal/Human/Ecosystem Health]
- (h) Master of Science – Option: Ruminant Health
- (i) Master of Science – Option: Veterinary Epidemiology
- (j) Master of Science – Option: Veterinary Reproduction
- (k) Doctor of Philosophy – [PhD] (2 years)
- (l) Doctor of Veterinary Science – [DVSc]
- (m) University Diploma in Veterinary Nursing – [DipVetNurs] (2 years)

Students who were given permission by the deans of both faculties to register for a module offered by another faculty, must familiarise themselves with the requirements for admission to the module in question as well as the regulations governing subminima in examinations and supplementary examinations, etc.

I. BACHELOR'S DEGREE

General Regulations G.1 to G.15 are applicable to bachelor's degrees and also apply *mutatis mutandis* to undergraduate diplomas.

**V.1 Bachelor of Veterinary Science
[BVSc] (Code 08130003 – old programme) (Code 08130004 – new programme)**

(a) Admission

- 1. Minimum requirements for the new programme
- 1.1 Subject to the stipulations of General Regulation G.1., prospective students who wish to be admitted to the new programme, must have:
 - a National Senior Certificate (NSC) with the following subjects and minimum performance levels:

Subject and level requirements

Degree	APS	Group A		Group B
		English	Mathematics	Physical Science
BVSc	32	5 (60-69%) (at Home Language or First Additional Language level)	5 (60-69%)	5 (60-69%)

- completed the National Benchmark Test with performance above the “basic” level;
- completed the value-added questionnaire; and
- an admission point score (APS) of at least 32 (the sum of the 6 highest performance levels obtained, ie in the required subjects as set out above, excluding Life Orientation).

The selection procedure will make provision for various categories and will be reviewed on an annual basis for approval by Faculty Board and Senate.

Competence in Mathematics and Physical Science at school-leaving level is a requirement for registration as a veterinarian with the South African Veterinary Council.

OR

- successfully completed appropriate modules at tertiary level and/or a related degree with appropriate modules as required;

OR

- successfully completed related modules in an existing veterinary science degree programme at another university.

2. Admission will be subject to selection and the availability of places (see General Information).
3. Each student must apply immediately after first admission to the Registrar of the South African Veterinary Council for registration as a student in Veterinary Science. Registration is compulsory and must be renewed annually for the duration of the study.
4. After the degree has been conferred, graduates are required to register with the South African Veterinary Council as veterinarians before they may practise in South Africa in this capacity.

(b) Duration of study

Four years of full-time study in the old programme (last intake in 2012) and **six years** in the new programme.

(c) General – relevant to both programmes as applicable

- (i) General Regulation G.10.1 concerning satisfactory attendance, preparation and payment of module fees, applies to examination, promotion and attendance modules. Attendance at all lectures, practical classes, clinics (including clinical orientation and holiday clinics) and excursions is compulsory. Any form of absence must be justified by submission of a medical certificate or another acceptable form of evidence. Failure to comply may lead to examination refusal.

- (ii) Admission to the examinations in some modules is subject to specific requirements – consult study guides. The weighting of semester/year marks in the calculation of the final mark shall be 50%.
- (iii) A student is required to obtain a subminimum of 40% in the examination as well as a final mark of at least 50% to pass a module. A subminimum of 40% in subdivisions of theoretical and/or practical examinations may be required as stipulated by the Dean in consultation with the head of department concerned, and as set out in the annual study guide. In terms of General Regulation G.10.4, a semester mark or year mark of at least 50% must be obtained in attendance modules. The stipulations of General Regulations G.12.1 to G.12.5 also apply.
Promotion modules require a year mark of at least 65% to pass.
- (iv) A student must pass all the modules of the respective previous year of study in order to be promoted to the subsequent year of study, as well as to the clinical rotations. A single further examination will, however, be allowed for students who have **only one** of the following modules in the old programme outstanding at the end of the relevant academic year:
 - ANV 601 Anaesthesiology
 - CBF 610 Cage bird and fish diseases
 - PHP 601 Porcine health and production
 - PLY 601 Poultry health and production
 - VBE 601 Veterinary business management and ethics
 - WOC 610 Wildlife, ostrich and crocodile healthprovided the final mark is at least 40%.

or **only one** of the following modules in the new programme of the relevant academic year:

- ANV 420 Anaesthesiology
 - CLP 410 Clinical pathology
 - GNS 320 General surgery
 - VEM 210 Veterinary microbiology
 - VIM Veterinary immunology
 - VKU 210 Animal science
 - VKU 220 Animal ecology
 - WDE 253 Pasture science
- provided the final mark is at least 40%.

- (v) A student who fails a module or modules in a year of study, has to repeat, subject to the stipulations of General Reg. G.11.2 (a) to (c) and Regulation V.1(c)(ix), all the modules for that particular year of study, except modules which were passed with a final mark of at least 65%, for which full exemption is granted. Provisional exemption is granted for an examination module passed with a final combined mark of less than 65%. This implies that at least 80% of the practical periods have to be attended and that a year/semester mark of at least 50% has to be obtained through the completion of all scheduled assessments, tests, tasks, etc, in order to obtain exemption from the examination in those modules at the end of the repeat semester/year. Examinations are compulsory in all the modules previously failed, as well as in those modules in which exemption from the examination has not been obtained. If a student fails any of these examinations (or supplementary examination), he or she will not be allowed to continue their studies in the Faculty [see V.1(c)(x)].

- (vi) No limit is placed on the number of modules in which supplementary examinations may be done, except in the final year of study. The nature and date of supplementary examinations are determined by the Dean in consultation with the head of department.
- (vii) A head of department may require from a student who has been admitted to a supplementary examination, to do additional prescribed work for a specified period of time before he or she may take the supplementary examination as approved by the Dean.
- (viii) Subject to General Regulation G.12.4.3, a minimum of 50% is required to pass a supplementary examination. The semester or year mark is not taken into account.
- (ix) In addition to the stipulations of General Regulation G.3.2(b), a student will not be allowed to repeat the same year of study more than once.
- (x) A student who has to discontinue his or her studies in terms of stipulations (v) and (ix) above, may request the Dean in writing to consider his or her application for readmission to the Faculty in terms of prescribed procedures as stipulated in *Application of General Regulation G.3 and Faculty Regulation V.1.c(ix) in the Faculty of Veterinary Science, University of Pretoria* as approved by the Faculty Board.

(d) Curriculum

1. Old curriculum (Code 08130003)

(i) **Third year of study**

- (1) ANV 601 Anaesthesiology
- (2) ECS 601 Equine clinical studies
- (3) PHE 601 Veterinary public health and applied epidemiology
- (4) PHP 601 Porcine health and production
- (5) PLY 601 Poultry health and production
- (6) SSH 601 Small stock health and production
- (7) VBE 601 Veterinary business management and ethics
- (8) **Electives**
- CBF 610 Cage bird and fish diseases
- WOC 610 Wildlife, ostrich and crocodile health

(9) **Attendance module**

- DPT 620 Diagnostic pathology

- (aa) Students who would like to pursue an elective in research methodology should lodge an enquiry at Student Administration.
- (bb) Students have to attend 5 working days of clinic orientation in the Veterinary Academic Hospital before commencement of the clinic rotation programme.
- (cc) **Supplementary examinations**
Supplementary examinations in first-semester modules take place after conclusion of the June examinations.

(ii) **Fourth year of study**

- (1) BHP 650 Applied bovine health and production
- (2) ECS 650 Applied equine clinical studies
- (3) PHE 650 Applied veterinary public health
- (4) PHP 650 Applied porcine health and production
- (5) PLY 650 Applied poultry health and production

- (6) SAC 650 Applied small animal clinical studies
- (7) SSH 650 Applied small stock health and production

(aa) **Supplementary examinations**

A head of department may require from a student who has been admitted to a supplementary examination, to do additional prescribed work for a specified period of time before he or she may take the supplementary examination as approved by the Dean.

A student will only be allowed to do supplementary examinations in **two** modules.

(bb) **Special examination**

Students who have failed one or two modules and who have not been admitted to a supplementary examination, or who fail the supplementary examination(s), may be allowed to take a special examination after having worked full-time in the department/s concerned for a period determined by the head/s of department and with the Dean's approval. If they fail the latter, the Dean will determine when a further examination may be taken.

(cc) **Repetition of the final year of study**

Students who have failed more than two modules at the time of the Examination Commission meeting, must repeat the final year of the curriculum with due cognisance of rule V.1(c)(v), unless the Dean decides otherwise.

(dd) **Clinical experience (including practical work)**

Proof of satisfactory completion of prescribed clinical and practical components of the programme as prescribed below must be submitted to the Head: Student Administration of the Faculty, prior to the commencement of the final examinations. Failure to do so may lead to examination refusal.

- In state control of stock diseases and administration: experience at an approved institution as approved by the Dean.
- Practical and clinical experience at the Faculty and at approved private practices as well as other institutions as approved by the Dean.

(ee) **Degree with distinction**

The BVSc degree is conferred with distinction on a student who has obtained at least 60% for each module during the last three years of study, and an average of at least 75% for all the modules in the final year of study.

2. New curriculum (Code 08130004)

(i) **First year of study**

First semester

- (1) AIM 101 Academic information management
- (2) CMY 117 General chemistry
- (3) LST 110 Language and study skills
- (4) MLB 111 Molecular and cell biology
- (5) MTL 180 Medical terminology
- (6) PHY 131 General physics
- (7) WTW 134 Mathematics

Second semester

(1)	BME 120	Biometry
(2)	CMY 127	General chemistry
(3)	GTS 161	Introductory genetics
(4)	VKU 122	Introduction to animal nutrition
(5)	VKU 120	Introductory animal science
(6)	VPL 120	Veterinary professional life

(ii) **Second year of study**

First semester

(1)	VCA 200	Veterinary comparative anatomy
(2)	VEM 210	Veterinary microbiology
(3)	VET 200	Veterinary ethology and genetics
(4)	VKU 210	Animal science
(5)	VPH 200	Veterinary physiology and histology
(6)	WDE 253	Pasture science

Promotion module

(7)	VPL 200	Veterinary professional life
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Second semester

(1)	VCA 200	Veterinary comparative anatomy
(2)	VET 200	Veterinary ethology and genetics
(3)	VIM 220	Veterinary immunology
(4)	VKU 220	Animal ecology
(5)	VPH 200	Veterinary physiology and histology

Promotion module

(6)	VPL 200	Veterinary professional life
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(iii) **Third year of study**

First semester

(1)	GOP 300	General and organ pathology
(2)	IVD 300	Introductory veterinary diagnostics
(3)	TOX 300	Veterinary toxicology
(4)	VIP 300	Veterinary infectious diseases
(5)	VPH 300	General veterinary pharmacology
(6)	VTP 300	Veterinary parasitology

Promotion module

(7)	VPL 300	Veterinary professional life
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Second semester

(1)	GNS 320	General surgery
(2)	GOP 300	General and organ pathology
(3)	IVD 300	Introductory veterinary diagnostics
(4)	VIP 300	Veterinary infectious diseases
(5)	VTP 300	Veterinary parasitology
(6)	VPH 300	General veterinary pharmacology
(7)	TOX 300	Veterinary toxicology

Promotion module

(8)	VPL 300	Veterinary professional life
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iv) **Fourth year of study**

First semester

(1)	CLP 410	Clinical Pathology
(2)	DIM 400	Diagnostic Imaging
(3)	DPT 400	Diagnostic Pathology
(4)	EQM 410	Equine Medicine and Surgery
(5)	SAS 400	Small Animal Medicine and Surgery
(6)	VPL 400	Veterinary Professional Live
(7)	VRP 400	Veterinary Reproduction

Second semester

(1)	ANV 420	Anaesthesiology
(2)	DIM 400	Diagnostic Imaging
(3)	DPT 400	Diagnostic Pathology
(4)	PHP 420	Porcine Health and Production
(5)	PLY 420	Poultry Health and production
(6)	SAS 400	Small animal medicine and surgery
(7)	VPL 400	Veterinary Professional Live
(8)	VRP 400	Veterinary Reproduction

II. HONOURS DEGREE

**V.2 Bachelor of Veterinary Science Honours
[BVScHons] (Code 08240001)**

The programme is under review and is to be phased out from 2013 onwards.

Also consult General Regulations G.16 to G.29. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

The honours degree provides the student with a broad scientific background in the theoretical aspects of the modules that are required for eventual MMedVet degree studies. However, the conferment of the honours degree is not subject to future registration for master's degree studies.

(a) Requirements for admission

A candidate must have a BVSc or an equivalent degree. Entrance examinations for individual modules may be required.

In addition to the stipulations of the regulations, the head of department has the prerogative to require an entrance test prior to registration for honours degree studies. Candidates may also be required to pass an English proficiency test (TOEFL) at an acceptable level.

(b) Duration

The programme has to be completed within two years following first registration for the degree in the case of full-time study, and within three years in the case of part-time study.

(c) Curriculum

The curriculum consists of a number of modules, equivalent to a minimum of 120 credits, chosen from the following list, or from relevant modules offered in other programmes of the Faculty and/or other faculties of the University as approved by the dean/s of the faculties concerned:

MODULE NAME	MODULE CODE
DISCIPLINE-BASED	
Anaesthesiology:	
Anaesthesiology	ANV 771
Anatomy/Histology:	
Anatomy	ANG 774, 779
Histology	HIS 700
Clinical Pathology:	
Clinical pathology	KPA 701, 702
Ophthalmology:	
Ophthalmology	OFM 700
Pathology:	
Mechanisms of disease	PAT 771
Necropsy technique and interpretation	PAT 707
Ophthalmological pathology	PAT 708
Pathology	PAT 700
Reproductive pathology	PAT 709
Pharmacology:	
Clinical ophthalmic pharmacology and therapeutics	FAK 711
Physiology:	
Physiology	FSL 713, 787, 788
Reproductive physiology of animals	GSK 708
Surgery:	
Surgery	CHV 705
Toxicology:	
Toxicology: Basic and clinical veterinary toxicology	TOK 701
Toxicology: Organic and inorganic poisons	TOK 704
Toxicology: Phyto- and mycotoxins	TOK 703
Veterinary Public Health:	
Veterinary public health fundamentals	VPH 700
SPECIES-BASED	
LARGE STOCK/SMALL STOCK	
Anatomy	ANG 704
Reproductive biology: Cattle	GSK 709
Clinical reproduction: Cattle	GSK 710
Pathology: Ruminants	PAT 705
Small stock herd health	KKS 780
Reproductive biology: Small stock	GSK 711
Clinical reproduction: Small stock	GSK 712
HORSES	
Anatomy	ANG 703
Equine medicine	GEN 703
Reproductive biology: Horses	GSK 713

Clinical reproduction: Horses	GSK 714
Ophthalmology	OFM 700
Pathology: Horses	PAT 704
Radiology: Horses	DIM 783
Surgery: Horses	CHV 704
Non-radiological diagnostic imaging of horses	DIM 784

LABORATORY ANIMALS

Laboratory animal science	LAS 700
Toxicology: Laboratory toxicity testing	TOK 702

PIGS

Pathology: Pigs	PAT 703
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POULTRY

Poultry health and production	PHP 871
Poultry nutrition	PVV 700

SMALL ANIMALS

Anatomy	ANG 705
Ophthalmology	OFM 700
Pathology: Dogs and cats	PAT 702
Radiology: Dogs and cats	DIM 781
Small animal medicine	GEN 702, 707
Small animal behavioural medicine	GEN 709
Reproductive biology: Dogs and cats	GSK 715
Clinical reproduction: Dogs and cats	GSK 716
Surgery: Small animals	CHV 703
Non-radiological diagnostic imaging of dogs and cats	DIM 782

WILDLIFE

Drugs used in wildlife and exotic species	FAK 708
Pathology: Wildlife	PAT 806
Reproductive biology: Wildlife	GSK 717
Clinical reproduction: Wildlife	GSK 718

- (i) Where the honours degree precedes a master's degree, the modules chosen for the honours degree programme must support the particular field of study for the prospective master's degree programme. The selection of modules is approved by the Dean, on the recommendation of the head of department in which the study for the master's degree will be undertaken. Credits obtained will be recognised in the MMedVet degree programme [see V.3(d)].
- (ii) If a candidate plans to register for an honours degree only, the selected modules are approved by the Dean, following consultation with the heads of department concerned.

(d) Registration

Students, who intend to register for this programme, must consult with the Dean and the heads of department concerned, well in advance, as not all the postgraduate modules are necessarily offered every year.

(e) Examinations

(Consult General Regulations G.18 and G.26.1)

In order to obtain the degree a student has to successfully complete all relevant modules. A student may not sit for an examination more than twice in the same module.

- (i) A minimum examination mark of 50% is required in each of the modules where a semester or year mark is not required. However, where a semester or year mark is required, the latter will contribute 50% to the final mark. A subminimum of 40% is required in the examination and a final mark of at least 50% to pass the module. Instructions regarding requirements for semester, year or examination marks are published in the study guides, for the specific attention of students.
- (ii) To obtain the **degree with distinction**, a minimum of 60% is required in each module, as well as a proportionately calculated average of at least 75% for the degree as a whole.

III. MASTER'S DEGREES

V.3 Master of Veterinary Medicine [MMedVet]
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Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

The master's degree in Veterinary Medicine is a professional degree and equips the student with a broad scientific background in the theoretical and practical aspects of the chosen field of study.

Candidates are required to be qualified veterinarians registered with the South African Veterinary Council and to work in the field of specialisation under supervision of an approved supervisor for the required duration at a facility approved for this purpose. The MMedVet degree may entitle the holder to registration as a specialist with the South African Veterinary Council together with other requirements as determined by Council. Candidates are encouraged to review current Council guidelines on specialist registration.

(a) Fields of study

The MMedVet degree is offered in the following fields of study. The degree code, mini-dissertation code are indicated in respect of each field of specialisation.

	Field of study	Degree code	Mini-dissertation code
1	Anaesthesiology (Anaes)	08250131	ANV 890
2	Cattle Herd Health (Bov)	08250231	BKG 890
3	Clinical Laboratory Diagnostics (Clin lab diag)	08250191	KDK 890
4	Diagnostic Imaging (DiagIm)	08250142	DIM 890
5	Laboratory Animal Science (LAS)	08250211	PFK 890
6	Medicine (Med)(Bov)	08250052	GEN 891

7	Medicine (Med)(Eq)	08250053	GEN 892
8	Medicine (Med) (Small Animals)	08250054	GEN 893
9	Ophthalmology (Ophth)	08250251	OFM 890
10	Pathology (Path)	08250101	PAT 890
11	Pharmacology (Pharm)	08251131	FAK 895
12	Pig Herd Health (Suill)	08250182	VKH 890
13	Poultry Diseases (Altil)	08250171	PVT 890
14	Reproduction (Gyn)	08250031	GSK 891
15	Small Stock Herd Health (CaprOv)	08250241	KKS 890
16	Surgery (Chir)(Eq)	08251121	CHV 894
17	Surgery (Chir) (Small Animals)	08250022	CHV 892
18	Toxicology (Tox)	08251141	TOK 890
19	Veterinary Ethology (VetEt)	08250082	VET 890
20	Veterinary Public Health (Hyg)	08250041	VVD 895
21	Wildlife Diseases (Fer)	08250221	WSK 890

(b) Admission

- (i) Subject to the stipulations of General Regulations G.30 and G.62, a candidate must be in possession of the BVSc or an equivalent degree. In certain cases, the head of department under which a specific field of study for the MMedVet falls, may require that a candidate first obtains a BVScHons degree [Reg.V.2(c)], with modules applicable to the particular MMedVet degree programme. A minimum of 60% in each module may be required before a student may commence studies for the MMedVet degree.

A student who wishes to commence studies for the MMedVet degree, and already has a BVScHons degree and complies with the requirements already mentioned, will retain credit for the modules concerned for a period of two years, unless the head of department decides otherwise.

- (ii) Furthermore, a head of department has the prerogative to require, in addition to the requirements of the said regulation, an evaluation of a student, which may include practical components, or the setting of special conditions. A student may also be required to pass a proficiency test in English (TOEFL) at an acceptable level.
- (iii) The number of students that can be admitted to the MMedVet degree programme annually depends on the training capacity of a department and the number of available posts.

(c) Duration and attendance requirements

- (i) For candidates who are already in possession of the BVScHons degree with the applicable modules, the degree programme extends over at least three years, with a maximum duration of four years. If all the required modules have to be included in the MMedVet curriculum, the programme extends over a maximum of six years.
- (ii) Unless stipulated otherwise, the Dean must be satisfied that the candidates will have sufficient access to appropriate facilities and, where necessary, supervision by an appropriate person to complete the work required for the degree at a satisfactory level.

- (iii) Attendance requirements are determined in each individual case by the Dean (as recommended by the head of department concerned).
- (iv) Candidates have to complete an acceptable module in research methodology successfully.
- (v) Candidates will be required to keep a logbook or similar record of experiential training which is to be signed by the supervisor every 6 months. The logbook or other suitable record is to be made available for auditing when the specialist module is monitored by the South African Veterinary Council.

(d) Curricula

Elective modules will in all instances be determined in consultation with the head of department in which the proposed special field of study is offered. If deemed necessary, modules offered by other faculties of the University of Pretoria may form part of the prescribed programme.

1. MMedVet (Anaesthesiology) Code: 0825013

Specialist module	Core modules	Elective modules
ANV 800 Anaesthesiology	ANG 774 Anatomy	None
	FSL 787 Physiology	
	FSL 788 Physiology	
	VRM 811 Research methodology	

2. MMedVet (Cattle Herd Health) Code: 08250231

Specialist module	Core modules	Elective modules
BHP 800 Bovine health and production	EPL 851 Veterinary epidemiology	Any <u>two</u> appropriate postgraduate modules as approved by the HOD
	EPL 852 Veterinary epidemiology	
	VRM 811 Research methodology	

3. MMedVet (Clinical Laboratory Diagnostics) Code: 08250191

Specialist module	Core modules	Elective modules
KDK 800 Clinical laboratory diagnostics	FSL 713 Physiology	Two of: FSL 787 Physiology PAT 771 Mechanisms of disease
	KPA 701 Clinical pathology	
	KPA 702 Clinical pathology	
	VRM 811 Research methodology	

4. **MMedVet (Diagnostic Imaging) Code: 08250142**

Specialist module	Core modules	Elective modules
DIM 870 Diagnostic imaging	ANG 774 Anatomy	One of: GEN 703 Equine medicine GEN 707 Small animal medicine
	DIM 781 Radiology: Dogs and cats	
	DIM 782 Non-radiological diagnostic imaging of dogs and cats	
	DIM 783 Radiology: Horses	
	DIM 784 Non-radiological diagnostic imaging of horses	
	MFK 800 Medical physics	
	VRM 811 Research methodology	

5. **MMedVet (Laboratory Animal Science) Code: 08250211**

Specialist module	Core modules	Elective modules
PFK 800 Laboratory animal science	LAS 700 Laboratory animal science	Any <u>two</u> appropriate postgraduate modules as approved by the HOD
	TOK 702 Toxicology: Laboratory toxicity testing	
	VRM 811 Research methodology	

6. **MMedVet (Medicine) (Bovids) Code: 08250052**

Specialist module	Core modules	Elective modules
BHP 800 Bovine health and production	EPL 851 Veterinary epidemiology	Any <u>two</u> appropriate postgraduate modules as approved by the HOD
	FAK 877 Clinical pharmacology	
	VRM 811 Research methodology	

7. **MMedVet (Medicine) (Equine) Code: 08250053**

Specialist module	Core modules	Elective modules
GEN 802 Equine medicine	FAK 877 Clinical pharmacology	One of: CHV 704 Surgery: Horses DIM 783 Radiology: Horses DIM 784 Non-radiological diagnostic imaging of horses GSK 714 Clinical reproduction: Horses KPA 701 Clinical pathology KPA 702 Clinical pathology OFM 700 Ophthalmology PAT 704 Pathology: Horses
	FSL 787 Physiology	
	VRM 811 Research methodology	

8. **MMedVet (Medicine)(Small Animals) Code: 08250054**

Specialist module	Core modules	Elective modules
GEN 803 Small animal medicine	GEN 702 Small animal medicine	<u>One of:</u> DIM 781 Radiology: Dogs and cats DIM 782 Non-radiological diagnostic imaging of dogs and cats KPA 701 Clinical pathology KPA 702 Clinical pathology
	GEN 707 Small animal medicine	
	VRM 811 Research methodology	<u>Two of:</u> ANV 771 Anaesthesiology FAK 877 Clinical pharmacology FSL 787 Physiology PAT 771 Mechanisms of disease
		DIM 781 Radiology: Dogs and cats DIM 782 Non-radiological diagnostic imaging of dogs and cats

9. **MMedVet (Ophthalmology) Code: 08250251**

Specialist module	Core modules	Elective modules
OFM 800 Ophthalmology	ANG 774 Anatomy	None
	FAK 711 Clinical ophthalmic pharmacology and therapeutics	
	FSL 788 Physiology	
	PAT 708 Ophthalmological pathology	
	VRM 811 Research methodology	

10. **MMedVet (Pathology) Code: 08250101**

Specialist Module	Core modules	Elective modules
PAT 800 Pathology	HIS 700 Histology	Any appropriate postgraduate module approved by the HOD
	PAT 700 Pathology	
	VRM 811 Research methodology	

11. **MMedVet (Pharmacology) Code: 08251131**

Specialist module	Core modules	Elective modules
FAK 800 Pharmacology	FAK 876 Advanced fundamentals of pharmacology	Any <u>two</u> appropriate postgraduate modules approved by the HOD
	EPL 852 Veterinary epidemiology	
	VIP 800 Veterinary industrial pharmacology	
	VRM 811 Research methodology	

or

Specialist module	Core modules	Elective modules
FAK 800 Pharmacology	FAK 876 Advanced fundamentals of pharmacology	Any <u>two</u> appropriate postgraduate modules approved by the HOD
	FAK 877 Clinical pharmacology	
	FSL 713 Physiology	
	VRM 811 Research methodology	

12. **MMedVet (Pig Herd Health) Code: 08250182**

Specialist module	Core modules	Elective modules
VKH 800 Pig herd health	SID 815 Selected infectious diseases: Pigs	Any <u>two</u> appropriate postgraduate modules as approved by the HOD
	VRM 811 Research methodology	
	VKH 890 Mini-dissertation: Pig herd health	

13. **MMedVet (Poultry Diseases) Code: 08250171**

Specialist module	Core modules	Elective modules
PHP 800 Poultry health and production	FAK 877 Clinical Pharmacology	One appropriate postgraduate module as approved by the HOD
	PHP 871 Poultry health and production	
	PVT 890 Poultry Diseases (Atilil)	
	PVV 700 Poultry nutrition	
	VRM 811 Research methodology	

14. **MMedVet (Reproduction) Code: 08250031**

Specialist module	Core modules	Elective modules
GSK 800 Reproduction	GSK 801 Reproduction Physiology GSK 802 Assisted reproduction GSK 803 Female infertility GSK 804 Male breeding soundness and andrology	None or one elective module as approved by the HOD
	GSK 891 Mini Dissertation	
	VRM 811 Research methodology	

15. **MMedVet (Small Stock Herd Health) Code: 08250241**

Specialist module	Core modules	Elective modules
KKS 800 Small stock herd health	KKS 780 Small stock herd health	Any <u>two</u> appropriate postgraduate modules as approved by the HOD
	VRM 811 Research methodology	

16. **MMedVet (Surgery)(Equine) Code: 08251121**

Specialist module	Core modules	Elective modules
CHV 804 Surgery	ANG 703 Anatomy	One of: ANV 771 Anaesthesiology GEN 703 Equine medicine GSK 714 Clinical reproduction: Horses GSK 713 Reproductive Biology: Horses OFM 700 Ophthalmology
	DIM 783 Radiology: Horses	
	DIM 784 Non-radiological diagnostic imaging of horses	
	VRM 811 Research methodology	

17. **MMedVet (Surgery)(Small Animals) Code: 08250022**

Specialist module	Core modules	Elective modules
CHV 803 Surgery	ANV 771 Anaesthesiology	None
	ANG 705 Anatomy	
	DIM 781 Radiology: Dogs and cats	
	DIM 782 Non-radiological diagnostic imaging of dogs and cats	
	VRM 811 Research methodology	

18. **MMedVet (Toxicology) Code: 08251141**

Specialist module	Core modules	Elective modules
TOK 800 Toxicology	EPL 852 Veterinary epidemiology	Any appropriate postgraduate module approved by the HOD
	TOK 701 Toxicology: Basic and clinical veterinary toxicology	
	VRM 811 Research methodology	
	Two of: TOK 702 Toxicology: Laboratory toxicity testing TOK 704 Toxicology: Organic and inorganic poisons TOK 703 Toxicology: Phyto- and mycotoxins	

19. **MMedVet (Ethology) Code: 08250082**

Under review – will not be offered in 2014

20. **MMedVet (Veterinary Public Health) Code: 08250041**

Specialist module	Core modules	Elective modules
VVD 800 Veterinary public health	EPL 851 Veterinary epidemiology	Any appropriate postgraduate module approved by the HOD
	VPH 881, 882, 883, 884 Veterinary public health	
	VRM 811 Research methodology	

21. **MMedVet (Wildlife Diseases) Code: 08250221**

Specialist module	Core modules	Elective modules
WLS 800 Veterinary wildlife studies	PAT 806 Pathology: Wildlife	Any <u>one</u> appropriate postgraduate modules as approved by the HOD
	VRM 811 Research methodology	
	WSK 890 Mini-dissertation: Wildlife diseases	

(e) **Conferment of degree**

The MMedVet degree is conferred by virtue of completion of the required ancillary modules, an examination in the specialist module, and a mini-dissertation and appropriate research outputs.

(f) **Examinations**

(Consult General Regulations G.32 and G.40)

- (i) The examination(s) in the special field of study may only be taken from the end_of the second year of study onwards.

- (ii) The nature and duration of the examination(s), which will test fully the theoretical knowledge as well as the practical skills of the student, is determined by the head of department in which the chosen field of study is offered.
- (iii) A minimum examination mark of 50% is required in each of the theoretical and practical sections of the module where a semester or year mark is not required. However, in cases where a semester or year mark is awarded, the latter will contribute 50% to the final mark.
 A subminimum of 40% is required in the examination, and a final mark of at least 50% to pass in the theoretical and the practical sections. Instructions in the information guide regarding semester, year and examination marks, are brought specifically to the attention of students.
 A student who fails in one or more modules, may be admitted by the Dean to a supplementary examination in such module(s), on the recommendation of the head of department concerned, and after a time-lapse determined by the Dean. The average mark awarded for theoretical and practical examinations in the specialist module accounts for 75% of the final mark, and the mini-dissertation for 25%.
 Students who intend applying for membership of a specialist college abroad later on, should bear in mind that many of these colleges require a minimum examination mark, and a final mark of at least 60% for admission.

(g) Mini-dissertation

Also consult General Regulations G.57 to G.61.

- (i) A student must submit a mini-dissertation, which deals with the particular field of study, prior to the examination in the theoretical section of the chosen field of study.
- (ii) A mini-dissertation is based on a research project or related research projects (which need not be original), planned and written down by the student within the theme of the chosen field of study. (Assistance with statistical processing, applied specialised procedures, etc is allowed, but must be acknowledged.) The student may use appropriate research done previously, to add to the writing of the mini-dissertation.
 Earlier, related publications by the student may be bound with the mini-dissertation, but may not substitute the complete text of the mini-dissertation. Publications that are submitted, must be rounded off by means of an extensive introduction, materials, and information concerning methods and a discussion of the results. The mini-dissertation will be evaluated by an external examiner, who may not necessarily attend the final examination.
 Before or together with the mini-dissertation, a draft article based on the mini-dissertation must be prepared for publication in an acknowledged journal and submitted to the Head: Student Administration, failing which the degree will not be conferred. The draft article must be acceptable to the supervisor and must comply with the requirements for subsidy (see applicable faculty rules). (Also consult General Regulation G.61.)
- (iii) The average of the separate marks awarded by all the examiners, constitutes the final mark for the mini-dissertation. The minimum pass mark is 50%. A student who has failed may be permitted by the Dean, on the recommendation of the head of department concerned, to submit an amended mini-dissertation for final adjudication. The mark awarded for the mini-dissertation will make up 25% of the final mark.

(h) Degree with distinction

In order to obtain the degree with distinction, a minimum pass mark of 75% is required in the examination in the chosen field of study and the mini-dissertation together.

V.4 Master of Science in Veterinary Science [MSc (Veterinary Science)]

Also consult General Regulations G.30 to G.44.

The MSc degree in Veterinary Science is a research degree.

(a) Requirements for admission

Subject to the stipulations of General Regulations G.30 and G.62, a BScHons, a four-year BScAgric, BVSc or equivalent degree is required.

A candidate with a completed BTech degree with a minimum of 60% in the broad area of specialisation that the candidate wishes to pursue a master's programme must first complete additional undergraduate coursework as well as coursework at honours level as determined by the head of department. The programme of study must be approved by the Postgraduate Committee, Faculty Board and Subcommittee of Senate. Confirmation of candidature will be based on the successful completion of the additional coursework requirements before admission to the master's programme.

Candidates who are accepted for the MSc degree programme have to complete an acceptable module in research methodology successfully. In certain cases, it remains the prerogative of the head of department to require, in addition to the entrance requirements already mentioned, an appropriate honours degree, or the successful completion of an admissions test before registration. A student may also be required to pass a proficiency test in English (TOEFL) at an acceptable level.

(b) Duration

The programme extends over a minimum period of one year, and a maximum of three years.

(c) Field of study

Total number of SAQA credits: 240

The MSc degree programme is offered by the following departments:

(i) Anatomy and Physiology	08251002	VWE 802
(ii) Companion Animal Clinical Studies	08251003	VWE 803
(iii) Paraclinical Sciences	08251004	VWE 804
(iv) Production Animal Studies	08251005	VWE 805
(v) Veterinary Tropical Diseases	08250901	VWE 801

(d) Conferment of degree

The MSc degree is conferred by virtue of the successful completion of a dissertation. Regulations V.3(g)(i) and (ii) apply *mutatis mutandis*. (Also consult General Regulations G.57 to G.61 as well as Reg.V.3 (g)(ii) and (iii) concerning the content, submission and editing of the dissertation.)

The research topic is determined in consultation with the head of department, and the research project(s) that follow, must be approved according to Faculty guidelines.

Before or together with the dissertation, a student must submit at least one draft article for publication in an acknowledged journal, failing which the degree will not be conferred. The draft article must be based on the research for the dissertation and must be acceptable to the supervisor and meet subsidy requirements. (Also consult General Regulation G.61.)

(e) Pass with distinction

The degree is conferred with distinction on a student who has obtained at least 75% for the dissertation.

**V.5 Master of Science in Veterinary Industrial Pharmacology
[MSc (Veterinary Industrial Pharmacology)] (Code 08251006)**

Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

The MSc (Veterinary Industrial Pharmacology) is a coursework-based degree programme with a component of applied research (mini-dissertation).

(a) Requirements for admission

Subject to the stipulations of General Regulation G.62, an honours degree in natural sciences or agriculture such as a BScHons or BAgricHons, a four-year scientific-based degree such as BPharm and BScAgric, a BVSc or equivalent degree, is required.

A candidate with a completed BTech degree with a minimum of 60% in the broad area of specialisation that the candidate wishes to pursue a master's programme must first complete additional undergraduate coursework as well as coursework at honours level as determined by the head of department. The programme of study must be approved by the Postgraduate Committee, Faculty Board and Subcommittee of Senate. Confirmation of candidature will be based on the successful completion of the additional coursework requirements before admission to the master's programme.

In certain cases, it remains the prerogative of the head of department to require, in addition to the entrance requirements, the successful completion of an admissions test before registration. A student may be required to pass a proficiency test in English (TOEFL).

(b) Duration

The programme extends over a minimum period of one year full-time and two years part-time, and a maximum of three years.

(c) Curriculum

Total number of SAQA credits: 240

The curriculum consists of Veterinary industrial pharmacology as the special field of study; Fundamentals of pharmacology and Research methodology as additional core modules; and a number of elective modules equivalent to a prescribed number of credits, chosen from the following list, or from relevant general or species-based modules offered in other programmes in the Faculty and/or other faculties of the University approved by the Dean on the recommendation of the head of department.

Modules

Core modules (compulsory)

FAK 876	Advanced fundamentals of pharmacology
VIP 800	Veterinary industrial pharmacology
VRM 811	Research methodology

Elective modules

Discipline-based

CAH 811	Community-based animal health: Building communities
CAH 812	Community-based animal health: Veterinary communication and extension
HEI 811	Helminth infections: Companion animals
HEI 812	Helminth infections: Equids
HEI 813	Helminth infections: Ruminants
HEI 814	Helminth infections: Wildlife
EIP 811	Ectoparasitic infestations and protozoal infections: Companion animals
EIP 813	Ectoparasitic infestations and protozoal infections: Ruminants
EIP 814	Ectoparasitic infestations and protozoal Infections: Wildlife
SID 811	Selected infectious diseases: Animal health management
SID 812	Selected infectious diseases: Cattle
SID 813	Selected infectious diseases: Companion animals
SID 814	Selected infectious diseases: Equids
SID 815	Selected infectious diseases: Pigs
SID 816	Selected infectious diseases: Small stock
SID 817	Selected infectious diseases: Wildlife

(d) Conferment of degree

The MSc (Veterinary Industrial Pharmacology) degree is conferred by virtue of the successful completion of modules and a mini-dissertation.

(e) Examination

A minimum examination mark of 50% is required in each of the modules where a semester or year mark is not required. However, where a semester or year mark is required, the latter will contribute 50% to the final mark. A subminimum of 40% is required in the examination and a final mark of at least 50 % to pass the module. Instructions regarding requirements for semester, year or examination marks are published in the study guides, for the specific attention of candidates.

Should a candidate fail a module, but score a mark of at least 40%, he or she may be admitted to a supplementary examination, which has to be taken either during the same examination period, or not later than the subsequent examination period. If a

candidate fails to qualify for a supplementary examination, a special examination may be granted after one semester has lapsed.

The examination in the module Veterinary industrial pharmacology VIP 800 may only be taken after successfully completing the module Advanced fundamentals of pharmacology FAK 876.

(f) Mini-dissertation

Also consult General Regulations G.57 to G61

Candidates must submit a mini-dissertation (VIP 890) equivalent to a maximum of 100 credits, which deals with an applied field of study within the veterinary pharmaceutical industry. The topic is determined in consultation with the head of department, and the research project that follows, must be approved according to Faculty guidelines.

The mini-dissertation is based on an applied research project or related research projects (which need not be original), planned and reported by the candidate. (Assistance with statistical processing, applied specialised procedures, etc is allowed, but must be acknowledged.) The candidate may use appropriate research done previously, to add to the writing of the dissertation.

Previous, related publications by the candidate may be bound with the mini-dissertation, but may not substitute the complete text of the mini-dissertation. Publications, which are submitted, must be rounded off by means of an extensive introduction, materials, and information concerning methods and a discussion of the results. An external examiner, who may not necessarily attend the final examination in the special field of study, will evaluate the mini-dissertation.

Before or together with the mini-dissertation, a draft article based on the mini-dissertation must be prepared for publication in an acknowledged journal, failing which the degree will not be conferred. The draft article must be acceptable to the supervisor and must comply with the requirements for subsidy (see applicable Faculty rules). Also consult General Regulation G.61.

The average mark of the separate marks awarded by all examiners, constitutes the final mark for the dissertation. The minimum pass mark is 50%. The Dean, on the recommendation of the head of the department, may permit a candidate who has failed, to submit an amended mini-dissertation for final adjudication. The mark awarded for the mini-dissertation will make up 25% of the final mark.

(g) Pass with distinction

In order to obtain the degree with distinction, a minimum pass mark of 60% in all core modules and 75% in the examination in the special field of study and the mini-dissertation together are required.

**V.6 Master of Science in Veterinary Tropical Diseases
[MSc (Veterinary Tropical Diseases)] (Code 08251007)**

The degree is to be phased out and there will be no new intake from 2012 onwards. Currently registered students will be allowed to complete the degree under the rules and regulations published in the 2011 Faculty yearbook.

V.7 Master of Science
Option: Animal/Human/Ecosystem Health (Code 08251008)

Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

(a) Requirement for admission

Subject to the stipulations of General Regulation G.62, a BVSc, a four-year BSc in Agriculture (Animal Science), Microbiology, Zoology or Entomology or an equivalent degree is required.

In certain cases, it remains the prerogative of the head of department to require, in addition to the entrance requirements already mentioned, the successful completion of an admissions test before registration. A student may also be required to pass a proficiency test in English (TOEFL) at an acceptable level.

(b) Duration

The programme extends over a minimum period of one year full time and a maximum of three years part time.

(c) Curriculum

This degree programme underlines the connection between the health of animals, humans and the environment in which they exist. It caters for the needs of candidates who wish to be trained as health professionals and decision or policy makers involved in the diagnosis, control and prevention of tropical animal diseases and, secondly, as higher level health officers (decision or policy makers) responsible for the development and implementation of appropriate control strategies, development and of policies and promotion of international animal health, including marketing and trade of animals (livestock and wildlife) and their products.

The curriculum consists of compulsory and elective modules as well as a mini-dissertation. Core and specialist modules are grouped into the two career paths, directed at (i) health professionals and (ii) managers and policy makers. It is primarily a web-based modular degree programme.

The following two career paths are catered for:

Career path 1 – Directed at field and regulatory health professionals

Total credits required		[240]
Research	AHE 890 Mini-dissertation	[80]
Core modules	AHE 801 Animal/Human/Ecosystem health	[30]
	AHE 802 Laboratory diagnostics	[10]
	VRM 811 Research methodology	[20]
Specialist modules	AHE 803 Disease surveillance	[15]
	AHE 807 Animal health management	[30]
	AHE 804 High impact diseases	[20]
	AHE 805 Zoonoses	[20]
	AHE 806 Emerging and re-emerging disease	[15]

Career path 2 – Directed at managers and policy makers

Total credits required		[240]
Research	AHE 890 Mini-dissertation	[80]
Core modules	AHE 801 Animal/Human/Ecosystem health	[30]
	AHE 802 Laboratory diagnostics	[10]
	VRM 811 Research methodology	[20]
Specialist modules	AHE 807 Animal health management	[30]
	AHE 808 Marketing and trade of animals and their products	[30]
	AHE 809 Policy planning and legislation	[20]
	AHE 810 Communication and management	[20]
Elective modules	<i>In consultation with the HED and study leader, any of the following modules can be chosen in addition to the required selections to broaden the scope of the career path:</i>	
	AHE 803 Disease surveillance	[15]
	AHE 804 High impact diseases	[20]
	AHE 805 Zoonoses	[20]
	AHE 806 Emerging and re-emerging diseases	[15]

(d) Conferment of degree

The MSc degree is conferred by virtue of the successful completion of coursework and a mini-dissertation. The final mark will be calculated as follows:
Coursework: 60%; Mini-dissertation: 40%

(e) Examination

If a student fails a module, he/she will have to repeat the module the following year.

(f) Mini-dissertation

Consult Regulations G.32 and G.40.

On an appropriate topic depending on the field of interest of the student, a research project of limited scope must be undertaken and written in the format of a mini-dissertation to fulfil the requirements of the MSc. The research topic is determined in consultation with the supervisor and head of department and the research project must be approved according to Faculty guidelines.

Before or together with the mini-dissertation, a student must submit at least one draft article for publication in an acknowledged journal, failing which the degree will not be conferred. The draft article must be based on the research for the mini-dissertation and must be acceptable to the supervisor and meet subsidy requirements. (Also consult General Regulations G.57 to G.61).

(g) Pass with distinction

The degree is conferred with distinction on a student who has obtained at least 75% for the mini-dissertation and an average of at least 75% for the modules chosen.

<p>V.8 Master of Science Option: Ruminant health (Code 08251012)</p>
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Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

(a) Requirement for admission

Subject to the stipulations of General Regulation G.62, a BVSc, a four-year BSc in Agriculture (Animal Science), Microbiology, Zoology or Entomology or an equivalent degree is required.

The curriculum must include a module in research methodology, failing which the Veterinary Research Methodology module (VRM811) is required as a prerequisite for admission.

In certain cases, it remains the prerogative of the head of department to require, in addition to the entrance requirements already mentioned, the successful completion of an admissions test before registration. A student may also be required to pass a proficiency test in English (TOEFL) at an acceptable level.

(b) Duration

The programme extends over a minimum period of one year full time and a maximum of three years part time.

(c) Curriculum

This degree programme underlines the major health and production considerations in domesticated ruminants. It caters for the needs of candidates who wish to be extent their knowledge and skills that they have gained during their under-graduate training and aims to allow them to practise at a higher level.

The curriculum consists of compulsory modules as well as a mini-dissertation. It is primarily a web-based modular degree programme.

Total credits required		[180]
Research	RUM 890 mini-dissertation	[80]
Core modules	BHH 801 Bovine herd health and RUM 801 Ruminant medicine or SSH 801 Small stock health	[40]
		[40]
		[40]
Elective modules	Any appropriate postgraduate 800 level module approved by the HOD	[20]

(d) Conferment of degree

The MSc degree is conferred by virtue of the successful completion of coursework and a mini-dissertation. The final mark will be calculated as follows:
Coursework: 60%; Mini-dissertation: 40%

(e) Examination

If a student fails a module, he/she will have to repeat the module the following year.

(f) Mini-dissertation

Consult Regulations G.32 and G.40.

On an appropriate topic depending on the field of interest of the student, a research project of limited scope must be undertaken and written in the format of a mini-dissertation to fulfil the requirements of the MSc. The research topic is determined in consultation with the supervisor and head of department and the research project must be approved according to Faculty guidelines.

Before or together with the mini-dissertation, a student must submit at least one draft article for publication in an acknowledged and accredited journal. The draft article must be based on the research for the mini-dissertation and must be acceptable to the supervisor and meet subsidy requirements. Proof of submission of the article from the relevant journal editorial office must be submitted together with the final bound mini-dissertation.

(Also consult General Regulations G.57 to G.61).

(g) Pass with distinction

The degree is conferred with distinction on a student who has obtained at least 75% for the mini-dissertation and an average of at least 75% for the modules chosen.

V.9 Master of Science
Option: Veterinary epidemiology (Code 08251009)

Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

(a) Requirement for admission

Subject to the stipulations of General Regulation G.62, a BVSc, BSc (Honours), four-year BSc in natural sciences or agriculture or an equivalent degree is required.

In certain cases, it remains the prerogative of the Head of Department to require, in addition to the entrance requirements already mentioned, the conduction of an interview and/or the successful completion of an admissions test before registration. Students must be proficient in English and may be required to pass a proficiency test prior to admission. Admission is also subject to the identification of a suitable research project and the availability of a supervisor. Prospective applicants should therefore make enquiries well in advance.

(b) Duration

The programme extends over a minimum period of two years full time and a maximum of three years part time.

(c) Curriculum

This degree programme provides training in the principles of and methods used in veterinary epidemiology, including training in selected more specialised tools used in the discipline. It caters for the needs of candidates who wish to be trained as epidemiologists, health officers or researchers involved in the investigation and control of diseases in animal populations and who would like to gain relevant knowledge and develop specific technical skills.

The curriculum consists of compulsory and elective modules as well as a mini-dissertation. It is primarily a web-based modular degree programme.

At the discretion of the HOD and supervisor, a student may be granted exemption from the modules VRM 811 (Veterinary research methodology) and/or EPL 851 (Basic veterinary epidemiology) if equivalent module(s) have successfully been completed.

Total credits required			[240]
Research	EPL 890	Mini-dissertation	[120]
Core modules	EPL 851	Basic veterinary epidemiology	[10]
	EPL 852	Biostatistics in veterinary science	[20]
	EPL 853	Analytical veterinary epidemiology	[20]
	EPL 855	Animal health information management	[5]
	EPL 856	Scientific reasoning in veterinary epidemiology	[5]
	VRM 811	Veterinary research methodology	[20]
Elective modules	Any appropriate 800-level modules, relevant to the field of study and approved by the HOD and supervisor, may be selected from those offered in the Faculty of Veterinary Science, the Faculty of Health Sciences and the Faculty of Natural and Agricultural Sciences.		[40]

(d) Conferment of degree

The MSc degree is conferred by virtue of the successful completion of modules and a mini-dissertation. A minimum mark of 50% is required for each of the modules. The final mark will be calculated as follows:

Coursework: 50% (weighted average of marks for all modules); Mini-dissertation: 50%

(e) Examination

If a student fails a module, he/she will have to repeat the module the following year.

(f) Mini-dissertation

Consult Regulations G.32 and G.40.

A research project of limited scope must be undertaken on an appropriate topic, depending on the field of interest of the student and the availability of a suitable supervisor, and written in the format of a mini-dissertation of 120 credits (EPL 890) to fulfil the requirements of the MSc. The research topic is determined in consultation with the supervisor and head of department, and the research project must be approved according to Faculty guidelines.

Before or together with the mini-dissertation, a student must submit at least one draft article for publication in an accredited scientific journal, failing which the degree will not be conferred. The draft article must be based on the research for the mini-dissertation and must be acceptable to the supervisor and meet subsidy requirements.

(Also consult General Regulations G.57 to G.61).

(g) Pass with distinction

The degree is conferred with distinction on a student who has obtained at least 75% for the mini-dissertation and an average of at least 75% for the modules chosen.

V.10 Master of Science

Option: Veterinary reproduction (Code 08251010)

Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented during a particular year. This enquiry should be directed to the head of the Department of Production Animal Studies after having consulted the Syllabi on the web at: <http://web.up.ac.za/modules>.

(a) Requirements for admission

Subject to stipulations of General Regulation G.62, a BVSc, a four-year BSc in Agriculture (Animal Science), Zoology or an equivalent degree is required.

In certain cases, it remains the prerogative of the head of department to require, in addition to the entrance requirements already mentioned, the successful completion of an admissions test before registration. A student may also be required to pass a proficiency test in English (TOEFL) at an acceptable level.

The student must provide proof of having passed a suitable course or module in research methodology. VRM 811, presented by the Faculty of Veterinary Science of the University of Pretoria is one such module. A student that has passed another module in Research methodology must provide an official outline of the module content, issued by the institution that presented the module to the head of the department of Production Animal Studies based on which the head of the department will decide whether or not the exposure to research methodology was sufficient or not. The student has to present a copy of his (her) academic record with respect to the research methodology module that he (she) passed.

(b) Duration

The programme extends over a minimum period of one year full-time and a maximum of three years part time. The rate at which the required modules can be presented may constrain the minimum duration to more than one year.

(c) Curriculum

Total SAQA credits:	minimum of 180
Course work:	90
Mini-dissertation:	90
Total:	180

The first objective of the degree programme is to provide each participant a strong theoretical grounding in those aspects of veterinary reproduction that are specifically of interest to him or her, whilst also having the opportunity to gain a wider perspective from interacting with other students doing the same programme but with different foci of interest. The second objective, which is as important as the first, is to let the student go through the scientific research process, from the formulation of a research question to reporting the research in a mini-dissertation and an article of sufficient merit to submit to an approved scientific journal.

The degree programme will be suitable for any veterinarian with an interest in reproduction and an interest in doing research in the field of reproduction, irrespective of the species in which his or her interest lies. The degree programme may also be suitable for non-veterinarians with similar interests but focused on those aspects of reproduction that are not of a strict veterinary nature, yet maintaining a focus on animal health.

The curriculum will consist of four core modules and a mini-dissertation.

Total credits required			[180]
Research	GSK 891	Mini-dissertation	[90]
Core modules	GSK 801	Reproductive physiology	[20]
	GSK 802	Assisted reproduction	[30]
	GSK 803	Female infertility	[20]
	GSK 804	Male infertility	[20]

Modules

GSK 801	Reproductive physiology
GSK 802	Assisted reproduction
GSK 803	Female infertility
GSK 804	Male breeding soundness and andrology
GSK 805	Reproduction, <i>capita selecta</i>

(d) Conferment of the degree

The MSc degree is conferred by virtue of the successful completion of the course work and a mini-dissertation.

The final mark will be calculated as follows:

Coursework: **50%**

Mini-dissertation: **50%**

(e) Examination

The degree is conferred on a student who has obtained at least 50% for every module and at least 50% for the mini-dissertation.

If a student fails a module, he (she) has to repeat the module the next time it is presented.

Also consult General Regulations G.32 and G.40

(f) Mini-dissertation

Mini-dissertation: 90 credits (GSK 890)

On an appropriate topic depending on the field of interest of the student and research theme of the supervisor. A research project of limited scope must be undertaken and written in the format of a mini-dissertation to fulfill the requirements of the MSc. The research topic is determined in consultation with the supervisor and the head of department, and the research project must be approved according to Faculty guidelines.

Before or together with the mini-dissertation, a student must submit at least one draft article for publication in an accredited journal, failing which the degree will not be conferred. The draft article must be based on the research for the mini-dissertation and must be acceptable to the supervisor and meet subsidy requirements.

Also consult General Regulations G.41 and G.57 to G.61.

(g) Pass with distinction

The degree is conferred with distinction on a student that has obtained at least 75% for the mini dissertation and an average of at least 75% for the modules.

V.11 Master of Science

Option: Veterinary public health (Code 08251013)

Also consult General Regulations G.30 to G.44. Students are required to confirm whether a module will be presented in any particular year. This enquiry should be directed to the relevant head of department according to the syllabi information provided in the list of modules in this publication.

The MSc with the Option: Veterinary Public Health is a coursework degree programme with a component of applied research (mini-dissertation).

(a) Requirement for admission

Subject to the stipulations of General Regulation G.62, a four-year scientific-based degree such as BScHons, BScAgric, a BVSc, BVMCh or an equivalent degree, is required.

A candidate with a completed BTech degree with a minimum of 60% in the broad area of specialisation. In certain cases, it remains the prerogative of the head of department to require, in addition to the entrance requirements already mentioned, the successful completion of additional coursework and/or an admissions test before registration. A student may be required to pass a proficiency test in English (TOEFL) at an acceptable level.

(b) Duration

The programme extends over a minimum period of two years full-time and three years part-time.

(c) Curriculum

Total number of SAQA credits: 240

The curriculum consists of Meat Hygiene and Milk Hygiene as special fields of study with Basic Veterinary Epidemiology and Research Methodology as additional core modules and a number of elective modules equivalent to 50 credits, chosen from the list of elective modules offered in other programmes in the Faculty and/or other faculties of the University and approved by the Dean on the recommendation of the head of department.

Core modules to be completed:

	Core modules	Credits
EPL 851	Basic veterinary epidemiology	[10]
VPH 881	Veterinary public health: Meat hygiene	[40]
VPH 883	Veterinary public health: Veterinary milk hygiene	[40]
VRM 811	Research methodology	[20]
Total credits		[110]

Elective modules that can be selected (50 credits):

	Elective modules	Credits
AHE 801	Animal/Human/Ecosystem Health	[30]
AHE 805	Zoonoses	[20]
AHE 809	Policy, planning and legislation	[20]
AHE 810	Communication and management	[20]
VPH 884	Veterinary public health: Environmental health and biosecurity	[40]
VPH 882	Veterinary public health: Poultry food hygiene	[40]
EHM 870	Basis of environmental health	[5]
HCS 870	Project management for the health sector	[10]
HME 873	Monitoring and evaluation	[15]
SCC 871	Communication in health	[10]
EHM 871	Health risk assessment	[10]
HIN 870	Introduction to health informatics	[10]
QHR 870	Qualitative research methods	[10]
CDS 872	Economic evaluation of disease control interventions	[10]
	Research	Credits
VPH 890	Mini-dissertation	[80]

(d) **Conferment of degree**

The MSc degree is conferred by virtue of the successful completion of modules and a mini-dissertation.

(e) **Examination**

A minimum examination mark of 50% is required to pass each of the modules. Instructions regarding requirements for semester, year or examination marks are published in the study guides, for the specific attention of candidates.

Should a candidate fail a module, but score a mark of at least 40%, he or she may be admitted to a supplementary examination, which has to be taken either during the same examination period, or not later than the subsequent examination period. If a candidate fails to qualify for a supplementary examination, a special examination may be granted after one semester has lapsed.

(f) **Mini-dissertation**

Also consult General Regulations G.57 to G.61.

Candidates must submit a mini-dissertation equivalent to 80 credits, which deals with an applied field of study within veterinary public health. The topic is determined in consultation with the head of department, and the research project that follows, must be approved according to Faculty guidelines.

The mini-dissertation is based on an applied research project or related research projects (which need not be original), planned and reported by the candidate. (Assistance with statistical processing, applied specialised procedures, etc is allowed, but must be acknowledged). The candidate may use appropriate research done previously, to add to the writing of the dissertation.

Previous, related publications by the candidate may be bound with the mini-dissertation, but may not substitute the complete text of the mini-dissertation. Publications, which are submitted, must be rounded off by means of an extensive introduction, materials, and information concerning methods and a discussion of the results. An external examiner, who may not necessarily attend the final examination in the special field of study, will evaluate the mini-dissertation.

Before or together with the mini-dissertation, a draft article based on the mini-dissertation must be prepared for publication in an acknowledged journal, failing which the degree will not be conferred. The draft article must be acceptable to the supervisor and must comply with the requirements for subsidy (see applicable Faculty rules). Also consult General Regulation G.61.

The average mark of the separate marks awarded by all examiners constitutes the final mark for the dissertation. The minimum pass mark is 50%. The Dean, on the recommendation of the head of the department, may permit a candidate who has failed, to submit an amended mini-dissertation for final adjudication. The mark awarded for the mini-dissertation will make up 30% of the final mark.

(g) Pass with distinction

The degree is conferred with distinction on a student who has obtained at least 75% for the mini-dissertation and an average of at least 75% for the modules chosen.

IV. DOCTORATES

V.12 Doctor of Philosophy [PhD]

Also consult General Regulations G.45 to G.55.

(a) Admission requirements

Subject to the stipulations of General Regulation G.62, a candidate must hold an applicable master's degree to qualify for admission to the study for the PhD degree.

A candidate with an MTech degree who has obtained at least 60% for the MTech dissertation may be considered for admission if approved by Senate. Since the PhD is clearly more demanding of a wider (philosophical) scientific background, the selection of candidates for the PhD degree must be stringent, and could include outside evaluation of the dissertation work by nominees selected by the head of department and approved by the Faculty Postgraduate Committee, evidence of peer-reviewed publication, appropriate work-related experience (ie in a research environment) and, where necessary, formal coursework to address shortcomings in the academic background.

It remains the prerogative of the head of department to require an admissions test prior to registration for the degree study, in addition to the regulatory requirements. A pass in a proficiency test in English (TOEFL) at an acceptable level may also be required, especially in the case of international candidates.

(b) Field of study

Total number of SAQA credits: 360

The PhD degree is offered by the following departments:

	Department	Degree code	Thesis code
(i)	Anatomy and physiology	08261002	VWE 902
(ii)	Companion animal clinical studies	08261003	VWE 903
(iii)	Paraclinical sciences	08261004	VWE 904
(iv)	Production animal studies	08261005	VWE 905
(v)	Veterinary tropical diseases	08260271	VWE 901

The research topic will be determined in consultation with the head of department, following which the research projects will be approved in terms of Faculty guidelines and General Regulation G.57. Each candidate must satisfy the Dean on the recommendation of the head of department that he or she is working at an institution with the necessary facilities, to enable him or her to complete the work required for the degree satisfactorily.

(c) Duration

Consult General Regulation G.51.

The study extends over a minimum period of two years, with a maximum of six years.

(d) Conferment of degree

The PhD degree is conferred by virtue of the successful completion of a thesis and an oral examination. Consult General Regulation G. 60.4(e).

Before or together with the thesis a student must submit at least one article for publication in an acknowledged journal, failing which the degree will not be conferred.

The article must be based on the research for the thesis and must be acceptable to the supervisor and meet subsidy requirements. The student is required to submit proof of the receipt of the article by an accredited journal to the Head: Student Administration. Consult General Regulation G.61.

Also consult General Regulations G.57 to G.61 with regard to the submission and technical editing of the thesis.

V.13 Doctor of Veterinary Science [DVSc]

The DVSc degree is conferred by virtue of publications (consult General Regulation G.56)

	Department	Degree code	Thesis code
(i)	Anatomy and physiology	08260002	VWE 902
(ii)	Companion animal clinical studies	08260003	VWE 903
(iii)	Paraclinical sciences	08260005	VWE 904
(iv)	Production animal studies	08260004	VWE 905
(v)	Veterinary tropical diseases	08260006	VWE 901

VI. UNIVERSITY DIPLOMA

**V.14 University Diploma in Veterinary Nursing [DipVetNurs]
(Code 08120002)**

This programme may be phased out in due time and be replaced by 3 year degree programme pending approval and accreditation.

Check Faculty website for notification in this regard.

The University retains the right not to admit students in the old programme as from 2015.

(a) Requirements for admission

- (i) A candidate must be in possession of a National Senior Certificate (NSC) and must have passed the following Grade 12 subjects at the level indicated:

English at home language/first additional language level	4 (50-59%)
Life Sciences	4 (50-59%)
Mathematics	4 (50-59%)
Physical Sciences	4 (50-59%)
Alternative subject 1	4 (50-59%)
Alternative subject 2	4 (50-59%)

A minimum Admission Point Score (APS) of 24 will be required [calculated from the achievement level obtained in English, Life Sciences, Mathematics and Physical Sciences and the two best alternative subjects (second language and one other)]

(Although Life Orientation is excluded from the calculation of the required APS, a minimum score of 4 (50-59%) must be achieved.)

School-leavers will be provisionally selected on the basis of their Grade 11 and NBT results; selection will be confirmed if the Grade 12 APS is not > 3 points below the Grade 11 APS and still above the minimum of 24.

- (ii) Students are admitted annually after selection according to the approved procedure.
- (iii) Each student must apply, immediately after first admission, to the Registrar of the South African Veterinary Council for registration as a student in veterinary nursing. Registration is compulsory and must be renewed annually for the duration of the study.
- (iv) After the diploma has been awarded, diplomates are required to register with the South African Veterinary Council as veterinary nurses before they may be employed in South Africa in this capacity.

(b) Duration of study

Two academic years of full-time study.

(c) Admission to examinations

The stipulations of General Regulation G.10.1 regarding satisfactory attendance, preparation, as well as the payment of class fees, apply to examination, promotion and attendance modules. In addition, attendance at all the prescribed lectures, practicals, clinics (including holiday clinics) and excursions is compulsory. Absence with good reason from any of these must be substantiated by a medical certificate or other acceptable proof, failing which admission to the examination could be refused. Failure to comply with General Regulation G.10.1 will also result in examination refusal.

(d) Pass requirements in modules and supplementary examinations

- (i) In order to pass an examination module, a student must obtain a subminimum of 40% in the examination and a final mark of at least 50%. In promotion modules, a semester or year mark of at least 50% is required to pass.

- (ii) The theoretical part (ie written and/or oral) and the practical part (where applicable) of the examinations contribute an equal amount (ie 50:50) in the calculation of the final mark.
- (iii) If the examination includes a practical as well as a theoretical part, a sub-minimum of 40% is required in each section.
- (iv) An examination mark of 50% is required to pass a supplementary examination. The semester or year mark is not taken into calculation.
- (v) Supplementary examinations may be granted to a student in an unlimited number of modules in the first year of study, but not in the second year of study.
- (vi) A student must pass all the modules of the first year of study in order to be promoted to the second year of study. A single further examination will, however, be allowed for students who have **only one** of the following modules outstanding at the end of the academic year:
 - FAK 120 Pharmacology
 - LTG 120 Laboratory technique
 - MBI 111 Microbiology
 - AVP 111 General nursing
 - VET 110 Veterinary ethology
 - PAR 120 Parasitology
 - MVP 120 Medical nursing
 - TPR 120 Theatre practice
 - GSV 120 Reproductive nursingprovided the final mark is at least 40%

(e) Promotion to the second year of study

A student, who fails one or more modules in the first year of study, is subject to selection once again. A limited number of five students will be re-admitted to the first year of study. If re-admitted, the student has to repeat the first year of study. Students may apply for exemption from the examination in modules already passed, provided that a year or semester mark of at least 50% is obtained in the relevant modules in the year during which first-year studies are repeated and the requirements of V.14(c) have been met. For modules passed with a final mark of 65% or more, full exemption of lectures and examinations is granted.

(f) Pass with distinction

The diploma is awarded with distinction to a student who has obtained at least 60% in each module throughout the programme, and an average of at least 75% in the final year.

(g) General

In addition to the stipulations of General Regulation G.3.2(b), a student will not be allowed to repeat the same year of study twice.

- (h)** A student who has to discontinue his or her studies in terms of stipulations (e) and (g) above, may request the Dean in writing to consider his or her application for re-admission to the Faculty in terms of prescribed procedures as stipulated in *Application of General Regulation G.3* and *Faculty Regulation V.1.c(ix)* in the *Faculty of Veterinary Science, University of Pretoria* as approved by the Faculty Board.

(i) Curriculum

Total number of SAQA credits: 355

(i) **First year of study**

ANG 104	Anatomy 104
AVP 111	General nursing 111
FAK 120	Pharmacology 120
FSL 104	Physiology 104
LTG 120	Laboratory technique 120
MBI 111	Microbiology 111
PAR 120	Parasitology 120
VET 110	Veterinary ethology 110

Promotion modules

GSV 120	Reproductive nursing 120
MVP 120	Medical nursing 120
TPR 120	Theatre practice 120

- (aa) **Clinical skills training** must be completed at various clinics of the Veterinary Academic Hospital throughout the year and during the December holidays, and also on a rotation basis at Outpatients, Isolation Ward and Intensive Care Unit after-hours and over weekends.
- (bb) **Supplementary examinations:** Subject to the provisions of Regulation V.14(d)(iii), students who obtain a final mark of between 40% and 49% in General nursing 111, Microbiology 111 or Veterinary ethology 110, may be admitted to a supplementary examination immediately after the June examinations. The provisions of Regulation V.14(d)(v) also apply.

(ii) **Second year of study**

CVP 200	Surgical nursing 200
GSV 200	Reproductive nursing 200
MVP 200	Medical nursing 200
NAR 200	Anaesthesiology 200
RAV 200	Radiography 200
TPR 200	Theatre practice 200

- (aa) **Clinical skills training** must be completed in various clinics of the Veterinary Academic Hospital. Students also have to work on a rotation basis at Outpatients, in the Isolation Ward and the Intensive Care Unit after hours and over weekends and holidays. After-hour duties are also required in the Equine Clinic, Ambulatory Services and the Reproduction Clinic. Students are also required to gain experience at the following institutions for two weeks each: an approved veterinary institute, private practice or clinic of their own choice at the Veterinary Academic Hospital. Additional rotations must be done at the Veterinary Academic Hospital during the April holidays.
- (bb) **Supplementary examinations**
 A student in the final year of study may be granted a maximum of two supplementary examinations
 A head of department may require from a student who has been admitted to a supplementary examination, to do additional prescribed work for a specified period of time before he or she may take the supplementary examination as approved by the Dean.

(cc) **Special examination**

A student who has failed one or two modules and who has not been admitted to a supplementary examination, or who fails the supplementary examination(s), may be allowed to take a special examination after having worked full-time in the department/s concerned for a period determined by the head/s of department and with the Dean's approval. If he or she fails the latter, the Dean will determine when a further examination may be taken.

(dd) **Repetition of the final year of study**

A student who has failed more than two modules at the time of the Examination Commission meeting, must repeat the last two semesters of the curriculum with due cognisance of rule V.14(e), unless the Dean decides otherwise.

(ee) **Clinical experience (including practical work)**

Proof of satisfactory completion of prescribed clinical and practical components of the programme as prescribed below, must be submitted to the Head: Student Administration of the Faculty, prior to the commencement of the final examinations. Failure to do so may lead to examination refusal.

In state control of stock diseases and administration: experience at an approved institution as approved by the Dean.

Practical and clinical experience at the Faculty and at approved private practices as well as other institutions as approved by the Dean.

Alphabetical list of modules in the Faculty of Veterinary Science

= Concurrent registration

() = Examination admission

dpw = discussions per week

GS = combined (final) mark (semester/year mark plus examination mark) of at least 40% - 49%

hpw = hours per week

LP = Lecturer's permission

lpw = lectures per week

opw = other per week

ppw = practicals per week

ppy = practicals per year

spw = seminars per week

TDH = Permission by head of department

tpw = tutorials per week

wbppw = web-based period per week

AHE 801 Animal/Human/Ecosystem Health 801

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 30

Module content:

The objective of this module is to give the learner a multidisciplinary view (One Health) of the concepts and principles of integrated livestock and wildlife health and management in the tropics. There will be a special focus on understanding the relationship between ecosystem health and infectious/parasitic diseases of animals and humans (zoonoses) and ecosystem health in order to improve disease control policies, ecosystem sustainability, food security and rural development.

AHE 802 Laboratory diagnostics 802

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 10

Module content:

The objective of this module is to provide focused training in the concepts and principles of field and laboratory diagnosis of infectious and parasitic diseases of livestock and wildlife including aspects of specimen collection and shipment, interpretation of laboratory results and basic laboratory management.

AHE 803 Disease surveillance 803

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 15

Module content:

This module deals with the concepts and principles of terrestrial animal (livestock and wildlife) health surveillance; including the design; implementation and evaluation of surveillance system; the data sources; tools and methods available to perform effective surveillance; and the evaluation and analysis of surveillance data.

AHE 804 High impact diseases 804

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 20

Module content:

The objective of this module is to give the learner an overview of the concepts and principles of high impact contagious and vector-borne infectious and parasitic diseases of livestock and wildlife that have the potential of rapid spread (irrespective of international borders) , causing serious socioeconomic and possibly public health consequences, impacting on international trade and requiring reporting to the OIE

AHE 805 Zoonoses 805

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 20

Module content:

This module deals with basic concepts and principles of zoonoses with a clear focus on wildlife/livestock/human interactions. Key drivers, contributing underlying factors as well as impacts of zoonoses will be investigated against the background of socioeconomic determinants, the environment, animal husbandry practices; integrated intervention tools and strategies; integrated medical and veterinary data collection, cultural perceptions and advocacy and policy development.

AHE 806 Emerging and re-emerging diseases 806

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 15

Module content:

This module deals with the concepts and principles of the drivers of emerging and re-emerging diseases including the presence of wildlife reservoirs, interactions at the livestock/wildlife/human interface, changing agricultural practices, climate change and collapsing veterinary services in some parts of the world

AHE 807 Animal health management 807

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 30

Module content:

The objective of this module is to give the learner an overview of the general principles of animal health management including control/eradication of important infectious and parasitic diseases of livestock and wildlife with special reference to sub-Saharan Africa

AHE 808 Marketing and trade 808

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 30

Module content:

This module deals with the concepts and principles of trade and marketing of animal (livestock and wildlife) commodities and products including economic principles; livestock supply chains, marketing channels and competitiveness; international standard-setting bodies; risks associated with commodities and products; meeting sanitary and phytosanitary (SPS) and technical barriers to trade (TBT) standards; biological safety and animal production (value) chains; traceability requirements; and auditing and certification.

AHE 809 Policy, planning and legislation 809

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 20

Module content:

This module deals briefly with the concepts and principles of animal health policy formulation in the context of livestock/wildlife/human interactions; trade in animals and their products; food safety and zoonotic diseases; and the management alternatives for African transboundary (high impact) diseases.

AHE 810 Communication and management 810

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 20

Module content:

The primary objective of this module is to equip managers/decision-makers in particular with the necessary communication skills to address not only the public but also international audiences or panels. It will also deal with basic principles of project management (eg scope, stakeholders, time management, budgets and risk analysis) as well as basic principles of financial management (eg statements, financing decisions, capital budgeting, working capital management).

AHE 890 Mini-dissertation 890

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Year

Language of tuition: English

Credits: 80

Module content:

A mini-dissertation must be delivered on an appropriate topic depending on the field of interest of the student. A research project of limited scope must be undertaken and written in the format of a mini-dissertation to fulfil the requirements of the MSc. The research topic is determined in consultation with the supervisor and head of department and the research project must be approved according to Faculty guidelines. Before or together with the mini-dissertation, a student must submit at least one draft article for publication in an acknowledged journal, failing which the degree will not be conferred. The draft article must be based on the research for the mini-dissertation and must be acceptable to the supervisor and meet subsidy requirements.

ANG 104 Anatomy 104

Academic organisation: Anatomy and Physiology

Contact time: Block 1: 4 lpw Block 1: 5 demonstrations per week Block 2: 1 demonstration per week Block 2: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Basic anatomy, histology and embryology of the dog, including applicable comparative anatomy of the horse and ruminant. Offered for DipVetNursing students.

ANG 703 Anatomy 703

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

An in-depth study of the osteology, arthrology, myology, angiology, neurology, splanchnology and topographical anatomy of the horse. Special attention to clinically important sections of the anatomy.

ANG 704 Anatomy 704

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

An in-depth study of the osteology, arthrology, myology, angiology, neurology, splanchnology and topographical anatomy of cattle. Special attention to clinically important sections of the anatomy.

ANG 705 Anatomy 705

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

An in-depth study of the osteology, arthrology, myology, angiology, neurology, splanchnology and topographical anatomy of the dog. Special attention to clinically important sections of the anatomy.

ANG 774 Anatomy 774

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

The number of lectures and credits will depend on the course compiled for the student. A formal module comprises at least 6 credits. The modules are compiled for each student individually to fulfil the specific needs of the student concerned.

ANG 779 Anatomy 779

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

An in-depth comparative study of the anatomy of the pelvis and surrounding areas, histology of the reproductive system and the embryological development of the reproductive system.

ANV 420 Anaesthesiology 420

Academic organisation: Companion Animal Clinical Studies

Contact time: 3 lpw 3 ppw

Period of presentation: Semester 2

Language of tuition: English

Credits: 7.5

Module content:

Prepare for safe general anaesthesia; premedication; trachea intubation; induction and maintenance of intravenous and inhalation anaesthesia; recovery from anaesthesia; local anaesthesia and pain management; anaesthetic complications.

ANV 601 Anaesthesiology 601

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 1: 2 lpw Block 2: 1 lpw

Period of presentation: Year

Language of tuition: English

Credits: 6

Module content:

Theoretical training in the basic principles in the administration of premedication, intravenous and inhalation anaesthetic agents to domestic and some common exotic pet animals. The module covers the design and function of the inhalation anaesthetic machine, the monitoring of vital functions during anaesthesia, the diagnosis and treatment of common complications during the peri-anaesthetic period and the administration of local anaesthetic agents.

ANV 771 Anaesthesiology 771

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

Advanced theoretical training on a species-orientated basis, including domestic animals (horses, dogs and cats), birds, laboratory animals and wildlife species. The module covers the latest techniques in anaesthetising compromised animals and the use of total intravenous anaesthetic techniques, positive pressure ventilation, peripheral muscle relaxants and monitor apparatus.

ANV 800 Anaesthesiology 800

Academic organisation: Companion Animal Clinical Studies

Contact time: 0.5 spw 5 dpw

Period of presentation: Year

Language of tuition: English

Credits: 451

Module content:

Advanced theoretical and practical and experiential training in the administration of local and general anaesthetics on a species-orientated basis. The module covers the structure and functioning of inhalation anaesthesia and monitor apparatus, the latest use of total intravenous anaesthetic techniques, positive pressure ventilation, peripheral muscle relaxants and the techniques and equipment employed for the immobilisation of game. Theoretical training includes the attendance of postgraduate seminars in Anaesthesiology at the School of Medicine.

ANV 890 Mini-dissertation: Anaesthesiology 890

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 150

ASR 811 Applied serology 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

A theoretical and practical study of serology and the production of diagnostic reagents.

AVE 811 Applied veterinary ectoparasitology and protozoology 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 25

Module content:

A theoretical and practical study of techniques to diagnose free-living and parasitic stages of the economically important arthropod and protozoal parasites of domestic and wild animals (excluding tsetse flies and trypanosomes, and those ticks and tick-borne protozoa and rickettsias that are included in the "Ticks" and "Tick-borne diseases" modules).

AVH 811 Applied veterinary helminthology 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 25

Module content:

A study of the diagnostic techniques of helminth parasites in live and dead animals, their fixation, preservation and identification in livestock, companion animals and wildlife, and their population dynamics, ecology and parasite-host interactions.

AVP 111 General nursing 111

Academic organisation: Production Animal Studies

Contact time: 7.5 ppw

Period of presentation: Semester 1

Language of tuition: English

Credits: 14

Module content:

Professional ethics, human relations, responsibilities towards the employer, the patient and the clients. General safety aspects and preventive measures during hospitalisation, nursing and treatment of patients. Hygiene and maintenance of the hospital, apparatus and treatment of patients. Secure storage of medicines, secure administration and record-keeping of medicines, monitoring patients and important reporting to the veterinary surgeon, using correct veterinary terminology. Arrangements regarding transportation of animals and basic wound dressing.

AVV 811 Applied virology: General theory 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 10

Module content:

A theoretical study of veterinary virology with particular emphasis on the characteristics of viruses, and their morphology, replication, and identification in the laboratory.

AVV 815 Applied veterinary virology: Virus identification 815

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 20

Module content:

Theoretical and practical study of the use of cell cultures, embryonated eggs and laboratory animals for the isolation and identification of viruses.

BHH 801 Bovine herd health 801

Academic organisation: Production Animal Studies

Prerequisite: A BVSc, a four year BSc in Agriculture (Animal Science), Microbiology, Zoology or an equivalent degree

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

The primary aim of this module is to provide the candidate with the skills and competence to promote the health and production efficiency of cattle operations (dairy, beef and feedlots). The module will enable students to integrate and apply knowledge so that health and production can be monitored and problems can be identified and solved on a herd basis. The module content will be based on advanced theoretical training in bovine herd health with emphasis on principles of herd health and production programmes, animal health economics, monitoring dairy herd health and production (applied nutrition, fertility, udder health, foot health, general cow health, calves and replacement heifers), monitoring the health and performance of beef cow calf enterprises (resource base, forage and beef cow-calf stock flow, applied nutrition, fertility, young stock, integrated resource, health and management program), and beef feedlots

BHP 650 Applied bovine health and production 650

Academic organisation: Production Animal Studies

Contact time: 7.9 ppw

Period of presentation: Year

Language of tuition: English

Credits: 43

Module content:

Practical tuition under supervision in the diagnosis, treatment and control of diseases of cattle. Includes tuition during after-hours, weekends and vacations.

BHP 800 Bovine health and production 800

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 400

Module content:

Specialist training with regard to the organ, metabolic and deficiency diseases of bovinds. Pathophysiology, diagnostic and treatment methods are emphasised. Integration and application of knowledge of health and production problems on a herd basis, evaluation of the health status and production effectiveness of herds in a holistic and cost-effective way within a wide spectrum of dairy and beef cattle farming systems and feedlots. Applied nutrition of cattle.

BKG 890 Mini-dissertation: Cattle herd health 890

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 132

BOM 801 Bovine medicine 801

Academic organisation: Production Animal Studies

Prerequisite: A BVSc or an equivalent degree

Contact time: 1 dpw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 48

Module content:

Advanced theoretical, practical and experiential training in cattle medicine with emphasis on the pathophysiology, diagnosis, treatment and control of non-infectious diseases, specifically applicable to conditions of the gastro-intestinal tract, liver, production diseases, cardiovascular system, respiratory system, nervous system, musculo-skeletal system, skin and appendages.

CAH 811 Community-based animal health: Building communities 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 7

Module content:

A study of the importance of the social and ecological aspects of agriculture during the development of community-based animal health and development programmes.

CAH 812 Community-based animal health: Veterinary communication and extension 812

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 6

Module content:

Knowledge and skills in veterinary communication and extension required to facilitate group and community participation in surveillance, monitoring and control of animal diseases.

CAH 813 Community-based animal health: Veterinary service delivery 813

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 7

Module content:

Development of an effective and cost efficient community-based veterinary service delivery system which is of benefit to animal owners, government and other stakeholders.

CBF 610 Cage bird and fish diseases 610

Academic organisation: Companion Animal Clinical Studies

Contact time: 3 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 6

Module content:

Theoretical module covering: Avian: housing and biosecurity; nutrition and nutritional diseases; special equipment and caging for avian practice; anatomy, physical examination and history taking; haematology and clinical chemistry; pharmacology, endoparasites, ectoparasites, protozoal, rickettsial, fungal, bacterial and viral diseases; diseases, species specific conditions and syndromes; radiology, anaesthesia and selected procedures. Fish: husbandry, clinical work-up, endoparasites and ectoparasites; bacterial, fungal and viral diseases and treatments.

CHV 703 Surgery: Small animals 703

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

Advanced theoretical study of small animal soft tissue surgery. The module extends over a period of one year. Approximately 15 lectures/group discussions are presented every third week on Wednesday mornings and a computer based multi choice test is conducted with the completion each of each section. Training is done mainly by means of PPT presentations by the lecturer or students of specific surgical conditions and the presentation of two case reports. The course starts with disinfecting agents, detergents, aseptic technique and characteristics of different suture materials, followed by surgical

oncology of all the different neoplastic conditions and reconstruction skin surgery, surgery of the Respiratory system, Gastro-intestinal surgery, and surgery of the kidneys and urology system, as well as urogenital surgery. The module is normally only presented in alternate years.

CHV 704 Surgery: Horses 704

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

Advanced theoretical study of equine surgery.

CHV 705 Surgery: Small Animals 705

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

Applicable aspects of small animal orthopaedic surgery (fractures and joints), spinal surgery and oromaxillo-facial surgery. The module extends over a period of one year. Approximately 15 lectures/group discussion are presented every third week on Wednesday mornings and a computer based of PPT presentations by the lecturer or students of each surgical conditions and the presentation of two case reports. The module is normally only presented in alternate years.

CHV 803 Surgery 803

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 562

Module content:

Advanced theoretical, practical and experiential module in small animal surgery.

CHV 804 Surgery 804

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 532

Module content:

Advanced theoretical, practical and experiential module in equine surgery.

CHV 892 Mini-dissertation: Small animal surgery 892

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 188

CHV 894 Mini-dissertation: Equine surgery 894

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 178

CLP 410 Clinical pathology 410

Academic organisation: Companion Animal Clinical Studies

Contact time: 3 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 7

Module content:

Diagnosis and treatment of anaemia, polycythemia, leukocyte kinetics, lymphohaemopoietic neoplasia; diagnosis and treatment of haemostatic abnormalities; diagnostic use of serum biochemistry, faecal and blood tests, urinalysis; cytology.

CVP 200 Surgical nursing 200

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 3: 6 lpw Block 4: 200 clinic sessions

Period of presentation: Year

Language of tuition: English

Credits: 38

Module content:

The classification, complications and treatment of inflammation, wounds, bleeding, fractures and dislocation. Healing of wounds. Healing of different types of tissue. Surgical terminology. Examining a traumatised patient. Ocular emergencies. General surgical conditions and procedures of the thorax, abdomen, head and neck, skin, vertebral column and motor system. Nutrition of surgical patients. Surgical nursing of companion and production animals. Bandaging large and small animals. Dental hygiene. Physiotherapy. Pre-operative and post-operative nursing. Lectures offered by various departments.

DIM 400 Diagnostic imaging 400

Academic organisation: Companion Animal Clinical Studies

Contact time: 27 ppy 3 lpw (Sem1) 2 lpw (Sem2)

Period of presentation: Year

Language of tuition: English

Credits: 17

Module content:

Principles of diagnostic imaging; diagnostic imaging of the abdomen, thorax, head, appendicular system and vertebral column in dogs and cats; diagnostic imaging of the appendicular system in horses and production animals.

DIM 781 Radiology: Dogs and cats 781

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 39

Module content:

Advanced study of radiology of dogs and cats. The module extends over a period of one year. Approximately 18 lectures/group discussions are presented fortnightly on Wednesday mornings. Training is done mainly by means of practical interpretation of radiographic images and the presentation of 2 case reports. The pathophysiology, diagnosis and prognosis of pathological conditions are discussed, as well as ways in which this field of study is linked to other diagnostic methods in order to confirm a diagnosis. The module is normally only presented in alternate years.

DIM 782 Non-radiological diagnostic imaging of dogs and cats 782

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

Advanced study in non-radiological diagnostic imaging of dogs and cats. The module extends over a period of about 8 months. Approximately 12 lectures/group discussions are presented fortnightly on Wednesday mornings. Approximately 76% is allocated to diagnostic ultrasound; 8% to MRI, CT and Scintigraphy each respectively. Training is done mainly by means of interactive lectures and discussions and practical interpretation

of a variety of images and the presentation of two case reports. The pathophysiology, diagnosis and prognosis of pathological conditions are discussed, as well as ways in which this field of study is linked to other diagnostic methods in order to confirm a diagnosis. The module is normally only presented in alternate years.

DIM 783 Radiology: Horses 783

Academic organisation: Companion Animal Clinical Studies

Contact time: 1 dpw 1 lpw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

Advanced study of radiology of horses. The module extends over a period of one year. Approximately 16 lectures/group discussions are presented fortnightly on Wednesday mornings. Training is done mainly by means of practical interpretation of radiographic images and the presentation of two case reports. The pathophysiology, diagnosis and prognosis of pathological conditions are discussed as well as ways in which this field of study relates to other diagnostic methods used to confirm a diagnosis. The module is normally only presented in alternate years.

DIM 784 Non-radiological diagnostic imaging of horses 784

Academic organisation: Companion Animal Clinical Studies

Contact time: 1 ppw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

Advanced study in non-radiological diagnostic imaging of horses. The module extends over a period of about 9 months. Approximately 13 lectures/group discussions are presented fortnightly on Wednesday mornings. Approximately 80% is allocated to diagnostic ultrasound; 5% to MRI, 5% to CT and 10% to Scintigraphy. Training is done mainly by means of interactive lectures and discussions and practical interpretation of a variety of images and the presentation of two case reports. The pathophysiology, diagnosis and prognosis of pathological conditions are discussed, as well as ways in which this field of study is linked to other diagnostic methods in order to confirm a diagnosis. The module is normally only presented in alternate years.

DIM 870 Diagnostic imaging 870

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 325

Module content:

Advanced study of small and large animal radiography, radiology, ultrasonography, scintigraphy, magnetic resonance imaging and computed tomography: with a view to specialisation. Literature study and a minimum of 90 weeks practical work are also required.

DIM 890 Mini-dissertation: Diagnostic imaging 890

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 109

DPT 400 Diagnostic pathology 400

Academic organisation: Paraclinical Sciences

Contact time: 2 lpw S1 2 lpw S2 30 ppy

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Planning and conducting necropsies; making a diagnosis; fatal conditions and diseases of dogs, cats, pigs, poultry and horses.

DPT 620 Diagnostic pathology 620

Academic organisation: Paraclinical Sciences

Contact time: Block 2: 3 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 6

Module content:

Application of practical procedures in post mortem techniques.

ECS 601 Equine clinical studies 601

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 1: 8 lpw Block 2: 9 lpw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

The diagnosis, treatment and control of diseases of the horse. Integration of aspects of clinical veterinary science, including components of contagious and parasitic diseases, clinical diagnostics, clinical pathology, diagnostic imaging, therapeutics, medicine, surgery, reproduction and pathology. Lectures are offered by different departments.

ECS 650 Applied equine clinical studies 650

Academic organisation: Companion Animal Clinical Studies

Contact time: 9.9 ppw

Period of presentation: Year

Language of tuition: English

Credits: 42

Module content:

Practical instruction on module matter dealt with in Equine clinical studies 300.

EIP 811 Ectoparasitic infestations and protozoal infections: Companion animals 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 10

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis, control and prevention of selected ectoparasitic infestations and protozoal infections in companion animals (dogs, cats, and equids) in the Afrotropical region.

EIP 813 Ectoparasitic infestations and protozoal infections: Ruminants 813

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 10

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis, control and prevention of

selected ectoparasitic infestations and protozoal infections in domestic ruminants in the Afrotropical region

EIP 814 Ectoparasitic infestations and protozoal infections: Wildlife 814

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis, control and prevention of selected ectoparasitic infestations and protozoal infections in wildlife in the Afrotropical region.

EPL 851 Basic veterinary epidemiology 851

Academic organisation: Production Animal Studies

Prerequisite: A BVSc or equivalent qualification. Non-veterinary graduates will be considered under exceptional circumstances. Recommended: Grade 12 Mathematics.

Contact time: 1 opw 1 wbpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 10

Module content:

An introductory module in veterinary epidemiology designed to provide a sound foundation in epidemiology that can be applied in practice and upon which further studies can be built. The module covers aspects of population medicine, disease outbreak investigation, clinical epidemiology, experimental studies, observational studies, surveys, basic analytical tools and diagnostic tests

EPL 852 Biostatistics in veterinary science 852

Academic organisation: Production Animal Studies

Prerequisite: BVSc or equivalent qualification and Grade 12 Mathematics.

Contact time: 2 spw

Period of presentation: Semester 1

Language of tuition: English

Credits: 20

Module content:

This module provides the student with a foundation in basic statistical methods commonly used by postgraduate students in veterinary science. It covers statistical building blocks, confidence intervals, hypothesis testing, chi-square procedures, regression and correlation, paired and pooled t-tests, analysis of variance and non-parametric tests.

EPL 853 Analytical veterinary epidemiology 853

Academic organisation: Production Animal Studies

Prerequisite: EPI 851 and EPI 852

Contact time: 2 spw

Period of presentation: Semester 2

Language of tuition: English

Credits: 20

Module content:

This module provides the student with further knowledge and skills in veterinary epidemiology and an introduction to certain more advanced statistical methods commonly used in veterinary science, including adjustment for confounding, multiple linear regression, logistic regression and survival analysis, and will provide the basis for further studies and research involving these techniques.

EPL 855 Animal health information management 855

Academic organisation: Production Animal Studies

Contact time: 1 wbpw

Period of presentation: Semester 1 or Semester 2

Language of tuition: English

Credits: 5

Module content:

This module covers the principles and practice of the collection, entry, storage, management and processing of animal health-related data. It provides the knowledge necessary to be able to effectively work with data in veterinary epidemiology and animal health research.

EPL 856 Scientific reasoning in veterinary epidemiology 856

Academic organisation: Production Animal Studies

Contact time: 1 wbpw

Period of presentation: Year

Language of tuition: English

Credits: 5

Module content:

This module covers, using practical examples, the processes of scientific reasoning and critical thinking applicable to veterinary epidemiology, and equips the student to use clear lines of reasoning in developing and testing hypotheses and making inferences, and to be able to critically evaluate information presented in the literature.

EPL 890 Mini-dissertation: Veterinary epidemiology 890

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 120

Module content:

Mini-dissertation

EQM 410 Equine medicine and surgery 410

Academic organisation: Companion Animal Clinical Studies

Contact time: 7 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 14

Module content:

Lameness: disorders of the front and hind limb; disorders of the spine; fractures and emergencies; muscular disorders; insurance examinations; identification, diagnosis and treatment of important cardiovascular, gastrointestinal, nervous system, urinary, skin, multi-systemic and respiratory disorders/diseases; hydration status and correction of fluid imbalances; the equine neonate: clinical examination, diagnostic tests and selected disorders.

FAK 120 Pharmacology 120

Academic organisation: Paraclinical Sciences

Contact time: 4 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 7

Module content:

Fundamental principles of Pharmacology required by veterinary nurses. The basic study of groups of functional, systemic and chemotherapeutic drugs used in domestic animals. Regulatory requirements, control and use of veterinary medicines by veterinary nurses.

FAK 708 Drugs used in wildlife and exotic species 708

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

Wildlife clinical pharmacology: Fundamentals of pharmacology in wildlife, theoretical and practical training of drugs used in the immobilisation, capture, handling and translocation of wild animals, general pharmacotherapies applied in wildlife; chemical reproductive manipulation of wildlife and drugs used in some unusual species.

FAK 711 Clinical ophthalmic pharmacology and therapeutics 711

Academic organisation: Paraclinical Sciences

Contact time: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 8

Module content:

Advanced clinical pharmacological studies required for the rational use of veterinary medicinal products in the treatment and management of ocular conditions. Principles of rational use of veterinary medicinal products, applied pharmaceuticals, pharmacokinetics, pharmacodynamics, pharmacotherapeutics, specific medicinal products, chemotherapeutics and adverse reaction of drugs used in ocular conditions.

FAK 800 Pharmacology 800

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 344

Module content:

Advanced theoretical, practical and experiential training in clinical or industrial pharmacology.

FAK 876 Advanced fundamentals of pharmacology 876

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

Scope and historical development of veterinary pharmacology. Veterinary pharmaceuticals and formulation theory. Pharmacokinetic theory, pharmacokinetic analysis and modelling. Bioequivalence theory and evaluation. Physicochemical and molecular basis of drug action. Dose response and calculation of dose response parameters. Pharmacological modulation of organ and body functions. Molecular basis of action and pharmacological effects of chemotherapeutic agents. Adverse drug reactions, interactions and pharmacovigilance. Comparative species pharmacology, pharmacogenomics and pharmacogenetics. Background on complementary medicines. Fundamentals of pharmacological research.

FAK 877 Clinical pharmacology 877

Academic organisation: Paraclinical Sciences

Contact time: 1 lpw

Period of presentation: Year

Language of tuition: English

Credits: 26

Module content:

Advanced veterinary pharmacology including pharmaceuticals, pharmacokinetics, pharma-

cotherapeutics and pharmacodynamics. Clinical pharmacology relevant to a selected domesticated animal species in the area of specialization (capita selecta), including species-specific therapeutic objectives and rational pharmacotherapy; specialised drug therapy pertaining to that species; drug use and control and adverse drug reactions.

FAK 895 Mini-dissertation: Pharmacology 895

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 126

FSL 104 Physiology 104

Academic organisation: Anatomy and Physiology

Contact time: Block 1: 3 ppw Block 1: 8 lpw Block 2: 3 lpw Block 2: 3 ppw

Period of presentation: Year

Language of tuition: English

Credits: 22

Module content:

An elementary module in the physiology and physiological chemistry of the most important physical systems of domestic animals.

FSL 713 Physiology 713

Academic organisation: Anatomy and Physiology

Prerequisite: Prospective students must pass an entrance test during November of the preceding year to be admitted to the module.

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Continuation of tuition at an advanced level, with the emphasis on applied and pathophysiology. Admission to the module must be discussed with the head of department during June of the preceding year.

FSL 787 Physiology 787

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 25

Module content:

Pathophysiology of clinical syndromes (capita selecta).

FSL 788 Physiology 788

Academic organisation: Anatomy and Physiology

Contact time: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 25

Module content:

Applied Physiology of a selected topic (capita selecta).

GEN 702 Small animal medicine 702

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

Advanced theoretical study in small animal medicine. Study of the conditions of internal organs is not included in this module. The module may include selected practical aspects.

GEN 703 Equine medicine 703

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

Advanced theoretical study in equine medicine. The module may include selected practical aspects.

GEN 707 Small animal medicine 707

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 37

Module content:

Advanced theoretical study in small animal medicine specifically applicable to conditions of the internal organs. The module may include selected practical aspects.

GEN 709 Small animal behavioural medicine 709

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

Broad-based theoretical and selected practical training in small animal behavioural medicine aimed at the provision of a high standard of clinical services in aspects of small animal behavioural medicine.

GEN 802 Equine medicine 802

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 356

Module content:

Advanced training in organ, metabolic and deficiency diseases of equines. Pathophysiology, diagnostic and treatment methods are emphasised.

GEN 803 Small animal medicine 803

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 396

Module content:

Advanced theoretical and practical training in organ, metabolic and deficiency diseases of small animals. Pathophysiology, diagnostic and treatment methods are emphasised.

GEN 891 Mini-dissertation: Bovine medicine 891

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 115

GEN 892 Mini-dissertation: Equine medicine 892

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 120

GEN 893 Mini-dissertation: Small animal medicine 893

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 132

GNS 320 General surgery 320

Academic organisation: Companion Animal Clinical Studies

Contact time: 1 ppw 3 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 7

Module content:

General principles of surgery, applicable to all species. Principles of surgical asepsis, disinfection and sterilisation, suture materials and patterns, surgical haemostasis, traumatology, wound healing, wound infection, wound management, small animal bandages and surgical instrumentation.

GOP 300 General and organ pathology 300

Academic organisation: Paraclinical Sciences

Contact time: 7 lpw

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

Definitions and common causes of basic lesions in tissues and organs. Pathogenesis of basic lesions including, reversible cell injury, pigmentations, necrosis, apoptosis, circulatory disturbances, inflammation, immunopathology, growth disturbances and neoplasia. Organ pathology (with the emphasis on macroscopic changes and pathogenesis) of the various organ systems of the body.

GSK 708 Reproductive physiology of animals 708

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Students will gain advanced theoretical knowledge of general reproductive endocrinology and physiology of animals. It includes detailed knowledge and application of the structures of different hormone groups, forms of storage, transportation, methods of action and secretion control mechanisms: hormonal control of female reproductive cycles; fertilisation, sexing, gestation, pathogenesis of teratogenic deviations and partus, the puerperal period and re-implantation; male reproductive endocrinology and physiology; examining of fresh and frozen semen, including advanced methods; the use of hormone profiles to monitor gestation and cycles, and artificial breeding.

GSK 709 Reproductive biology: Cattle 709

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

Includes the physiology and endocrinology of puberty in the heifer, the oestrous cycle, pregnancy, parturition, the puerperium, as well as that of the foetus and the neonate. Also included are the physiology and endocrinology of the bull, more specifically that of puberty, spermatogenesis, the scrotum, the accessory sex glands, libido, erection, coitus, sperm and semen. Also included are certain aspects of reproductive biotechnology,

namely the biotechnical aspects of collection, examination and freezing of semen and embryos, embryo transfer and in vitro fertilisation.

GSK 710 Clinical reproduction: Cattle 710

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

Causes, pathogenesis, control, treatment and prevention of diseases and malfunctions of reproduction in cattle, as well as the evaluation of males and females for breeding soundness. Also included are certain aspects of assisted reproduction and reproductive biotechnology, such as control of the oestrous cycle and parturition. A veterinary perspective (indications, limitations, current and future possibilities, and methods) on those reproductive biotechnologies included in GSK 709.

GSK 711 Reproductive biology: Small stock 711

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Includes the physiology and endocrinology of puberty in the ewe or doe, as well as that of seasonality of reproduction, the oestrous cycle, pregnancy, parturition, the puerperium, and that of the foetus and the neonate. Physiology and endocrinology of the ram, more specifically that of puberty, spermatogenesis, the scrotum, the accessory sex glands, libido, erection, coitus, sperm and semen. Also included are certain aspects of reproductive biotechnology, namely the biotechnical aspects of collection, examination and freezing of semen and embryos.

GSK 712 Clinical reproduction: Small stock 712

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Causes, pathogenesis, control, treatment and prevention of diseases and malfunctions of reproduction in sheep and goats, as well as the evaluation of males and females for breeding soundness. Also included are certain aspects of assisted reproduction and reproductive biotechnology, such as control of the oestrous cycle and parturition. A veterinary perspective (indications, limitations, current and future possibilities, and methods) on those reproductive biotechnologies included in GSK 711.

GSK 713 Reproductive biology: Horses 713

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Includes the physiology and endocrinology of puberty in the mare, as well as that of seasonality of reproduction, the oestrous cycle, pregnancy, parturition, the puerperium, and that of the foetus and the neonate. Also included are the physiology and endocrinology of the stallion, more specifically that of puberty, spermatogenesis, the scrotum, the accessory sex glands, libido, erection, coitus, sperm and semen. Also included are certain aspects of reproductive biotechnology, namely the biotechnical aspects of collection, examination and freezing of semen and embryos and embryo transfer.

GSK 714 Clinical reproduction: Horses 714

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Causes, pathogenesis, control, treatment and prevention of diseases and malfunctions of reproduction in horses, as well as the evaluation of males and females for breeding soundness. Also included are certain aspects of assisted reproduction and reproductive biotechnology, such as control of the oestrous cycle and parturition. A veterinary perspective (indications, limitations, current and future possibilities, and methods) on those reproductive biotechnologies included in GSK 713.

GSK 715 Reproductive biology: Dogs and cats 715

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Includes the physiology and endocrinology of puberty in the bitch and queen, the seasonality of reproduction in the queen, the oestrous cycle, pregnancy, parturition, the puerperium, and that of the foetus and the neonate. Also included are the physiology and endocrinology of the dog and tomcat, more specifically that of puberty, spermatogenesis, the scrotum, the accessory sex glands, libido, erection, coitus, sperm and semen. Also included are certain aspects of reproductive biotechnology, namely the biotechnical aspects of collection, examination and freezing of semen.

GSK 716 Clinical reproduction: Dogs and cats 716

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Causes, pathogenesis, control, treatment and prevention of diseases and malfunctions of reproduction in dogs and cats, as well as the evaluation of males and females for breeding soundness. Also included are certain aspects of assisted reproduction and reproductive biotechnology, such as control of the oestrous cycle and parturition. A veterinary perspective (indications, limitations, current and future possibilities, and methods) on those reproductive biotechnologies included in GSK 715, as well as embryo transfer and in vitro fertilisation.

GSK 717 Reproductive biology: Wildlife 717

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Physiology and endocrinology of reproduction and reproductive patterns of wildlife, the monitoring of their reproduction, the development of breeding programmes for them and contraception. Also included is a theoretical overview of the threats to wildlife reproduction posed by environmental pollutants, diseases and drugs.

GSK 718 Clinical reproduction: Wildlife 718

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Causes, pathogenesis, diagnosis, treatment, control, and prevention of diseases and malfunctions of reproduction in wildlife, as well as the evaluation of males and females for breeding soundness. Also included are certain aspects of assisted reproduction, reproductive biotechnology and contraception.

GSK 800 Reproduction 800

Academic organisation: Production Animal Studies

Prerequisite: Modules GSK 801 to GSK 804 are prerequisites for GSK 800 and they may be done concurrently with the GSK 800 module.

Contact time: Sixty weeks of experiential training under supervision, divided over 2 to 3 years.

Period of presentation: Year

Language of tuition: English

Credits: 366

Module content:

This module offers broad-based, in-depth experiential training that may be theoretical and practical on animal reproduction and is a requirement for the MMedVet (Reproduction) degree. Reproduction, as taught during the undergraduate veterinary curriculum and modules GSK 801 to GSK 804 serves as basis for advanced training in obstetrics, gynaecology, andrology and assisted reproduction of animals.

GSK 801 Reproductive physiology 801

Academic organisation: Production Animal Studies

Contact time: 10 Seminars over a period of 2 weeks

Period of presentation: Quarter 1

Language of tuition: English

Credits: 20

Module content:

This module will provide advanced theoretical study in and critical appraisal of the principles, concepts, current application and potential developments in selected aspects of reproductive physiology of animals.

GSK 802 Assisted reproduction 802

Academic organisation: Production Animal Studies

Contact time: 10 Seminars over a period of 2 weeks

Period of presentation: Quarter 2

Language of tuition: English

Credits: 30

Module content:

This module will provide advanced theoretical study in and critical appraisal of the principles, concepts, current applications and potential developments in selected aspects of assisted reproduction in animals.

GSK 803 Female infertility 803

Academic organisation: Production Animal Studies

Contact time: 10 Seminars over a period of 2 weeks

Period of presentation: Quarter 3

Language of tuition: English

Credits: 20

Module content:

This module will provide advanced theoretical study in and critical appraisal of the principles, concepts, current applications and potential developments pertaining to selected aspects of infertility in female animals.

GSK 804 Male breeding soundness and andrology 804

Academic organisation: Production Animal Studies

Contact time: 10 Seminars over a period of 2 weeks

Period of presentation: Quarter 4

Language of tuition: English

Credits: 20

Module content:

This module will provide advanced theoretical study in and critical appraisal of the principles, concepts, current applications and potential developments pertaining to selected aspects of breeding soundness and andrology in male animals.

GSK 805 Reproduction capita selecta 805

Academic organisation: Production Animal Studies

Contact time: 5 Seminars per week over a period of 4 weeks

Period of presentation: Year

Language of tuition: English

Credits: 20

Module content:

This module will provide advanced theoretical study in and critical appraisal of the principles, concepts, current applications and potential developments pertaining to selected aspects of reproduction in animals. This module includes selected aspects from two or more of the modules GSK 801 to GSK 804. The purpose of this module is to provide Masters degree students doing a course other than the MSc Option: Reproduction or the MMedVet (Gyn) the opportunity to do an elective module in a limited selection of aspects of reproduction.

GSK 891 Mini-dissertation 891

Academic organisation: Production Animal Studies

Contact time: 10 Seminars over a period of 2 weeks

Period of presentation: Year

Language of tuition: English

Credits: 90

Module content:

The aim of the module is to let the student experience and work through the scientific research process, starting with the formulation of a research question in the field of animal reproduction and ending with reporting the research in a mini-dissertation and an article of sufficient merit to submit to an approved scientific journal.

GSV 120 Reproductive nursing 120

Academic organisation: Production Animal Studies

Contact time: Block 2: 2 lpw Block 2: 5 ppw

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

Elementary reproductive physiology and endocrinology of male and female domestic animals. The oestrus cycle. Artificial insemination of the cow and bitch. Impregnation. The physiology of gestation and care of the animal during gestation. Methods of gestation diagnosis. The normal process of parturition and care of the animal during parturition. Elementary obstetrics. The puerperium. Care of the new-born. Elementary principles of collection, examination and storage of semen. The principles of oestrus control. Sterility of male and female animals. Reproductive emergencies (including administration of epidural anaesthetic and correction of simple abnormal presentations). The principles of herd health programmes. Laboratory techniques regarding diagnosis and reproductive anomalies.

GSV 200 Reproductive nursing 200

Academic organisation: Production Animal Studies

Contact time: Block 4: 80 clinic sessions

Period of presentation: Semester 2

Language of tuition: English

Credits: 11

Module content:

Duties in the reproductive clinic. Scheduled practical training and participation in herd health programmes.

HEI 811 Helminth infections: Companion animals 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

A study of the epidemiology, clinical signs, pathology, diagnosis, socioeconomic effects and control/eradication of the economically important helminth infections of companion animals (dogs and cats).

HEI 812 Helminth infections: Equids 812

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

A study of the epidemiology, clinical signs, pathology, diagnosis, socioeconomic effects and control/eradication of the economically important helminth infections of domestic equids.

HEI 813 Helminth infections: Ruminants 813

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 10

Module content:

A study of the epidemiology, clinical signs, pathology, diagnosis, socioeconomic effects and control/eradication of the economically important helminth infections of domestic ruminants.

HEI 814 Helminth infections: Wildlife 814

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 10

Module content:

A study of the epidemiology, clinical signs, pathology, diagnosis and control/eradication of helminth infections of the more common wildlife species.

HIS 700 Histology 700

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 20

Module content:

An in-depth comparative study of light and electron microscopic histology of domestic animals, birds and selected wildlife species. Consult the head of department for details of modules for the master's degree programme.

IVD 300 Introductory veterinary diagnostics 300

Academic organisation: Production Animal Studies

Contact time: 1 lpw 1 ppw (for 5 weeks) 1 opw (for 1 week)

Period of presentation: Year

Language of tuition: English

Credits: 28

Module content:

Introduction to common diagnostic procedures used in key domestic animals including clinical examination, clinical pathology, pain assessment and sedation in relation to clinical examination, basic epidemiological concepts, basic diagnostic imaging modalities and radiation safety.

KDK 800 Clinical laboratory diagnostics 800

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Advanced training in veterinary clinical laboratory diagnostics including theoretical as well as practical knowledge of clinical biochemistry, clinical endocrinology, haematology, cytology, capita selecta aspects of: diagnostic bacteriology; diagnostic virology; diagnostic immunology; diagnostic protozoology; diagnostic toxicology and diagnostic parasitology; quality control; applied biometry; electronics/optics of laboratory equipment, and computer use.

KDK 890 Mini-dissertation: Clinical laboratory diagnostics 890

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

KKS 780 Small stock herd health 780

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

A year module based on farm visits, discussions, seminars and case studies. The module will enable students to integrate and apply knowledge so that health and production problems can be identified and solved on a flock basis and health status and production effectiveness of small stock flock can be raised from a holistic and cost-effective viewpoint.

KKS 800 Small stock herd health 800

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 360

Module content:

Specialised training based on farm visits, discussions, seminars and case studies. Specialised integration and application of knowledge so that health and production problems can be identified and solved on a herd basis, and health status and production effectiveness of small stock herds can be raised from a holistic and cost-effective viewpoint, within a broad spectrum of sheep and goat-farming systems and feedlots.

KKS 890 Mini-dissertation: Small stock herd health 890

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 120

KPA 701 Clinical pathology 701

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

Advanced study in clinical pathology including enzymology, cytology, haematology as well as clinical pathology of the kidney.

KPA 702 Clinical pathology 702

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 31

Module content:

Advanced study in clinical pathology including blood-gas and acid-base balance, gastro-enterology, haemostasis, diagnostic indices and principles.

LAS 700 Laboratory animal science 700

Academic organisation: Paraclinical Sciences

Prerequisite: VRM 811

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

The biology of laboratory animals, their management and use as models in bio-medical research. The aim is to extend the activities concerning the care and use of laboratory animals for research, training and testing. Further to affirm the concept on which the modern practice of experimenting with animals is based, to take into consideration the controversy evoked in the climate of animal rights. The special professional role required of the veterinary and paraveterinary professions to enhance humane practice with regard to animal experiments as well as the promotion of a productive scientific effort in the biomedical sciences.

LPK 811 Laboratory practice 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 20

Module content:

A study of veterinary diagnostic laboratory management. The emphasis is on the managerial skills and knowledge that the head of a laboratory will require to manage such a laboratory in terms of its daily activities, quality assurance and safety of personnel.

LTG 120 Laboratory technique 120

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 2: 6 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 11

Module content:

*Lectures offered by various departments.

Maintenance and handling of laboratory equipment. Collecting and dispatching samples. Elementary haematology. Preparation and examination of skin scrapings, excretion samples, bacteriological and urine samples, as well as elementary clinical chemistry.

MBI 111 Microbiology 111

Academic organisation: Veterinary Tropical Diseases

Contact time: 2 ppw 5 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 10

Module content:

Elementary bacteriology, virology, immunology and epidemiology. Theory of the effect of antiseptic agents. Introduction to the recognition of the most important infectious diseases of domestic animals.

MVP 120 Medical nursing 120

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 2: 3 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 6

Module content:

Theoretical aspects of intensive care nursing, including fluid therapy, cardiovascular and pulmonary resuscitation, nutritional therapy, recognition and treatment of shock. Monitoring of patients.

MVP 200 Medical nursing 200

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 3: 6 lpw Block 4: 473 clinic sessions

Period of presentation: Year

Language of tuition: English

Credits: 74

Module content:

Emergency treatment and nursing care of companion animal and production animal patients. Medical nursing and emergency management of companion and production animals. Assisting with and performing diagnostic procedures. Lectures are offered by the departments of Companion Animal Clinical Studies and Production Animal Studies.

NAR 200 Anaesthesiology 200

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 3: 3 lpw Block 4: 80 clinic sessions

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

The physiology and signs of anaesthesia. Anaesthetics, methods and apparatus of anaesthesia. Anaesthetising and monitoring anaesthesia. Preparation and after-care. Anaesthetic emergencies.

OFM 700 Ophthalmology 700

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

A year module consisting of eight theoretical and two practical sessions on ophthalmology of domestic animals (large and small animals). The module covers the anatomy and physiology of the eye and its adnexa, examination techniques and aids, ocular therapeutics and treatment techniques, surgical and non-surgical conditions of the orbit, eyelids, third eyelid, conjunctiva, lachrymal system, cornea, sclera, anterior chamber, uvea lens, vitreous and retina, and hereditary diseases. Practical work includes the use of instrumentation and accessories during examination and surgical procedures.

OFM 800 Ophthalmology 800

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 400

Module content:

An advanced theoretical, practical and experiential module in ophthalmology of domestic animals (large and small animals).

OFM 890 Mini-dissertation: Ophthalmology 890

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 150

PAR 120 Parasitology 120

Academic organisation: Veterinary Tropical Diseases

Contact time: Block 2: 4 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 8

Module content:

Elementary helminthology, ectoparasitology and protozoology. Theoretical and practical studies on the most important parasites of domestic animals, the diseases they cause or transmit and methods to control them.

PAT 700 Pathology 700

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 36

Module content:

General pathology for students who plan to take pathology as special field of study for MMedVet.

PAT 702 Pathology: Dogs and cats 702

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Diagnostic pathology of the diseases of dogs and cats.

PAT 703 Pathology: Pigs 703

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Diagnostic pathology of the diseases of pigs.

PAT 704 Pathology: Horses 704

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Diagnostic pathology of the diseases of horses.

PAT 705 Pathology: Ruminants 705

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Diagnostic pathology of the diseases of ruminants.

PAT 707 Necropsy technique and interpretation 707

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 28

Module content:

An advanced module in necropsy techniques, interpretation and specimen collection.

PAT 708 Ophthalmological pathology 708

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Macroscopic and microscopic pathology of the diseases of the eyes of domestic animals.

PAT 709 Reproductive pathology 709

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

General and specific diseases of the reproductive system of domestic animals.

PAT 771 Mechanisms of disease 771

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 16

Module content:

Mechanisms of disease (for Medicine students).

PAT 800 Pathology 800

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 272

Module content:

Advanced diagnostic pathology of production animals, domestic animals, wildlife, laboratory animals, fish and poultry.

PAT 806 Pathology: Wildlife 806

Academic organisation: Paraclinical Sciences

Contact time: 1 dpw

Period of presentation: Year

Language of tuition: English

Credits: 28

Module content:

Diagnostic pathology of the diseases of wildlife.

The emphasis of the module is on practical diagnostic pathology (including forensic pathology) and its outcomes will enable a veterinarian to investigate disease and the cause of death in wildlife. The approach will emphasise the following: After conducting a necropsy, a diagnosis is finalised by also considering the results of other diagnostic tests and ancillary data; when it is not possible to make a final diagnosis, the formulation of a list of differential diagnoses and a strategy to resolve the problem; compiling interim and final report(s) that are scientifically sound, presentable to a court of law and reflect a degree of professionalism that is commensurate with a professional person. The theoretical component includes selected information dealing with incidental findings and 'non-lesions', species-specific infectious diseases, and non-infectious diseases.

PAT 890 Mini-dissertation: Pathology 890

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 90

PFK 800 Laboratory animal science 800

Academic organisation: Paraclinical Sciences

Prerequisite: VRM 811 and a research project.

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

An advanced module in the role of the veterinarian in laboratory animal medicine and practical aspects relating to the promotion of a productive scientific effort in the biomedical sciences.

PFK 890 Mini-dissertation: Laboratory animal science 890

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 127

PHE 601 Veterinary public health and applied epidemiology 601

Academic organisation: Paraclinical Sciences

Contact time: Block 1: 6 lpw Block 2: 5 lpw

Period of presentation: Year

Language of tuition: English

Credits: 21

Module content:

The role of the veterinary surgeon in veterinary public health. Veterinary food hygiene and nutrition-related diseases of importance regarding food of animal origin. Meat and milk hygiene; all necessary measures, including legislation, to ensure that food of animal origin is safe, sound and wholesome at all stages of production and manufacture, up to the consumer. Veterinary aspects of environmental health. Zoonoses in veterinary science. Introduction of the use of laboratory animals in biomedical research and relevant aspects relating to animal welfare. Introduction to veterinary epidemiology and the development of basic principles by way of case studies. Introduction to the social aspects of the human-

animal interaction by protecting and promoting human health in communities, veterinary extension and risk communication.

PHE 650 Applied veterinary public health 650

Academic organisation: Paraclinical Sciences

Contact time: 10 ppw

Period of presentation: Year

Language of tuition: English

Credits: 18

Module content:

Practical instruction and applied consideration of the basic principles of subject areas dealt with in PHE 601.

PHP 420 Porcine health and production 420

Academic organisation: Production Animal Studies

Contact time: 2 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

The pig industry; breeding and husbandry; nutrition and related disorders; important diseases; biosecurity; miscellaneous conditions.

PHP 601 Porcine health and production 601

Academic organisation: Production Animal Studies

Contact time: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 11

Module content:

Theoretical training in pig parasitic and infectious diseases, herd health and management programmes to integrate and apply the knowledge of relevant veterinary courses with a view to identifying and solving problems on a herd basis. Further to improve the health status and production effectiveness of intensive and extensive piggeries from a holistic and cost-effective viewpoint. Departments involved in lectures: Anatomy and Physiology, Production Animal Studies and Veterinary Tropical Diseases.

PHP 650 Applied porcine health and production 650

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 6

Module content:

Practical instruction on module matter dealt with in Porcine health and production 601.

PHP 800 Poultry health and production 800

Academic organisation: Production Animal Studies

Prerequisite: This module is a prerequisite for the MMedVet(Altil) degree.

Period of presentation: Year

Language of tuition: English

Credits: 418

Module content:

Advanced training in poultry health and production. (Master's level)

PHP 871 Poultry health and production 871

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 32

Module content:

Advanced training in poultry health and production systems. The emphasis of the module is on practical health management and will enable a veterinarian to control disease in poultry production systems. Compile interim and final report(s) that are scientifically sound, and reflect a degree of professionalism that is commensurate with a professional person.

PLY 420 Poultry health and production 420

Academic organisation: Production Animal Studies

Contact time: 2 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

The poultry industry; breeding and husbandry; nutrition and related disorders; important diseases; biosecurity; miscellaneous conditions; zoonosis.

PLY 601 Poultry health and production 601

Academic organisation: Production Animal Studies

Contact time: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 11

Module content:

Theoretical training in poultry parasitic and infectious diseases, flock health and management programmes to integrate and apply relevant veterinary knowledge with a view to identifying and solving problems on a flock basis. Further to improve the health status and production effectiveness of intensive and extensive poultry flocks from a holistic and cost-effective viewpoint.

Departments involved in lectures: Anatomy and Physiology, Production Animal Studies and Veterinary Tropical Diseases.

PLY 650 Applied poultry health and production 650

Academic organisation: Production Animal Studies

Contact time: 1.7 ppw

Period of presentation: Year

Language of tuition: English

Credits: 7

Module content:

Practical instruction on module matter dealt with in Poultry health and production 601.

PVT 890 Mini-dissertation: Poultry diseases 890

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

PVV 700 Poultry nutrition 700

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: Both Afr and Eng

Credits: 20

Module content:

Commercial poultry nutrition.

RAV 200 Radiography 200

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 3: 3 lpw Block 4: 48 clinic sessions

Period of presentation: Year

Language of tuition: English

Credits: 12

Module content:

Generating röntgen rays and their properties. Protective measures. Manipulating exposure factors. Positioning. Purpose and maintenance of accessories. Films, contrast media, development and evaluation of the quality of röntgen photographs. Basic principles of diagnostic ultrasonography.

RUM 801 Ruminant medicine 801

Academic organisation: Production Animal Studies

Prerequisite: A BVSc, a four year BSc in Agriculture (Animal Science), Microbiology, Zoology or an equivalent degree

Contact time: 1 dpw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

Advanced theoretical training in ruminant medicine with emphasis on the pathophysiology, diagnosis, treatment and control of non-infectious diseases, specifically applicable to conditions of the gastro-intestinal tract, liver, production diseases, cardiovascular system, respiratory system, nervous system, musculo-skeletal system, skin and appendages.

RUM 890 Ruminant Health 890

Academic organisation: Production Animal Studies

Prerequisite: A BVSc, a four year BSc in Agriculture (Animal Science), Microbiology, Zoology or an equivalent degree

Contact time: 20 Contact sessions

Period of presentation: Year

Language of tuition: English

Credits: 80

Module content:

Mini-dissertation

SAC 650 Applied small animal clinical studies 650

Academic organisation: Companion Animal Clinical Studies

Contact time: 33 ppw

Period of presentation: Year

Language of tuition: English

Credits: 139

Module content:

Practical tuition under supervision in the diagnosis, treatment and control of diseases of the dog and cat. Includes tuition after-hours and over weekends, public holidays and university recesses/vacations.

SAS 400 Small animal medicine and surgery 400

Academic organisation: Companion Animal Clinical Studies

Contact time: 9 lpw S1 12 lpw S2 21 ppy

Period of presentation: Year

Language of tuition: English

Credits: 50

Module content:

Patient assessment; therapeutic and monitoring plans for selected key critical situations;

identification, diagnosis and treatment of important cardiovascular, respiratory, gastrointestinal, liver, pancreas, peritoneal, kidney, urogenital, skin, endocrine, musculoskeletal, nervous system and eye conditions/diseases; multi-systemic conditions; dentistry; oncology; behaviour-related disorders and treatment, critical care and traumatology in dogs and cats; selected aspects of the handling, housing, nutrition, husbandry and diseases of cage birds, reptiles, small mammals, rabbits and chinchillas.

SID 811 Selected infectious diseases: Animal health management 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 25

Module content:

A theoretical study of general principles of animal health management including control/eradication of important infectious and parasitic diseases of livestock with special reference to sub-Saharan Africa.

SID 812 Selected infectious diseases: Cattle 812

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 25

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis and control/eradication of economically important infectious diseases of cattle particularly in Africa with special reference to transboundary diseases and diseases of importance at the wildlife/domestic animal interface.

SID 813 Selected infectious diseases: Companion animals 813

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 15

Module content:

A theoretical study of the epidemiology, clinical signs diagnosis and control of important infectious diseases of companion animals (dogs and cats).

SID 814 Selected infectious diseases: Equids 814

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 15

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis and control/eradication of economically important infectious diseases of equids.

SID 815 Selected infectious diseases: Pigs 815

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 15

Module content:

A theoretical study of the epidemiology, diagnosis and control/eradication of important infectious diseases of pigs.

SID 816 Selected infectious diseases: Small stock 816

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 25

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis and control/eradication of important infectious diseases of small stock with special reference to sub-Saharan Africa.

SID 817 Selected infectious diseases: Wildlife 817

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 20

Module content:

A theoretical study of the important infectious diseases of wildlife particularly at the interface with domestic animals in sub-Saharan Africa.

SSH 601 Small stock health and production 601

Academic organisation: Production Animal Studies

Contact time: 5 lpw

Period of presentation: Year

Language of tuition: English

Credits: 19

Module content:

Theoretical training in the infectious and parasitic diseases of small stock, aspects of medical, surgical and reproductive disorders affecting small stock. Applied nutrition and flock health.

SSH 650 Applied small stock health and production 650

Academic organisation: Production Animal Studies

Contact time: 2.8 ppw

Period of presentation: Year

Language of tuition: English

Credits: 12

Module content:

Practical instruction on course matter dealt with in SSH 601.

SSH 801 Small stock health 801

Academic organisation: Production Animal Studies

Contact time: 1 dpw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

The module content will be based on advanced theoretical training in small stock health with emphasis on principles of population health and production programmes, animal health economics, monitoring health and production. The module will enable students to integrate and apply knowledge so that health and production problems can be identified and solved on a flock basis and health status and production effectiveness of small stock flock can be raised from a holistic and cost effective viewpoint.

TBD 811 Tick-borne diseases: Companion animals 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis, control and prevention of the tick-borne protozoal and rickettsial diseases of dogs, cats and equids in the Afrotropical region.

TBD 813 Tick-borne diseases: Ruminants 813

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 15

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis, control and prevention of the tick-borne protozoal and rickettsial diseases of cattle, sheep and goats in the Afrotropical region.

TBD 814 Tick-borne diseases: Wildlife 814

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1

Language of tuition: English

Credits: 5

Module content:

A theoretical study of the epidemiology, clinical signs, diagnosis, control and prevention of the tick-borne protozoal and rickettsial diseases of wildlife in the Afrotropical region.

TCK 811 Ticks 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 30

Module content:

A theoretical and practical study of the identification, biology, ecology, life cycles, surveillance, sampling methods and control of the most important ticks of sub-Saharan Africa.

TOK 701 Toxicology: Basic and clinical veterinary toxicology 701

Academic organisation: Paraclinical Sciences

Contact time: 1 dpw

Period of presentation: Year

Language of tuition: English

Credits: 20

Module content:

Advanced studies in toxicological principles to enable students to develop proficiency in routine toxicological investigations, treatment, advice and diagnostic procedures.

TOK 702 Toxicology: Laboratory toxicity testing 702

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 8

Module content:

Advanced studies in laboratory toxicity testing and methodology.

TOK 703 Toxicology: Phyto- and mycotoxins 703

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Advanced training in the most important and well-known plant poisoning syndromes and mycotoxicoses as well as an introduction to newer and less important poisonous plants and mycotoxicoses.

TOK 704 Toxicology: Organic and inorganic poisons 704

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 20

Module content:

Advanced training on the most important and well-known zootoxicoses and organic and inorganic poisons. An introduction to less common organic and inorganic poisonings and other poisonous/venomous species of veterinary importance in Southern Africa.

TOK 800 Toxicology 800

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 270

Module content:

Advanced theoretical study and specialised practical training in aspects of veterinary toxicology.

TOK 890 Mini-dissertation: Toxicology 890

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 90

TOX 300 Veterinary toxicology 300

Academic organisation: Paraclinical Sciences

Contact time: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 14

Module content:

General principles of veterinary toxicology, with emphasis on the relevant factors and circumstances contributing to poisoning; advanced toxicology with regard to inorganic and organic compounds, fungi, cyanobacteria, plants, rodenticides, zootoxins, etc. Plant poisonings, mycotoxicoses and inorganic and organic poisonings are discussed under the following headings: epidemiology and species affected, description, identification, distribution and poisonous principle (if applicable), mechanism of action, toxicity, clinical signs, pathology (limited to the most important lesions); diagnosis, differential diagnosis, treatment and control of prevention. A pressed plant collection or a poisonous plant collection in digital format has to be submitted.

TPR 120 Theatre practice 120

Academic organisation: Companion Animal Clinical Studies

Contact time: 3 ppw Block 2: 3 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 6

Module content:

Theatre ethics. Basic principles of aseptic techniques. Types of surgical infections and their causes. Theatre management, hygiene and routine. Care of patients in the theatre. Lectures are offered by various departments.

TPR 200 Theatre practice 200

Academic organisation: Companion Animal Clinical Studies

Contact time: Block 3: 3 lpw Block 4: 50 clinic sessions

Period of presentation: Year

Language of tuition: English

Credits: 12

Module content:

Principles of sterilisation and disinfection. Surgical instruments, equipment, accessories and its maintenance and care. Suture materials and suturing. Professional responsibility.

TSE 811 Tsetse and trypanosomosis 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 45

Module content:

A theoretical and practical study of the identification, life cycle, biology, ecology, sampling methods, surveillance and control of tsetse flies and of the epidemiology, clinical and pathological aspects, diagnosis and control of animal trypanosomosis.

VBE 601 Veterinary business management and ethics 601

Academic organisation: Veterinary Tropical Diseases

Contact time: Semester 1: 3 lpw Semester 2: 2 lpw

Period of presentation: Year

Language of tuition: English

Credits: 9

Module content:

The module is divided into three areas of study, namely Veterinary law and ethics, Regulatory veterinary services and Practice management. The first section deals with statutes involving the veterinary profession, including labour law and the veterinarian's role in ethical decisionmaking with regards to their patients and animals used in research. The second section deals with control measures to prevent the spread of nationally and internationally recognised notifiable diseases and the certification of animals and animal products. The third section deals with business principles applicable to private veterinary practice, including general practice management, financial management and marketing.

VCA 200 Veterinary comparative anatomy 200

Academic organisation: Anatomy and Physiology

Contact time: Semester 1: 9 lpw Semester 2: 11 lpw

Period of presentation: Year

Language of tuition: English

Credits: 38

Module content:

Anatomical terminology, early embryonic development, central and autonomic nervous systems, cutaneous appendages and musculature, thoracic limb, pelvis, pelvic limb and the head of the major domestic species. Basic avian anatomy.

VEM 210 Veterinary microbiology 210

Academic organisation: Veterinary Tropical Diseases

Contact time: 3 lpw

Period of presentation: Quarter 1

Language of tuition: English

Credits: 5

Module content:

General introduction to microbiology, bacteriology and mycoplasmaology, pathogenesis of bacterial and mycoplasmal infections, rickettsiales and pathogenesis of infection, chlamydiales and pathogenesis of infection, general introduction to fungi and patho-

genesis of infection, general introduction to viruses and pathogenesis of infection, laboratory diagnosis of infectious diseases, normal flora of selected organ systems in domestic animals, sterilisation and disinfection.

VET 110 Veterinary ethology 110

Academic organisation: Companion Animal Clinical Studies

Contact time: 3 ppw Block 1: 8 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 16

Module content:

Introduction to veterinary ethology. Applied ethology of companion animals (dogs, cats, horses) and applied production animal ethology (cattle, sheep, pigs), including livestock, breeds, behaviour, breeding, feeding and care of each species. Lectures are offered by the departments of Companion Animal Clinical Studies and Production Animal Studies.

VET 200 Veterinary ethology and genetics 200

Academic organisation: Production Animal Studies

Contact time: 3 lpw 4 ppw

Period of presentation: Year

Language of tuition: English

Credits: 23

Module content:

The impact of genetics on function and management of key domestic species, husbandry of and common procedures performed on key domestic species, behavioural principles of key domestic species, handling skills for key domestic animals, key aspects of nutrition in companion animals, animal welfare and animal welfare legislation.

VET 800 Veterinary ethology 800

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

Module content:

Under revision and will not be offered during 2014.

VET 890 Mini-dissertation: Veterinary ethology 890

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 24

VIM 220 Veterinary immunology 220

Academic organisation: Veterinary Tropical Diseases

Contact time: 3 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 5

Module content:

Overview of the immune system, structure of antibodies, biosynthesis of immunoglobulins, antigen-receptor interaction, complement, the immune response, cellular immune responses, selected immunodiagnostic techniques, vaccinology, basic principles of immunity to infectious and parasitic diseases.

VIP 300 Veterinary infectious diseases 300

Academic organisation: Veterinary Tropical Diseases

Contact time: 1 dpw 1 lpw

Period of presentation: Year

Language of tuition: English

Credits: 14

Module content:

Veterinary infectious diseases is a module aimed at providing the student with in-depth knowledge of all aspects of diseases of food-producing and companion animals caused by viruses, bacteria, fungi and prions. The module is structured to enable students to discern which infectious diseases of animals are high impact diseases and which are of lesser significance in order of importance. The module covers the morphological and physico-chemical characteristics of the causative organisms and the epidemiology and pathogenesis of the diseases caused by them. Course candidates will also learn how to diagnose these diseases in both the living and dead animal, and the control strategies applicable, including control at the livestock/wildlife/human interface. Finally, course candidates will learn about the socioeconomic importance of infectious diseases of animals with special reference to transboundary spread.

VIP 800 Veterinary industrial pharmacology 800

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 64

Module content:

Veterinary pharmaceutical discovery and development. Non-clinical safety and preclinical toxicology. Clinical safety and efficacy evaluation. Good laboratory and clinical practices. Drug statutory and application requirement. Drug application submission. Regulatory procedures, evaluation and veterinary drug control. Drug residue risk assessment. Product planning, production management and quality assurance. Drug marketing, pricing and promotion. Technical services, training, extension, product support and complaint investigation.

VIP 890 Minidissertation: Veterinary industrial pharmacology 890

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 100

VKH 800 Pig herd health 800

Academic organisation: Production Animal Studies

Contact time: 12 Seminars per year plus 90 weeks of experiential training under supervision, split over 2-3 years.

Period of presentation: Year

Language of tuition: English

Credits: 423

Module content:

Specialised training based on farm visits, discussions, seminars and case studies. Integration and application of knowledge so that health and production problems can be identified and solved on a herd basis, and health status and production effectiveness of pig herds can be raised within a wide spectrum of pig-farming systems.

VKH 890 Mini-dissertation: Pig herd health 890

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 141

VMB 816 Molecular biology 816

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 2

Language of tuition: English

Credits: 40

Module content:

Theoretical and practical study in the principles and applications of PCR; DNA sequencing techniques; blotting techniques and protein expression and analysis.

VPH 200 Veterinary physiology and histology 200

Academic organisation: Anatomy and Physiology

Contact time: Semester 1: 8 lpw Semester 2: 9 lpw

Period of presentation: Year

Language of tuition: English

Credits: 33

Module content:

The light microscope, structure and function of cells and tissues, the endocrine system, the nervous system, the integument, muscle structure and function, haematology, the cardiovascular system, the respiratory system, metabolic pathways and the digestive system, the urinary system, the reproductive system, basic avian physiology and thermo-regulation.

VPH 300 General veterinary pharmacology 300

Academic organisation: Paraclinical Sciences

Contact time: 3 lpw

Period of presentation: Year

Language of tuition: English

Credits: 14

Module content:

General principles of pharmaceuticals, pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Regulatory control of veterinary medicines and dispensing requirements. A study of groups of functional, systemic and chemotherapeutic drugs utilised in general veterinary practice with emphasis on their pharmacological effects, general indication, safety and side effects.

VPH 700 Veterinary public health fundamentals 700

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 30

Module content:

General field of study for students wishing to take veterinary public health at honours level or as an ancillary. A well-rounded and systematically expanded knowledge base, an informed understanding and the effective selection and application of appropriate skills and resources in the field of veterinary public health; together with a more detailed knowledge and application of veterinary meat and milk hygiene, poultry hygiene, food safety, veterinary environmental health, disaster management and the associated risk analyses, certification for export and relevant legislation.

VPH 881 Veterinary public health: Meat hygiene 881

Academic organisation: Paraclinical Sciences

Contact time: 10 ppw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

A coherent and critical understanding and application of the theory and research methodologies and techniques relevant to all aspects of red meat hygiene relating to prevention and control of zoonoses and other diseases transmitted by meat, welfare of livestock, pre-harvesting, harvesting and post-harvesting aspects of red meat production, practical application of HACCP relating to the specific activities, prevention and control of

chemical residues in meat, including veterinary drug residues and appropriate national and international legislation. An understanding of how these relate to applied research relevant to industry or public health (including the ability to select and apply research methods effectively). Ability must be shown to rigorously critique and evaluate current research and participate in scholarly debates in this area of specialisation. Ability must be demonstrated to relate theory to practice and vice versa and to think epistemologically.

VPH 882 Veterinary public health: Poultry food hygiene 882

Academic organisation: Paraclinical Sciences

Contact time: 10 ppw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

A coherent and critical understanding and application of the theory and research methodologies and techniques relevant to all aspects of poultry hygiene relating to prevention and control of zoonoses and other diseases transmitted by meat, eggs or other poultry products, welfare of poultry, pre-harvesting, harvesting and post-harvesting aspects of poultry meat or egg production, practical application of HACCP relating to the specific activities, prevention and control of chemical residues, including veterinary drug residues and appropriate national and international legislation. An understanding of how these relate to applied research relevant to industry or public health (including the ability to select and apply research methods effectively). Ability must be shown to rigorously critique and evaluate current research and participate in scholarly debates in this area of specialisation. Ability must be demonstrated to relate theory to practice and vice versa and to think epistemologically.

VPH 883 Veterinary public health: Veterinary milk hygiene 883

Academic organisation: Paraclinical Sciences

Contact time: 10 ppw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

A coherent and critical understanding and application of the theory and research methodologies and techniques relevant to all aspects of milk hygiene relating to prevention and control of zoonoses and other diseases transmitted by milk, or other dairy products, welfare of livestock, pre-harvesting, harvesting and post-harvesting aspects of milk production, practical application of HACCP relating to the specific activities, prevention and control of chemical residues in milk, including veterinary drug residues and appropriate national and international legislation. An understanding of how these relate to applied research relevant to industry or public health (including the ability to select and apply research methods effectively). Ability must be shown to rigorously critique and evaluate current research and participate in scholarly debates in this area of specialisation. Ability must be demonstrated to relate theory to practice and vice versa and to think epistemologically.

VPH 884 Veterinary public health: Environmental health and biosecurity 884

Academic organisation: Paraclinical Sciences

Contact time: 10 ppw

Period of presentation: Year

Language of tuition: English

Credits: 40

Module content:

A coherent and critical understanding and application of the theory and research method-

ologies and techniques relevant to control of zoonoses of environmental origin, biosecurity relating to food of animal origin and management of disasters and emergencies involving animals and animal products, safe collection and disposal of animal carcasses, condemned meat or other animal products and animal wastes. The prevention, control and impact assessment of pollution by livestock production or industries, population control of animals in rural and urban environments to prevent zoonoses, occupational health of veterinary staff, management of the veterinary public health aspects of disasters and emergencies, evaluation of human-animal interactions and their impact on human health including animal facilitated therapy. An understanding of appropriate national and international legislation and how these relate to industry or public health (including ability to select and apply research methods effectively). Ability must be shown to rigorously critique and evaluate current research and participate in scholarly debates in this area of specialisation. Ability must be demonstrated to relate theory to practice and vice versa and to think epistemologically.

VPH 890 Mini-dissertation: Veterinary Public Health

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 80

Module content:

Mini-dissertation

VPL 120 Veterinary professional life 120

Academic organisation: Veterinary Tropical Diseases

Contact time: 2 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 3

Module content:

The focus of the five-year programme on veterinary professional life is on professional and competency development. It also aims to contribute to the development of competencies to enable veterinarians to be consummate professionals capable of dealing with the diverse challenges of professional and everyday life. The VPL 120 module specifically aims to expose students to the diversity of opportunities and career paths in the veterinary profession.

VPL 200 Veterinary professional life 200

Academic organisation: Veterinary Tropical Diseases

Contact time: 2 lpw

Period of presentation: Year

Language of tuition: English

Credits: 7

Module content:

Information management, societal roles and responsibilities of veterinarians, cultural diversity and group skills, leadership, stress management.

VPL 300 Veterinary professional life 300

Academic organisation: Veterinary Tropical Diseases

Contact time: 2 lpw

Period of presentation: Year

Language of tuition: English

Credits: 10

Module content:

This module also deals with communication, conflict management and negotiation skills with particular reference to community engagement and veterinary profession.

VPL 400 Veterinary professional life 400

Academic organisation: Veterinary Tropical Diseases

Contact time: 2 lpw

Period of presentation: Year

Language of tuition: English

Credits: 11

Module content:

The veterinarian in context: political roles and responsibilities; collegiality and professional associations; veterinary law and ethics; stressors and stress management.

VRM 811 Research methodology 811

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Semester 1 and Semester 2

Language of tuition: English

Credits: 20

Module content:

A web-based introductory module in research methodology that includes planning and undertaking a research project or clinical trial, collecting and analysing data, scientific writing, and preparation and presenting of a research protocol.

VRP 400 Veterinary reproduction 400

Academic organisation: Production Animal Studies

Contact time: 30 ppy 4 lpw S1 5 lpw S2

Period of presentation: Year

Language of tuition: English

Credits: 17

Module content:

The female reproductive cycle; parturition and puerperium; control of reproduction; identification, diagnosis and treatment of important diseases or malfunctions of the female reproductive system; identification, diagnosis and treatment of conditions of the neonate; male reproductive processes; identification, diagnosis and treatment of important diseases or malfunctions of the male reproductive system; venereal diseases in domestic animals; optimisation of breeding; investigation of infertility; the Animal Improvement Act.

VTP 300 Veterinary parasitology 300

Academic organisation: Veterinary Tropical Diseases

Contact time: 4 lpw

Period of presentation: Year

Language of tuition: English

Credits: 22

Module content:

The objective of the module is to provide fundamentals of applied veterinary helminthology, ectoparasitology and protozoology as required by veterinarians. The module covers the life cycles, relevant morphological features, epidemiology and pathogenesis of important parasites of domestic animals. Candidates will also learn how to diagnose infections/infestations and diseases in life and dead animals as well as how to treat and control them. Where applicable, emphasis is also given on zoonotic implications.

VTS 890 Mini-dissertation 890

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Year

Language of tuition: English

Credits: 100

VVD 800 Veterinary public health 800

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 300

Module content:

Specialised integration and application of knowledge within a single specific activity (core module) in Veterinary public health, including an approved research project.

VVD 895 Mini-dissertation: Veterinary public health 895

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 100

VWE 801 Dissertation: Veterinary tropical diseases 801

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Year

Language of tuition: English

Credits: 240

VWE 802 Dissertation: Anatomy and physiology 802

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 240

VWE 803 Dissertation: Companion animal clinical studies 803

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 240

VWE 804 Dissertation: Paraclinical sciences 804

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 240

VWE 805 Dissertation: Production animal studies 805

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 240

VWE 901 Thesis: Veterinary tropical diseases 901

Academic organisation: Veterinary Tropical Diseases

Period of presentation: Year

Language of tuition: English

Credits: 360

VWE 902 Thesis: Anatomy and physiology 902

Academic organisation: Anatomy and Physiology

Period of presentation: Year

Language of tuition: English

Credits: 360

VWE 903 Thesis: Companion animal clinical sciences 903

Academic organisation: Companion Animal Clinical Studies

Period of presentation: Year

Language of tuition: English

Credits: 360

VWE 904 Thesis: Paraclinical sciences 904

Academic organisation: Paraclinical Sciences

Period of presentation: Year

Language of tuition: English

Credits: 360

VWE 905 Thesis: Production animal studies 905

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 360

WLS 800 Veterinary wildlife studies 800

Academic organisation: Production Animal Studies

Contact time: 1 dpw 1 spw 5 ppw

Period of presentation: Year

Language of tuition: English

Credits: 420

Module content:

Broad-based, in-depth theoretical and practical training with emphasis on the skills required to capture, transport and manage free-ranging and captive animals with due consideration of conservation ecology, the interaction of wildlife and domestic animals and the control of diseases of wildlife.

WOC 610 Wildlife, ostrich and crocodile health 610

Academic organisation: Production Animal Studies

Contact time: 3 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 6

Module content:

A one-semester (elective) module designed to give veterinary students a working knowledge of the most important infectious and parasitic diseases of wildlife and the principles of good management and care of both free-living and farmed populations of wild mammals, ostriches and crocodiles. Offered by different departments.

WSK 800 Wildlife diseases 800

Academic organisation: Production Animal Studies

Contact time: 2 dpw 2 lpw 2 ppw 5 spw

Period of presentation: Year

Language of tuition: English

Credits: 24

WSK 890 Mini-dissertation: Wildlife diseases 890

Academic organisation: Production Animal Studies

Period of presentation: Year

Language of tuition: English

Credits: 140

Alphabetical list of modules presented by other faculties

Faculty of Humanities

LST 110 Language and study skills 110

Academic organisation: Unit for Academic Literacy

Contact time: 2 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 6

Module content:

The module aims to equip students with the ability to cope with the reading and writing demands of mainstream modules. LST 110 comprises two components: A flexible

learning component that requires individual engagement with the online computer program, MyFoundationsLab; and a formal taught component utilising the scheduled contact periods.

MTL 180 Medical terminology 180

Academic organisation: Ancient Languages

Contact time: 2 lpw

Period of presentation: Semester 1 and Semester 2

Language of tuition: Both Afr and Eng

Credits: 12

Module content:

The acquisition of a basic medical orientated vocabulary compiled from Latin and Greek stem forms combined with prefixes and suffixes derived from those languages. The manner in which the meanings of medical terms can be determined by analysing the terms into their recognisable meaningful constituent parts, is taught and exercised. The functional use of medical terms in context as practical outcome of terminological application is continually attended to.

Faculty of Natural and Agricultural Sciences

CMY 117 General chemistry 117

Academic organisation: Chemistry

Prerequisite: Refer to Regulation 1.2(e): A candidate must have obtained at least 50% for Mathematics and Physical Science in the Grade 12 examination

Contact time: 1 ppw 4 lpw

Period of presentation: Semester 1

Language of tuition: Both Afr and Eng

Credits: 16

Module content:

Theory: General introduction to inorganic and analytical chemistry. Nomenclature of inorganic ions and compounds, stoichiometric calculations concerning chemical reactions, redox reactions, solubilities, atomic structure, periodicity. Inorganic and physical chemistry. Molecular structure and chemical bonding using the VSEPR models. Chemical equilibrium, acids and bases, buffers, precipitation.

CMY 127 General chemistry 127

Academic organisation: Chemistry

Prerequisite: Natural and Agricultural Sciences students: CMY 117 GS or CMY 154 GS
Health Sciences students: none

Contact time: 1 ppw 4 lpw

Period of presentation: Semester 2

Language of tuition: Both Afr and Eng

Credits: 16

Module content:

Theory: General physical-analytical chemistry: Physical behaviour of gases, liquids and solids, intermolecular forces, solutions. Principles of reactivity: energy and chemical reactions, entropy and free energy, electrochemistry. Organic chemistry: Structure (bonding), nomenclature, isomerism, introductory stereochemistry, introduction to chemical reactions and chemical properties of organic compounds and biological compounds, ie carbohydrates, lipids and aminoacids. Practical: Molecular structure (model building), synthesis and properties of simple organic compounds.

GTS 161 Introductory genetics 161

Academic organisation: Genetics

Prerequisite: MLB 111 GS

Contact time: 2 lpw fortnightly practicals

Period of presentation: Semester 2

Language of tuition: Both Afr and Eng

Credits: 8

Module content:

Chromosomes and cell division. Principles of Mendelian inheritance: locus and alleles, dominance interactions and epistasis. Probability studies. Sex determination and sex linked traits. Pedigree analysis. Extranuclear inheritance. Genetic linkage and chromosome mapping. Chromosome variation.

MLB 111 Molecular and cell biology 111

Academic organisation: Genetics

Prerequisite: Refer to Regulation 1.2(c): A candidate who has passed Mathematics with at least 50% in the Grade 12 examination

Contact time: 1 ppw 4 lpw

Period of presentation: Semester 1

Language of tuition: Both Afr and Eng

Credits: 16

Module content:

Introductory study of the ultra structure, function and composition of representative cells and cell components. General principles of cell metabolism, molecular genetics, cell growth, cell division and differentiation.

PHY 131 Physics for Biology students 131

Academic organisation: Physics

Prerequisite: Refer to Regulation 1. 2

Contact time: 1 dpw 1 ppw 4 lpw

Period of presentation: Semester 1

Language of tuition: Both Afr and Eng

Credits: 16

Module content:

Units, vectors, one dimensional kinematics, dynamics, work, equilibrium, sound, liquids, heat, thermodynamic processes, electric potential and capacitance, direct current and alternating current, optics, modern physics, radio activity.

VKU 120 Animal science 120

Academic organisation: Animal and Wildlife Sciences

Contact time: 0.5ppw 2 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 8

Module content:

Origin and domestication of farm and companion animals. The ecological environment in which animal production and development is practised. Livestock species, breeds and breed characterisation and genetic variation. Terminology. Practical work includes identification and classification of different breeds of livestock.

VKU 122 Animal nutrition 122

Academic organisation: Animal and Wildlife Sciences

Contact time: 2 lpw

Period of presentation: Semester 2

Language of tuition: English

Credits: 6

Module content:

The chemical composition of fodder. Digestive processes and the digestibility of fodder. The nutrition and nutritional requirements of farm stock. Basic composition of rations. Intensive and extensive feeding.

VKU 210 Animal science 210

Academic organisation: Animal and Wildlife Sciences

Prerequisite: VKU 120 GS or TDH

Contact time: 1 ppw 2 lpw

Period of presentation: Quarter 1

Language of tuition: English

Credits: 8

Module content:

Basic principles of nutrition, physiology, breeding and production. Applied principles of livestock production, production management and systems (large livestock, small stock, pigs and poultry). Organisation of the livestock industry and relevant legislation. Animal handling. Practical work includes the general care and handling of farm stock.

VKU 220 Animal science 220

Academic organisation: Animal and Wildlife Sciences

Prerequisite: VKU 210 GS or TDH

Contact time: 1 ppw 2 lpw

Period of presentation: Quarter 2

Language of tuition: English

Credits: 12

Module content:

Livestock ecology, interaction between genotype and environment. Production regions and systems. Animal ecological factors that influence regional classification. Animal ecological factors to be considered in production factors, planning and management of different livestock production systems. Conservation farming and adapted farming and management systems; environmental conservation. Practical work will consist of compulsory farm practical during vacation after the 1st year and or during the 2nd year of study.

WDE 253 Basic principles of pasture science 253

Academic organisation: Plant Production and Soil Science

Contact time: 4 lpw

Period of presentation: Semester 1

Language of tuition: English

Credits: 18

Module content:

The influence of biotic and abiotic factors on the productivity of different strata and components of natural and planted pastures. This will enable the student to understand the management, production, appropriate and optimal utilisation as well as the conservation of these pastures. These principles can be used to ensure sustainable animal production and health.

WTW 134 Mathematics 134

Academic organisation: Mathematics and Applied Mathematics

Prerequisite: Refer to Regulation 1.2(b): A candidate must have passed Mathematics with at least 50% in the Grade 12 examination

Contact time: 1 tpw 4 lpw

Period of presentation: Semester 1 or Semester 2

Language of tuition: Both Afr and Eng

Credits: 16

Module content:

*Students will not be credited for more than one of the following modules for their degree: WTW 134, WTW 114, WTW 158. WTW 134 does not lead to admission to Mathematics at 200 level and is intended for students who require Mathematics at 100 level only. WTW 134 can also be taken in the second semester.

Functions, derivatives, interpretation of the derivative, rules of differentiation, applications of differentiation, integration, interpretation of the definite integral, applications of integration. Matrices, solutions of systems of equations. All topics are studied in the context of applications.

MFK 800 Medical physics 800

Academic organisation: Physics

Contact time: 2 lpw

Period of presentation: Year

Language of tuition: English

Credits: 36

Faculty of Economic and Management Sciences

BME 120 Biometry 120

Academic organisation: Statistics

Prerequisite: At least 4 (50-59%) in Mathematics in the Grade 12 examination, or at least 50% in both Statistics 113, 123

Contact time: 1 ppw 4 lpw

Period of presentation: Semester 2

Language of tuition: Both Afr and Eng

Credits: 16

Module content:

Simple statistical analysis: Data collection and analysis: Samples, tabulation, graphical representation, describing location, spread and skewness. Introductory probability and distribution theory. Sampling distributions and the central limit theorem. Statistical inference: Basic principles, estimation and testing in the one- and two-sample cases (parametric and non-parametric). Introduction to experimental design. One- and twoway designs, randomised blocks. Multiple statistical analysis: Bivariate data sets: Curve fitting (linear and non-linear), growth curves. Statistical inference in the simple regression case. Categorical analysis: Testing goodness of fit and contingency tables. Multiple regression and correlation: Fitting and testing of models. Residual analysis. Computer literacy: Use of computer packages in data analysis and report writing.

Faculty of Health Sciences

CDS 872 Economic evaluation of disease control intervention 872

Academic organisation: School of Health System and Public Health

Contact time: 40 dpw

Period of presentation: Year

Language of tuition: English

Credits: 10

EHM 870 Basis in environmental health 870

Academic organisation: School of Health System and Public Health

Contact time: 1 dpw 1 lpw 1 opw 1 ppw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 5

EHM 871 Health risk assessment 871

Academic organisation: School of Health System and Public Health

Prerequisite: EOH 871

Period of presentation: Year

Language of tuition: English

Credits: 10

HCS 870 Project management in health 870

Academic organisation: School of Health System and Public Health

Prerequisite: HME 870

Contact time: 1 dpw 1 lpw 1 opw 1 ppw 1 spw

Period of presentation: Year

Language of tuition: English

Credits: 10

HIN 870 Introduction to health informatics 870

Academic organisation: School of Health System and Public Health

Period of presentation: Year

Language of tuition: English

Credits: 10

HME 873 Monitoring and evaluation 873

Academic organisation: School of Health System and Public Health

Contact time: 1 ppw 2 lpw

Period of presentation: Year

Language of tuition: English

Credits: 15

QHR 870 Qualitative research methods 870

Academic organisation: School of Health System and Public Health

Period of presentation: Year

Language of tuition: English

Credits: 10

SCC 871 Communication in health 871

Academic organisation: School of Health System and Public Health

Contact time: 1 ppw 16 lpw

Period of presentation: Year

Language of tuition: English

Credits: 10

Faculty of Engineering, Built Environment and Information Technology

AIM 101 Academic information management 101

Academic organisation: School of Information Technology

Contact time: 2 lpw

Period of presentation: Semester 1 or Semester 2

Language of tuition: Both Afr and Eng

Credits: 6

Module content:

Find, evaluate, process, manage and present information resources for academic purposes using appropriate technology. Apply effective search strategies in different technological environments. Demonstrate the ethical and fair use of information resources. Integrate 21st-century communications into the management of academic information.