University of Pretoria Yearbook 2019

MSc Tropical Animal Health (Coursework) (08251020)

Minimum duration of study	2 years
Total credits	180

Programme information

This degree is offered as a combination of e-learning, face-to-face teaching and a compulsory collaborative induction/field-workshop. It has the following components:

- A two week compulsory induction/field-workshop
- Compulsory core modules
- Elective modules (Theory-based and Skills-based)
- Mini-dissertation
  For the MSc Tropical Animal Health the mini-dissertation will include an oral examination conducted face to face or via video conference. The oral examining panel will include an examiner from each institute (not the supervisor). A mark will be given which will constitute 10% of the final mini-dissertation mark. The dissertation will also be examined by one internal and one external examiner as stipulated by the UP regulations; a mark will be given which will constitute 90% of the final mini-dissertation mark.

Also consult General Regulations.
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.

Admission requirements

Subject to the stipulations of the applicable General Regulations, a BScHons, a four-year BScAgric, BVSc or equivalent degree or a relevant postgraduate diploma (on NQF level 8) is required.

Two years of professional experience might be required in certain cases.

Additional Requirements

In cases where web-based/online modules are offered, basic computer skills is required in order to successfully participate in the degree 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).

International requirements

International students have to ensure they are aware of all aspects pertaining to them to study at the University of Pretoria which can be found at www.up.ac.za/isd.

Additional requirements

According to the Bologna Bachelor-Master structure, a Masters degree is required to register at ITM. (Note: A four-year BSc degree in the South African context is equivalent to a Masters degree in the Bologna system). Two years of professional experience might be required in certain cases. It remains the prerogative of the head of department (UP) or course director (ITM) 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 web-based/online nature of the modules requires basic computer skills in order to successfully participate in the degree programme.

Also consult the General Regulations. Students are required to confirm whether a module will be presented in any particular year.

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Examinations and pass requirements

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.

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

If a student fails a module, he/she will have to repeat the module the following year. A module cannot be repeated more than twice.

Research information

Also consult the General Regulations.

Candidates must submit a mini-dissertation which deals with an applied field of study. The topic is determined in consultation with the supervisor and the relevant head of department, and 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.)

An internal as well as external examiner will evaluate the mini-dissertation. The supervisor may not be an examiner.

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

Pass with distinction

The degree is conferred with distinction on a student who has obtained at least 75% for the mini-dissertation and a weighted average of at least 75% in the other modules needed to comply with degree requirements, provided that a minimum pass mark of 60% in all the other modules have been obtained.

Curriculum: Year 1

Minimum credits: 90

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Elective modules: Choose modules to the value of 48 credits from the list of elective modules below ensuring that the following is adhered to:

- Choose two modules to the value of 18 credits from the following skills-based modules: ASR 811, AVB 817, AVH 811, AVV 811, EPL 804, TCK 811 and VMB 816.
- Choose three modules from the following list of theory-based modules: AHE 812, AHE 813, AHE 814, AHE 815, AHE 816, EPL 803, GVD 811 and TBD 814.

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Fundamental modules

Research methodology 812 (VRM 812)

Module credits	9.00
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1 and Semester 2

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 enabling preparation and presenting of a research protocol.

Core modules

Laboratory diagnostics 811 (AHE 811)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

This module deals with 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.

Basic epidemiology 802 (EPL 802)

Module credits	12.00
Prerequisites	No prerequisites.

Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

Compulsory module.

A web-based introductory module in epidemiology that includes general concepts, quantification of disease prevalence and incidence, interpretation of diagnostic test results, basic sampling designs and basic statistics.

One health: basic concepts 801 (OHB 801)

Module credits	12.00
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

This module will introduce students to the philosophy and practice of "One Health", an approach that recognises that the health and well-being of humans, domestic animals, wildlife and the ecosystems in which they live and function and intrinsically connected.

Elective modules

Advanced One Health 812 (AHE 812)

Module credits	12.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

(elective)

This module will provide students with an understanding of health in particular social-ecological systems, with a focus on understanding the relationship between ecosystem health and infectious diseases of animals and humans, in order to improve disease control policies, ecosystem sustainability, food security and rural development.

Advanced one health: public health 813 (AHE 813)

Module credits	12.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases

Period of presentation	Semester 1

Module content

(elective)

This module will focus on the human dimension of One Health. It introduces an approach to formulate a zoonotic disease control programme. After the module students should be able to explain the disease burden of a particular zoonosis, to develop an epidemiological model, to analyse its broader determinants, to appraise and prioritise possible interventions based on effectiveness, cost, feasibility and acceptability and to identify implementation challenges in a specific public health system's context.

Animal health management: high impact and emerging diseases 814 (AHE 814)

Module credits	12.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

(elective)

This module deals with the concepts and principles of basic animal health management for livestock production and trade in livestock and livestock commodities. There will be a special focus on the management of infectious diseases that have a high impact in terms of international trade because of their detrimental effects on livestock production and health and/or human health. The module will also examine the drivers for emerging and re-emerging diseases with special reference to the livestock/wildlife/human interface.

Advanced One Health: policy 815 (AHE 815)

Module credits	12.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

(elective)

Policy is generally defined as a plan of action on the part of a government, business or other organisation intended to influence decisions and actions in a particular direction. This module introduces the key principles in policy making in regard to animal health and trade in livestock or livestock products. It will consider the essentials of "effective" policy creation, the role of science and uncertainty in policy, policy analysis and the role of government versus the private sector in animal health.

Surveillance and survey methodology 816 (AHE 816)

Module credits	12.00

Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

(elective)

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. This module will also provide an introduction to geographic information systems (GIS) and provide basic skills on how to use GIS in epidemiological studies.

Applied serology 811 (ASR 811)

Module credits	9.00
Prerequisites	No prerequisites.
Contact time	8 web-based periods per week
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

Skills training

The module will enable delegates to develop proficiency in procedures in veterinary immunology and serology, and to implement and standardize different serological techniques with special emphasis on ELISA and FA techniques.

Applied veterinary bacteriology 817 (AVB 817)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

Skills training

This module provides an introduction to the basic concepts of veterinary bacteriology, from sampling and handling of specimens to the methods and tools used for isolation and identification of bacteria of veterinary significance in the laboratory.

Applied veterinary helminthology 811 (AVH 811)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

Skills training

This module provides an introduction to the control of helminth infections of economic or public health importance in the tropics. The focus is on transmission of helminths of livestock and on sustainable methods to break the lifecycles. Practical study includes common parasitological techniques and interpretation of parasitological parameters.

Applied veterinary virology 811 (AVV 811)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

Skills training

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

Advanced epidemiology 803 (EPL 803)

Module credits	12.00
Prerequisites	EPL 802 (with a minimum of 60% final mark)
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

This module builds on the subjects dealt with in the ‘Basic Epidemiology’ module. It includes advanced statistical models (generalised linear model, mixed models, survival analysis) and introduces quantitative risk assessment.

Applied epidemiology 804 (EPL 804)

Module credits	12.00
Prerequisites	EPL 803

Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

Skills training

This module is a hands-on theoretical and practical introduction to epidemiological modelling, including simulation modelling. It assumes successful completion of the basic and applied epidemiology modules.

General vector-borne diseases 811 (GVD 811)

Module credits	9.00
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 1

Module content

The module gives an overview of the most important vectors and vector borne diseases, their importance and insight on the importance of the biology of the vectors on the transmission of the micro-organisms they transmit.

Ticks and tick-borne diseases 814 (TBD 814)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

(elective)

This module gives an overview of the economically important ticks and tick-borne parasites of domestic and wild animals, their importance and insight the biology of the vectors on the transmission of the micro-organisms they transmit.

Selected tick identification 811 (TCK 811)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content
Skills training (elective)

The objective of this module is to provide the basic knowledge of the biology, ecology, life-cycles, and importance of ticks. There will be a practical session to acquire the necessary laboratory skills to identify ticks of companion animals, equids, ruminants and wildlife.

Applied molecular biology 816 (VMB 816)

Module credits	9.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Semester 2

Module content

Skills training

Theoretical and practical study in the principles and applications of PCR, cloning and DNA sequencing techniques.

Curriculum: Final year

Minimum credits: 90

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Core modules

Mini-dissertation 895 (AHE 895)

Module credits	90.00
Prerequisites	No prerequisites.
Language of tuition	Module is presented in English
Department	Veterinary Tropical Diseases
Period of presentation	Year

Module content

A mini-dissertation must be submitted 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 to the Faculty Administration, 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.

The information published here is subject to change and may be amended after the publication of this information. The General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.