

FACULTY OF VETERINARY SCIENCE

UNIVERSITY OF PRETORIA

POSTGRADUATE STUDIES AND RESEARCH

A guide for postgraduate students and promoters

2000

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1. INTRODUCTION

The University of Pretoria's research mission strives through basic and applied research and the development of postgraduate candidates, to obtain new knowledge, gather, arrange and treasure existing knowledge, and apply all fundamental knowledge over the broad academic spectrum of the University.

The Faculty of Veterinary Science strives to develop a research ethos in which researchers are allowed the liberty of responsible free thought. Thus, the Faculty believes that, even though contract research is important, both it and funding agencies have a responsibility to stimulate basic and applied research. The Faculty endeavours to follow a balanced research programme that does not curtail original thought and curiosity of the researcher.

Through the completion of either a dissertation or thesis, masters and doctorate candidates develop the ability to study and apply scientific knowledge. Masters candidates gain the ability to use scientific methods during a research project, while doctorate candidates prove their ability to do independent research and to make an original contribution to science.

Prospective candidates must contact the appropriate Head of Departments in order to obtain more information concerning the Department's fields of research interests.

The intention of this guideline is to assist supervisors and postgraduate candidates in their studies and in the completion of a thesis or dissertation. This document is only a guideline aimed at giving structure to post graduate studies and standardizing procedures within the Faculty.

It is recommended that candidates should consult their promoters or study leaders should any uncertainties exist or arise.

2. APPLICATIONS FOR ADMISSION

A candidate whose intention it is to undertake postgraduate studies, especially if they entail a thesis or dissertation, is expected to take the following steps before admission and /or commencing the project:

- Ascertain the academic qualifications required in order to register for a specific degree
- Consult the Head of the Department in the field of postgraduate studies concerned to discuss a topic for future research
- Familiarize himself/herself with the subject of choice. Its relevance and whether it has previously been researched or published. The library will assist candidates to conduct literature searches

A promoter/study leader shall be appointed by the Head of Department after due consultation. This person will assist the candidate in the compilation of his/her project proposal.

2.1 DEGREES / MODULES AT THE FACULTY OF VETERINARY SCIENCE, UNIVERSITY OF PRETORIA

2.1.1 BACHELOR OF VETERINARY SCIENCE (HONOURS)

This degree provides the candidate with a broad scientific background in the theoretical aspects of the prerequisite subjects with a view to prospective MMedVet degree studies. The conferment of the honours degree is, however, not subject to future registration for masters degree studies.

Requirements for admission

A candidate must be in possession of a BVSc or an equivalent degree. Entrance examinations for individual modules may be required. It remains the prerogative of the Head of the Department to prescribe, in addition to the stipulations of the regulations, an entrance test prior to registration for the study for the honours degree. Candidates may also be required to pass an English proficiency test (TOEFL) at an acceptable level.

For more details on the curriculum see: University of Pretoria, Rules and Syllabuses, Faculty of Veterinary Science.

2.1.2 MASTER'S DEGREES

2.1.2.1 MASTER OF VETERINARY MEDICINE (MMedVet)

The Masters degree in Veterinary Medicine is a professional degree, which equips the candidate with a broad scientific background in the theoretical and practical aspects of the chosen field. This degree serves as a prerequisite for registration as a veterinary specialist in South Africa. A student has to submit a dissertation, which deals with the particular field of study prior to the examination in the theoretical section of the chosen field of study.

Requirements for admission:

A candidate must be in possession of a BVSc degree. In certain cases the Head of the Department concerned may require that a candidate first obtain a BVSc (Hons) degree containing modules applicable to the particular MMedVet degree course. A minimum of 60% in each module may be required before a candidate can commence with the study for the MMedVet degree. A candidate who already possesses a BVSc (Hons) degree and who complies with the requirements mentioned above, will retain credit for the applicable modules for a period of two years, unless the Head of the Department decides otherwise. It remains the prerogative of the Head of the Department to require, in addition to the stipulations of the regulations, an evaluation which may include practical components, or to stipulate special conditions before a candidate may register for the course. Candidates may also be required to pass an English proficiency test (TOEFL) at an acceptable level.

For more details on the curriculum and duration of the study see: University of Pretoria, Rules and Syllabuses, Faculty of Veterinary Science.

2.1.2.2 MASTER OF SCIENCE (MSc)

The graduate candidate possessing a masters degree has a basic and advanced knowledge in a specialized area of science. He/she develops practical skills and has the ability to present research results by publishing them in scientific journals and presenting them at scientific congresses. Candidates are required to initiate original research and possess the ability to obtain funding for it.

The MSc degree is conferred on the successful completion of a dissertation and, in some cases also the satisfactory completion of ancillary subjects. The candidate may be required to undertake a written and/or oral examination on the dissertation. He/she must also submit simultaneously with the dissertation at least one draft of an article intended for publication in an acknowledged journal. This draft must be based on the research work that was undertaken for the dissertation and must be acceptable to the supervisor and must comply with the requirements for subsidy.

Requirements for admission:

A candidate must be in possession of a BSc (Hons) BSc(Agric)(Hons), or BVSc degree as well as having attained an average of at least 60% in the honours examination, where applicable. Candidates must successfully complete an acceptable course in Research Methodology. Supplementary prescribed work and attendance of certain courses with a pass mark in a test or examination may be required. It remains the prerogative of the head of the Department to require, in addition to the stipulations of the requirements, also a BVSc(Hons) degree, or successful completion of an admission test prior to registration. Candidates may also be required to pass an English proficiency test (TOEFL) at an acceptable level.

For more details on the curriculum and duration of the study see: University of Pretoria, Rules and Syllabuses, Faculty of Veterinary Science.

2.1.3 DOCTORATES

2.1.3.1 PHILOSOPHIAE DOCTOR (PhD)

Requirements for admission:

Candidates must hold an applicable masters degree. It remains the prerogative of the Head of the Department to prescribe, in addition to the stipulations of the requirements an admission test prior to registration. Candidates may also be required to pass an English proficiency test (TOEFL) at an acceptable level.

For more details on the regulations including duration for the completion of the thesis please consult the University of Pretoria, Rules and Syllabuses, Faculty of Veterinary Science and Regulation G56.

2.1.3.2 DOCTOR OF VETERINARY SCIENCE (DVSc)

Guidelines for the awarding of a DVSc degree:

The DVSc degree is conferred by virtue of publications.

For more details on the requirements and the time limit set for the compilation of the publications into an acceptable format see: University of Pretoria, Rules and Syllabuses, Faculty of Veterinary Science.

2.1.4 POSTGRADUATE DIPLOMAS

Requirements for admission

Candidates must have been in possession of a BVSc or equivalent degree for at least one year with regard to admission to the DCH(Vet) or at least two years with regard to the DHA(Vet) and must be registered with the South African Veterinary Council as a veterinarian.

Two postgraduate diplomas are presented:

Postgraduate diploma in Veterinary Community Health [DCH(Vet)] and

Postgraduate diploma in Health Administration [DHA(Vet)]

For more details on the curriculum and duration of the study see: University of Pretoria, Rules and Syllabuses, Faculty of Veterinary Science.

2.2 PROPOSED GUIDELINES FOR THE HANDLING OF APPLICATIONS FOR POSTGRADUATE STUDY

South African Graduates

Deadlines for applications:

BVSc (Hons)	31 January
MSc/MMedVet (with course work)	31 January
MSc/PhD (without course work)	31 July
Postgraduate diplomas	15 October

When prospective candidates make enquiries

- at the Department:
the Department can communicate with the candidate and provisionally accept or reject him/her according to guidelines outlined by the University and the Department. At the same time the student must complete the necessary application forms at Academic Administration
- at Academic Administration:
the student must complete the necessary application forms and the administrator will send the student to the relevant Department.

When application forms are submitted, the required application fee must be paid.

MMedVet/MSc/PhD Applicants

Academic Administration sends the application (together with the candidate's academic record) to the Head of the Department concerned for a written comment. The Department approaches the applicant for discussion of the intended studies.

Accept provisionally:

- Indicate in writing the conditions which the applicant must comply with before the Head of Department will accept the application (e.g. passed certain 700- modules/practical tests, etc.).
- Send the application together with the comments back to Academic Administration. Academic Administration informs the applicant of the conditions.
- If the applicant accepts the conditions, the Head of Department is requested to follow the steps in the following paragraph.

If the supervisor/promoter and the Head of the Department accept the student they:

- Nominate an advisory or guidance committee
- Determine the ancillary subject options
 - Send the particulars together with the application back to Academic Administration

Rejection:

Give the reasons in writing why the candidate should not be accepted and send these together with the application form back to Academic Administration.

Academic Administration sends applications to University of Pretoria Main Campus where they are allocated a number and recorded in the computer and the applicants are informed of the result.

The letter of acceptance informs the candidate of the registration process.

BVSc(Hons) Applicants

All enquiries must be referred to the Head: Academic Administration so that application forms can be completed and submitted, and the application fee paid.

The Head: Academic Administration sends the application form on a rotation basis to a member of the Postgraduate Curriculum Committee who is appointed at the same time as a one-person Advisory/Guidance Committee to guide the candidate in his/her studies until he/she has complied with all the requirements of the degree.

The member of the Committee discusses the proposed subjects with the applicant and plans (in consultation with the Heads of Departments concerned) the (study curriculum) (course of study) and which modules will be undertaken in which year.

Once the curriculum of study has been finalized, the application form and comments are sent back to the Head: Academic Administration for completion of registration.

Send the application together with the comments back to Academic Administration. Academic Administration informs the applicant of the conditions.

Academic Administration sends applications to University of Pretoria Main Campus where they are allocated a number and recorded in the computer and the applicants are informed of the result.

Applications from Foreign Graduates

Deadlines for applications:

31 July for registration in the following year.

MMedVet/ MSc/ PhD degrees

Refer all enquiries to the Head: Academic Administration who will send the relevant application forms and general information to the foreign students.

As soon as the formal application has been received it is sent to the Head of the Department concerned. It is NOT the duty of Academic Administration to determine whether an applicant can be accepted (unless acceptance conflicts with the regulations).

If necessary, the Head of the Department must correspond with the applicant (to make available more detailed information concerning the curriculum, possible research activities for MSc/PhD studies, financial regulations for costs of research, etc.).

As soon as a final decision has been made concerning a candidate's admission the application form and comments (together with copies of any correspondence) must be sent back to the Head: Academic Administration.

If a Head of Department requires that an admission examination should be taken in the country of the applicant, the sealed examination question paper must be sent to the Head; Academic Administration. The latter shall then make the necessary arrangements with the SA Embassy/SA representative for the candidate to write the examination.

If the Head of Department will only accept the applicant under certain conditions, the application together with clear instructions concerning the conditions must be sent back to the Head: Academic Administration so that the conditions can be spelt out to the applicant.

BVSc(Hons)

All enquiries must be referred to the Head: Academic Administration (Academic) so that an application form and all the information concerning foreign applicants can be sent to the person. Academic staff will finalize the subject/module course (Postgraduate Curriculum Committee) with the candidate and the departments concerned. In such a case the result will be sent in writing to the Head: Academic Administration so that the applicant can be informed.

If there is any doubt about acceptance of such a candidate, the application will be submitted to the Associate Dean/Postgraduate Curriculum Committee for consideration. In such a case the outcome will be sent in writing to the Head: Academic Administration so that the applicant can be informed.

If any conditions are set they must be relayed in writing, together with the application, to the Head: Academic Administration. The letter shall inform the applicant of these conditions. The letter of acceptance informs the candidate of the registration process.

General

It is a time-consuming and difficult process to make arrangements for the taking of an examination in another country. Many of the applications that are received these days come from countries where there is not even a SA Representative. It is recommended that applicants who apply for MSc studies should be provisionally accepted provided that they sign an undertaking in this connection. (Example below)

NB This is only an example and conditions can be attached on an *ad hoc* basis for each candidate.

Heads of Departments are requested to attend to all applications urgently (within two weeks) so that there is sufficient time remaining for the applicant to apply for a study permit. This can only be done once the applicant has finally been accepted for a specific course. It takes about two months to obtain a study permit.

Registration (Regulation 5 G.2 – 5.6)

- The letter of acceptance informs the candidate of the registration process.
- Registration forms will be mailed to candidates during December of the year before commencement of their studies. Should a candidate apply after this date or do not receive a registration form, registration forms are obtainable at Academic Administration.

- Registration takes place after payment of the prescribed registration fee.
- The registration form together with proof of payment has to be submitted to Academic Administration.
- Candidates have to re-register at the beginning of each academic year until they complied with the requirements for conferment of the degree/awarding of the postgraduate diploma.

2.3 AGREEMENT FOR STUDENTS WHO ARE IN POSSESSION OF A DEGREE NOT OBTAINED AT A SA UNIVERSITY

The Faculty of Veterinary Science, University of Pretoria expects students, who have not completed their undergraduate degree at a recognized South African university to complete and sign an agreement. The following document can serve as a guideline for such an agreement.

AGREEMENT OF CONDITIONAL ACCEPTANCE TO MSc/MMedVet - STUDY

I _____, apart from the normal regulations
(Full name in block letters)

pertaining to MSc/MMedVet study, agree to the following additional conditions of registration for the MSc/MMedVet degree course in _____:

1. That I have to register for the subject/s _____
_____ in my first year of study at the Faculty.
2. That I have to obtain an average final pass mark of at least 60% in _____ to enable me to continue with MSc/MMedVet studies.
3. That I will not be allowed to continue with any studies at the Faculty if my final mark in _____ is below 50% (fail).
4. That I have the choice either to leave the Faculty or to change my registration to the BVSc(Hons) degree course if my final mark in _____ is between 50% - 59%, in which case the normal regulations pertaining to the BVSc(Hons) degree course are applicable.
5. That I will have to leave the Faculty if it is found that my knowledge of English is not sufficient to follow lectures and/or to express myself satisfactorily orally and in writing.

Signature of Applicant

Date

Prof and Head: Department of

Date

2.4 RECOGNITION OF PREVIOUS DEGREES

2.4.1 Upgrading/conversion from a MSc degree course to a PhD degree course

- An application may be considered if the candidate has proved to have already fulfilled the requirements of the MSc degree
- Only exceptional cases are considered
- The candidate can only apply to convert from a MSc course to a PhD course after one year of MSc study
- The application to convert should include:
 - A report on the progress of the research. In this report the candidate must prove that the results obtained and the standard and quality of the research work are of such scientific value that it can be used for the attainment of a PhD degree. At the time of application the results must have been presented at a conference(s) and/or published in a recognized scientific journal(s).
 - A project proposal for a PhD with the aim, methods and expected results.
 - A recommendation from the study leader emphasizing the competency of the candidate and the importance of the project. The study leader's competency and a complete CV of him/her will also be evaluated.
 - A report from a referee preferably one from abroad, on the proposed project.
 - A recommendation from the Head of the Department, if applicable, on the competency of the candidate and that of the leader/promoter.
 - All these reports must be compiled by the Head of Department and presented to the Dean.
- Four months after the commencement of the research project the candidate must defend the new protocol. It is proposed that subject experts from outside the University also be invited to attend this occasion.

2.4.2 MSc status

A candidate may obtain **MSc status** in order to be registered in the PhD degree programme if the following are applicable:

- Considerable experience in the field of research, and adequate number of publications in refereed journals emanating from that research
 - Existing research data and/or the protocol that are intended to be followed for the attainment of the PhD degree are judged to be adequate. These will be evaluated by referees, who are not members of the University of Pretoria and who are recognized authorities in the field of the research under review.

The candidate will then be evaluated by means of either a written or an oral test monitored by internal and external examiners.

A report on this evaluation must be compiled by the Head of Department concerned and submitted together with all the relevant documents to the Faculty Board and the University Senate for final approval or rejection.

3. PROMOTERS AND SUPERVISORS

3.1 GUIDELINES FOR PROMOTERS AND SUPERVISORS – GUIDANCE COMMITTEES

Post-graduate student guidance is the function of **advisors/supervisors, guidance committees** and the **Faculty Post-graduate Curriculum Committee**. In broad terms the functions of these bodies are to see that postgraduate candidates complete their degrees as quickly and painlessly as possible while maintaining a satisfactory standard. This is achieved by assisting the candidates in the selection of appropriate course work and research project/clinical study, monitoring his/her progress throughout their studies and seeing to his/her general well being

1. POSTGRADUATE LEADERSHIP

1.1. Nomination and composition

Each postgraduate candidate, excluding honours' students, must have an advisor or advisory body. The head of department (or person nominated by the head of department) for the major subject, in consultation with the candidates, nominates the advisor at the commencement of the studies.

A single **advisor** may be allocated to a candidate but, depending on requirements, a **co-advisor** may need to be appointed. In such cases, the promoter/supervisor is the chairperson. The promoter/supervisor may be any senior person in the department, as long as he/she is suitably qualified in terms of academic standing and research experience. For administrative reasons (subsidiary) a promoter/supervisor, other than the head of department, must reside in the department where the major subject is being offered.

A co-supervisor/co-promoter must, as far as possible, be associated with the University – with the proviso that the dean, with adequate justification thereof provided by a head of the department and/or supervisor/promoter, may nominate a co-supervisor/co-promoter who is not associated with the University.

On the retirement or resignation of a supervisor/promoter from the University's service, the supervisor/promoter may, with approval of the dean concerned, and after consultation with the head of the department, for a period of not longer than two years after retirement or resignation, still act as supervisor/promoter for the student for which he or she was appointed as supervisor/promoter, in order to enable such a student to complete his or her dissertation/thesis. For this purpose and for this period such a supervisor/promoter will be deemed an accredited lecturer of the University.

The degree status of the promoter/supervisor should be at least equivalent to the degree, which the student is registered for. In the case of a PhD or DVSc degree, where there may be no person with an equivalent degree in the department, the head of department may serve as promoter. In such a case it is advisable that one co-promoter with either a PhD or DVSc is appointed. Co-promoters/co-supervisors must be in possession of a relevant university degree, but its nature is only important if, as stated above, there is no person with a doctorate in the department concerned.

The composition of the advisory body for various degrees is as follows:

a) Master's degree

⇒ Supervisor (also the chair-person)

⇒ Co-supervisor/s optional and depends on requirements as determined by the research topic

b) PhD

⇒ Promoter (also the chair-person)

⇒ Co-promoter/s optional and depends on requirements as determined by the research topic

c) DVSc

See General Rule 56 of the University Regulations

1.2 Responsibilities of the promoter/supervisor

The promoter/supervisor advises the postgraduate candidate throughout the production process of a treatise, dissertation or thesis, thus ensuring that a time schedule is followed and that the standard of work produced is satisfactory. The responsibilities are as follows:

- Advise the candidate on a research topic according to departmental research theme/s. The topic should preferably be selected before the student registers.
- Advise the candidates on the planning and writing of the research protocol.
- Arrange for the presentation of the protocol in open forum. **The presentation must take place within 6 months of registration for Masters' and PhD degrees.**
- Ensure that the protocol is submitted to the Faculty's Animal Use and Care and Research Committees, and that the title is submitted to the Titles Committee, for approval.
- Assist (with the HOD) the candidate in raising research funds and then supervise the funds.

- Set a time schedule for execution of the research project, which is then monitored.
- Monitor and advise the student during the execution of the research project.
- Advise the student in the writing of the treatise/dissertation/thesis according to the guidelines laid down by Faculty and to proofread it before the final version is submitted. The promoter/supervisor must proofread it and return the corrected material to the student. Faculty guidelines must also be followed when marking treatises, dissertations or theses.
- Appoint (with HOD) external examiner/s for the dissertation/thesis and major subject.
- Compiles a summarized report (final report).

Promoters/supervisors must meet with postgraduate students at regular intervals (use the Time scheduled/Action plan in 3.3 as a guideline) to ensure that the above responsibilities are met. The promoter/supervisor must submit a brief annual progress report on each student to the Dean through the Head of Department by 30 November each year. It should also be made clear that the student is primarily responsible for his/her own research and all aspects of it. The promoter's/supervisor's responsibility is to advise the student who must supply the former with regular progress reports.

1.3 Responsibilities of co-promoters/co-supervisors

Co-promoters/co-supervisors are appointed because of their scientific expertise in a particular field. They must assist the promoter/supervisor in advising the student on matters concerning the research project or clinical study. For instance, it often happens that certain aspects of a project e.g. (statistical analyses or laboratory procedures) are beyond the expertise of a promoter/supervisor. In such cases it is advisable to appoint a co-promoter/co-supervisor with the necessary expertise. This also helps to promote inter-departmental research co-operation and to foster Faculty research programs.

2. POSTGRADUATE GUIDANCE COMMITTEE

It is probably at present impractical to have a guidance committee assigned to each Honour's student. Instead, the Postgraduate Curriculum Committee will fulfil this function and each student will be assigned to a member of the committee. For each Master's and PhD student a Guidance Committee must be appointed. The Head of Department, in consultation with the student, nominates the members who will constitute the guidance committee at the commencement of his/her studies.

A Guidance Committee consists of the **Head of Department** (or **Clinical Supervisor** in some clinical departments), who acts as chairperson, and an **additional member**. The additional member should preferably be from another department of Faculty but must be a senior person. Advisors may not serve on the guidance committee. If the Head of Department is advisor of a student, another senior person in the same department will then serve as chairperson of the students' Guidance Committee.

2.1 Responsibilities of Guidance Committees

The Guidance Committees of each post-graduate student should meet at least twice a year once with a promoter, supervisor and once without the respective student. A student or chairperson may however request special meeting/s. Advisors may also request a meeting with a Guidance Committee with or without the presence of the student concerned. The responsibilities of a Guidance Committee of each student are as follows:

- Selection of course work: This is the primary responsibility of the HOD and Guidance Committee but the promoter/supervisor must also be consulted.
- Monitoring the progress regarding course work thus ensuring that both ancillary (modules) and, where applicable, major subjects are completed within the required time.
- Monitor the progress of the research project.
- Serving as a mediator when problems between a student and his/her advisors arise.
- Seeing to his/her general well-being and rendering assistance in the application for student grants.

3. PROBLEMS ARISING BETWEEN STUDENTS AND ADVISORS

Any problems that may arise between a student and his/her promoter/supervisor are referred to the student's Guidance Committee. This enables a student to appeal against decisions made by the promoter/supervisor and co-promoter/co-supervisor. It also enables the promoter/supervisor to submit a request to withdraw as promoter/supervisor of a particular student. The purpose of a Guidance Committee is to ensure that the student is always fairly treated and to act as an arbitrator in cases of dispute. Fair treatment, however, applies equally to promoters/supervisors. Impartiality of the Committee to both parties concerned is essential. Disputes that cannot be resolved by Guidance Committees are referred to the Postgraduate Curriculum Committee and the vice-Dean.

3.2 RESPONSIBILITIES OF CO-PROMOTERS FROM OTHER FACULTIES OR INSTITUTIONS

If a co-promoter/co-supervisor/co-advisor is not a staff member at the Faculty of Veterinary Science and if the postgraduate student spends most of his/her time in an 'outside' laboratory, the following guidelines /parameters apply:

- The promoter and/or Head of the Department at the Faculty of Veterinary Science in which the student is registered must approve of this working laboratory and environment.
- The study leader of the student at the outside laboratory must be aware of the responsibilities of promoters set by the Faculty of Veterinary Science and act accordingly.
- The study leader from the outside laboratory should consider what resources are needed to promote the student so provision can be made as needed.

3.3 TIME SCHEDULED / ACTION PLAN

It is expected from a candidate that he/she be motivated and on his/her own initiative arrange regular meetings with the promoter or study leader, to discuss research results and progress.

The following action plan can be used as a guideline by both the promoter and student to plan and co-ordinate the research.

SUGGESTED ACTION PLAN FOR POSTGRADUATE PROGRAMME			
PROGRAMME: TWO YEAR MSc			
STUDENT:			
DATE	MONTH	ACTION	WHO
	-2 to -12	Suggest and discuss field of research	Student and supervisor
	0 – 4	Develop research proposal/protocol	Student
		Attend Research Methodology course	Student
	4	Submit a research proposal/protocol and obtain approval from Animal Use and Care - and Research Committees	Student
	4-6	Present proposal/protocol to Faculty	Student
	6	Begin experimental data collection	Student
	16	Complete collection of experimental data	Student
	16	Begin writing up	Student
	16	Obtain title form from Academic Administration. Complete and return.	Supervisor
	16	Approach external examiners	Supervisor
	18	Present findings at national congress, Faculty Day and/or other forum. Start preparing scientific article related to this presentation.	Student
	18	Submit manuscript(s) to supervisor	Student
	18	Submit outline of dissertation to supervisor	Student
	18-22	Submit sections of draft dissertation to supervisor	Student
	22-24	Submit full dissertation to supervisor	Student
	24	Submit ring bound copies of dissertation to Academic Administration [one for each supervisor and examiner(s)], a permission form and ASN to be used for couriering copies to external examiners. Preparation of article(s) for submission to reviewed journal on subject matter of dissertation.	Student and Supervisor
	NB: 10 weeks before graduation	Allow six weeks for all examiners to return evaluations to Academic Administration.	Academic Administration
		Supervisor compiles a final report and submit to Head : Academic Administration	Supervisor
	5 weeks before graduation	Submission of required numbers of copies of the dissertation, which have been corrected to the satisfaction of the promoter and submission of final manuscript of article (for refereed journal) to promoter. The following are required: one bound and one unbound copy of the dissertation for the University. It is recommended that a bound final copy of the dissertation be presented to each examiner who has not retained an original copy. Allow four weeks for Academic Administration to attend to details	Student and Academic Administration

SUGGESTED ACTION PLAN FOR POSTGRADUATE PROGRAMME

PROGRAMME: THREE YEAR MSc

STUDENT:

DATE	MONTH	ACTION	WHO
	-2 to -12	Suggest and discuss field of research	Student and supervisor
	0 – 4	Develop research proposal/protocol	Student
		Attend Research Methodology Course	Student
	4	Submit a research proposal/protocol and obtain approval from Animal Use and Care - and Research Committees	Student
	6	Present proposal/protocol to Faculty	Student
	6	Begin experimental data collection	Student
	20	Complete collection of experimental data	Student
	20	Begin writing up	Student
	20	Obtain title form from Academic Administration. Complete and return.	Supervisor
	22	Present findings at national congress, Faculty Day and/or other forum. Start preparing scientific article related to this presentation.	Student
	24	Approach external examiners	Supervisor
	28	Submit manuscript(s) to supervisor	Student
	28	Submit outline of dissertation to supervisor	Student
	28 -30	Submit sections of draft dissertation to supervisor	Student
	30-32	Submit full dissertation to supervisor	Student
	32	Submit ringbound copies of dissertation to Academic Administration [one for each supervisor and examiner(s)], a permission form and ASN to be used for couriering copies to external examiners. Preparation of article(s) for submission to reviewed journal on subject matter of dissertation.	Student and Supervisor
	NB: 10 weeks before graduation	Allow six weeks for all examiners to return evaluations to Academic Administration.	Academic Administration
		Supervisor compiles a final report and submit to Head : Academic Administration	Supervisor
	5 weeks before graduation	Submission of required numbers of copies of dissertation, which have been corrected to the satisfaction of the promoter and submission of final manuscript of article (for refereed journal) to promoter. The following are required: one bound and one unbound copy of the dissertation for the university. It is recommended that a bound final copy be presented to each examiner who has not retained an original copy. Allow four weeks for Academic Administration to attend to details	Student and Academic Administration

SUGGESTED ACTION PLAN FOR POSTGRADUATE PROGRAMME

PROGRAMME: THREE YEAR PhD

STUDENT:

DATE	MONTH	ACTION	WHO
	-2 to -12	Suggest and discuss field of research	Student and promoter
	0 – 4	Develop research proposal/protocol	Student
	4	Submit a research proposal/protocol and obtain approval from Animal Use and Care - and Research Committees	Student
	6	Present proposal/protocol to Faculty	Student
	6	Begin experimental data collection	Student
	20	Complete collection of experimental data	Student
	20	Begin writing up	Student
	20	Obtain title form from Academic Administration. Complete and return.	Promoter
	24	Approach external examiners	Promoter
	22	Present findings at national congress, Faculty Day and/or other forum. Start preparing scientific article related to this presentation.	Student
	28	Submit manuscript(s) to supervisor	Student
	29	Submit outline of thesis to promoter	Student
	30	Submit sections of draft thesis to promoter	Student
	30	Submit full thesis to promoter	Student
	32	Submit ringbound copies of thesis to Academic Administration [one for each supervisor and examiner(s)], a permission form and ASN to be used for couriering copies to external examiners. Preparation of article(s) for submission to reviewed journal on subject matter of thesis.	Student and Promoter
	NB: 10 weeks before graduation	Allow six weeks for all examiners to return evaluations to Academic Administration.	Academic Administration
		Promoter compiles a final report and submit to Head : Academic Administration	Promoter
	5 weeks before graduation	Submission of required numbers of copies of thesis, which have been corrected to the satisfaction of the promoter and submission of final manuscript of article (for refereed journal) to promoter. The following are required: one bound and one unbound dissertation for the University. It is recommended that a bound final copy be presented to each examiner who has not retained an original copy. Allow four weeks for Academic Administration to attend to details	Student and Academic Administration

ACTION PLAN FOR POSTGRADUATE PROGRAMME			
PROGRAMME		THREE YEAR MMEDVET RESEARCH PROGRAMME (AS PART OF POSTGRADUATE CLINICAL PROGRAMME)	
STUDENT:			
SUPERVISOR:			
CO- SUPERVISOR:			
EXTERNAL:			
CLINICAL SUPERVISOR:			
DATE	MONTH	ACTION	WHO
	1 - 6	Attend research methodology course	Student
	6 – 10	Submit a research proposal. Appoint supervisor and co-supervisor	Student Clinical supervisor (guidance committee)
	10 – 15	Submit protocol and present to faculty	Student Supervisor
	15 – 18	Protocol approval (Finance, Animal Use and Care, Research committee)	Student Supervisor
	18 – 24	Complete collection of experimental data	Student
	24 – 27	Write up. Choose a title and submit to Title Committee. Approach external examiners. Present findings at national congress or other forum	Student Supervisor
	28	Submit article to supervisor for approval and journal submission.	Student
	29	Submit outline of dissertation to supervisor.	Student
	30	Submit sections of draft dissertation to supervisor	Student
	30	Submit full dissertation to supervisor.	Student
	32	Submit ringbound copies of dissertation to Academic Administration [one for each supervisor and examiner], a permission form and ASN to be used for couriering copies to external examiners. Preparation of article(s) for submission to reviewed journal on subject matter of dissertation.	Student and Supervisor
	10 weeks before graduation	Allow six weeks for all examiners to return evaluations to Academic Administration.	Academic Administration
		Supervisor compiles a final report and submit to Head : Academic Administration	Supervisor
	5 weeks before graduation	Submission of required numbers of copies of dissertation, which have been corrected to the satisfaction of the promoter and submission of final manuscript of article (for refereed journal) to promoter. The following are required: one bound and unbound dissertation for the university. It is recommended that a bound final copy be presented to each examiner who has not retained an original copy. Allow four weeks for Academic Administration to attend to details.	Student and Academic Administration

ACTION PLAN FOR POST-GRADUATE CLINICAL PROGRAMME		
PROGRAMME: 4 YEARS MMEDVET:		
STUDENT:		
CLINICAL SUPERVISOR:		
HEAD OF DEPARTMENT OR SECTION:		
ADDITIONAL MEMBER:		
COMMENCEMENT DATE:		
MONTH	ACTION	RESPONSIBILITY
-12 – 1	Discuss proposed study with the department	Student
1	(a) Register for degree	Student
	(b) Appoint postgraduate committee	HOD section head
	(c) Arrange for ancillary subjects for this year	Guidance committee
	(d) Introduce student to faculty	Clinical supervisor
2	Supply student with course objectives and clinical duties	Clinical supervisor
6	First meeting	Student Guidance committee
	Appoint supervisor, co-supervisor	Guidance committee
13	Second meeting	Student Guidance committee
	(a) Results of ancillary study in the first year	
	(b) Planning of 2 nd year	
	(c) Progress report to HOD, Dean, Postgraduate committee	
18	Third meeting	Student Guidance committee
24	Approval of student to continue MMedVet study	Guidance committee
25	Fourth meeting	Student Guidance committee
	(a) Plan course work in the major subject	
	(b) Setting dates for final examinations	
	(c) Identify external examiners	
	(d) Progress report to HOD, Dean, Postgraduate committee	
30	Fifth meeting	Student Guidance committee
37	Sixth meeting	Student Guidance committee
	(a) Final preparation for examinations	
	(b) Progress report to HOD, Dean, Postgraduate committee	
42	Final meeting	Student Guidance committee
48	Final report to HOD, Dean, Post-graduate committee	Clinical supervisor

- The guidance committee or supervisors may request a meeting at any time.
- Minutes of every meeting must be made available to all concerned within 14 days of the meeting.

3.4 This form is available at Academic Administration

APPLICATION FOR APPROVAL OF TITLE OF
DISSERTATION OR THESIS

This form must be completed *in typing*. Do not use capital letters unless applicable to the title. Send application form to: The Head: Academic Administration.

Department: _____

Degree: _____

Name of candidate: _____

Name of promoter: _____

Name(s) of co-promoter(s): _____

Title of dissertation / thesis: _____

Signature of candidate: _____

Signature of promoter: _____

Signature(s) of co-promoter(s): _____

Date of submission: _____

Approval recommended: _____

Convenor of Title committee: _____

Member of Title committee: _____

Date: _____

APPROVED: _____

DEAN: FACULTY OF VETERINARY SCIENCE

3.5 APPOINTMENT OF EXTERNAL EXAMINERS

This form is available at Academic Administration

DISSERTATION / THESIS

Department: _____

Degree: _____

Name of candidate: _____

Name of promoter(s): _____

Name co-promoter(s) _____

Approved title of dissertation / thesis: _____

(If title is not approved please attach the relevant form)

EXTERNAL EXAMINER (NAME & ADDRESS)

1. _____

2. _____

STUDYLEADER / PROMOTER: _____

APPROVED: _____
DEAN: VETERINARY SCIENCE

DATE: _____

3.6 FORM FOR SUBMISSION OF DISSERTATION / THESIS

This form is available at Academic Administration

Persoonlike besonderhede (Voltooi in drukskrif asseblief). * Personal details (Please print).

Titel * Title _____ Registrasienommer * Registration number _____

Van * Surname _____

Volle voorname * Full names _____

Huis of posadres * Home or postal address Werksadres * Employment address

Poskode _____ Postal code _____

Tel _____ Tel _____

Besonderhede van proefskrif / verhandeling * Details of thesis / dissertation

Graad * Degree _____ Departement * Department _____

Promotor / leier * Promoter/leader _____

Medepromotor * Co-promotor _____

Titel van proefskrif / verhandeling * Title of thesis / dissertation

Dit moet presies weergegee word soos goedgekeur deur titelkomitee en Dekaan (Hoof-, kleinletters en leestekens ingesluit). * This should be reflected exactly as approved by the title committee and Dean (Capital-, small letters and punctuation marks included).

Verklaring wat deur die kandidaat onderteken moet word * Statement which should be signed by the candidate

Ek verklaar hiermee dat die proefskrif / verhandeling wat hiermee vir die graad _____ aan die Universiteit van Pretoria deur my ingedien word nie voorheen deur my vir 'n graad aan enige Universiteit ingedien is nie. Ek neem kennis dat as die proefskrif / verhandeling goedgekeur word, ek die addisionele eksemplare soos deur die betrokke regulasies vereis, ten minste een maand voor die volgende promosieplegtigheid moet indien, in gebreke waarvan die graad nie toegeken sal word nie. * I hereby declare that the thesis / dissertation which is handed in by me to the University of Pretoria for the _____ degree was not handed in previously by me for a degree at any other University. I take notice that if the thesis/dissertation is approved, I will submit the additional copies, as prescribed by the relevant regulations, at least one month before the next graduation ceremony, failing which the degree will not be conferred on me.

Handtekening * Signature _____ Datum * Date _____

Verklaring wat deur die promotor / leier onderteken moet word * statement to be signed by the promotor / leader.

Ek verklaar hiermee dat ek die indiening van _____ se _____ proefskrif / verhandeling, asook die voorgeskrewe samevatting goedkeur. Voorts het ek my vergewis dat die mede-promotor / leier ook tot die indiening toestem. *

I hereby declare that I approve the submission of _____ 's _____ thesis / dissertation, as well as the prescribed summary. Furthermore I have ascertained that the co-promoter / leader also assents to the submission.

Handtekening * Signature _____ Datum * Date _____

(Promotor / leier * Promoter / leader)

Kwitansie vir Mikro-verfilming: R35,00
Receipt for Micro-filming: R35,00

4. RESEARCH

4.1 PROCEDURES FOR THE APPROVAL OF A PROTOCOL

The Head of the Department shall appoint a study-leader, who may also act as a student's supervisor or promoter. Hereafter this person will be referred to as 'supervisor'

- A supervisor is appointed by the Head of Department
- The student consults, discusses and identifies a project with the supervisor
- The protocol is to be drawn up between the postgraduate student and supervisor
- Once feasibility has been established, consult with the supervisor and, if necessary with the Head of Department or another person in the field of interest, for provisional approval of the project protocol
- The protocol may be evaluated and approved by outside interested parties and Head of Department, where applicable.
- Submit protocol to the Animal Use and Care Committee, Faculty of Veterinary Science for approval
- An Animal Use and Care Committee approved protocol is then submitted to the Research Committee, Faculty of Veterinary Science
- The protocol is then to be defended by the postgraduate student at an open meeting

4.2 WRITING A PROTOCOL – SUGGESTED FORMAT FOR A RESEARCH PROTOCOL

The protocol should be written using the following format:

COVER SHEET

The cover sheet shows at a glance the title, the date of submission, the correspondent, and the names of the researchers. The correspondent is the person to whom all administrative correspondence should be directed. This is not necessarily the main researcher, but may be a co-worker or even the supervisor/promoter. The cover sheet provides spaces for the approval of the research protocol by the supervisor/promoter, Head of Department, Animal Use and Care Committee and Research Committee.

The cover sheet contains a statement referring to the document entitled "Guidelines for Ethical Research" of the Ethics Committee. It is imperative that all researchers involved in the study be familiar with the contents of this document. The cover sheet has to be signed by all co-workers, which ensures their cooperation.

The protocol should be clearly identified and dated. The identification can be a short descriptive title or a number of keywords that accurately describe the project and indicate the main objectives and variables.

*e.g. "Pharmacokinetics of Diminazenin Sheep"
"Pharm / Diminazene / Sheep"*

A personal code or reference number (e.g. "/PHARM2") may be added. Noting the date is especially important as revisions may have to be made.

If planned experiment forms part of a larger research project, the title of the latter should be given first.

e.g. "Pharmacokinetics of Antimicrobials in Sheep: Part I"

4.2.1 JUSTIFICATION

4.2.1.1 Literature review

A literature review must be given. This should be concise and to the point, and its conclusion should indicate the gap that exists in the current knowledge. The latter then automatically leads to the problem or hypothesis.

4.2.1.2 Problem or hypothesis

The hypothesis or hypotheses should be clearly stated, particularly if the research to be undertaken is primarily explanatory in nature. In the case of a descriptive research project, the problem to be investigated must be clearly stated.

4.2.1.3 Benefits arising from the experiment

A brief statement of the envisaged benefits to be gained by conducting the experiment should be given. These could be either economic or academic, or both. The main reason for undertaking the research (e.g. postgraduate studies, contract research) should be stated.

4.2.1.4 Objective

The objective(s) of the trial must be stated briefly but explicitly. The nature of the research to be undertaken as well as the variables concerned should be clearly indicated.

4.2.2. MATERIALS AND METHODS

This section describes what is needed and what must be done in the research project.

4.2.2.1 Model system and justification of the model

A model system could include an animal population, laboratory animals or a laboratory bench model. The selection method of the population sample of the model system must also be described. The choice of model should be justified, especially if controversial or if extrapolation to other species is envisaged.

4.2.2.2 Experimental design

The experimental design should be described in terms of:

- the minimum size of the population and number of replicates required for the experiment;
- the requirement of experimental groups and, where applicable, the treatments assigned to each group; and
- The allocation procedure.

4.2.2.3 Experimental procedures

A description of every procedure that will be used during the experiment must be given. Some of the procedures may be very detailed and, in such cases applicable references can be given as an alternatives. It is also preferable to describe the data collection methods, forms to be used for data collection, and the criteria for classifying each item of data to be collected.

4.2.2.4 Observations / Analytical procedures

Observations to be measured should be clearly given (e.g. body mass, drug plasma levels, blood cell counts, worm counts, histology, etc.). Provision must be made to record in a daily log all scheduled and unscheduled events.

4.2.2.5 Data analysis

The methods by which the data will be summarized and statistical tests that will be performed should be described. The person(s) who will be performing the analyses should be clearly identified, but this does not relieve the researcher of mentioning the statistical methods.

4.2.3 PROJECT MANAGEMENT

This part describes the specific administration and management of the research project and provides the details of the specific procedures and of the model system, which are going to be used.

4.2.3.1 Experimental animals

A complete description of the model system including the type, source and number of experimental animals should be given. Where applicable the conditions of housing, environment and nutrition should be given and husbandry methods, if pertinent to the study, commented on. The management of the animals prior to the start of the experiment, including transportation, quarantine and adaptation should be described. It is of great importance to indicate the person who will be responsible for the routine daily care, veterinary supervision and emergency care of the animals.

4.2.3.2 Staff, facilities, equipment and supplies

List the staff, facilities, equipment and supplies needed for the experiment. The activities of each staff member performing the procedures should also be stipulated. In case of postgraduate research the promoter should be mentioned.

Specific arrangements, in cases of collaboration with, or assistance from other investigators, laboratories or institutions, should be clearly described. If applicable, the training staff members involved in the research, the calibration of apparatus and observation-making procedures should be described.

If appropriate, a text box may be included in the protocol depicting the support services, the names of the responsible persons and their signatures.

SUPPORT SERVICE	SIGNATURE
1.	
2.	
3.	
4.	
5.	

4.2.4 REPORTING

Describe the form of the research report and list the possible publications which may arise from the research, including the name of the journal envisaged and the senior author and co-authors (in the order anticipated). In case of contract research it should clearly be stated whether publication will be allowed.

4.2.5 RECORDS

The place, duration and requirements for storage of records and samples must also be stated.

4.2.6 DEVIATIONS & RECORDS

Occasionally it may be necessary to deviate from the protocol. The action that needs to be taken under such circumstances should be clearly described, particularly in the case of contract research. Should deviations have any ethical implications, a description of the intended changes should be submitted in writing to the Ethics Committee for approval.

4.2.7 ETHICAL CONSIDERATIONS

Ethical matters must be included as an integral part of the protocol and not described in an Addendum. The critical areas, however, can be pointed out under this heading. This may include an escape clause, informed consent arrangements in case of clinical research, and the fate of experimental animals or biological material after the completion of the research project. Protective measures in case of research using material that poses a health risk for the researchers (e.g. infectious agents, radioactive material, and recombinant DNA) must be addressed.

4.2.8. BUDGET

List cost estimates for personnel, consultants, animals, supplies, laboratory charges, travel and any other necessary expenses.

Sources of funds should be clearly indicated. If the protocol also serves as an application for funds from the Faculty of Veterinary Science's Research Committee please give a clear indication of the extent of funding requested.

4.2.9 DURATION AND TIME SCHEDULE

The approximate duration of the trial should be stated. Specify the approximate starting and/or completion dates of the trial and the day of trial for each of the principal operational phases.

4.2.10 REFERENCES

List all applicable literature references according to a recognized format

TITLE PAGE

This document is available on the network at I:\forms\navprot

**FACULTY OF VETERINARY SCIENCE
UNIVERSITY OF PRETORIA**

APPLICATION TO PERFORM EXPERIMENTS

Must be attached to every copy of the Protocol !!

PROJECT	
TITLE:	
DATE:	
PROJECT NUMBER: 36.5.	

APPLICANTS	NAME	HIGHEST QUAL VET + NON-VET	SIGNATURE
RESEARCHER:			
Telephone Number:	Work:	Home:	
SUPERVISOR:			
CORRESPONDING AUTHOR:			
CO-WORKER:			
CO-WORKER:			
CO-WORKER:			
CO-WORKER:			
CO-WORKER:			

AUTHORISATION	
NAME OF HOST DEPARTMENT: SIGNATURE OF DEPARTMENT HEAD:	
SIGN. OF BIOHAZARD OFFICER for biohazardous materials (specify):	
SIGNATURE OF DIRECTOR OVAH (if OVAH or its staff are involved):	

FACILITY	
NAME OF FACILITY USED (OVARU, SANDF etc): SIGNATURE OF HEAD:	

CONSENT BLOCK		
TYPE OF SERVICE	NAME	SIGNATURE

PROPOSED SOURCES OF FUNDING (NB! Detailed budget to be included in Protocol)		
FACULTY OF VET SCIENCE	AMOUNT PROPOSED?	AMOUNT CONFIRMED?
OTHER SOURCES		

REFEREES

Please nominate 2 experts who have agreed to evaluate your Protocol scientifically and technically
(Only required for Academic Type Research)

NAME & TITLE	POSTAL & E-MAIL ADDRESS
--------------	-------------------------

REFEREE 1	

REFEREE 2	

RESEARCH PUBLICATION

WILL THE WORK BE PUBLISHED /	
IN WHICH JOURNAL /	
WHEN WILL IT BE PUBLISHED	
IF NOT, WHY NOT	

TYPE OF RESEARCH

ACADEMIC		CONTRACT	
COMMERCIAL		TEACHING/CONTND EDUCATION	
FOR MASTERS DEGREE		FOR DOCTORATE	

RESEARCH CATEGORY (See attached list)					
A1	A2	B	C	D	E

DECLARATION BY PROJECT LEADERS AND RESEARCHERS
 I/we declare that:

1. The Guidelines for Ethical Research were read and accepted.
2. The work, to the best of my/our knowledge, is not an unnecessary repeat of work already done.
3. The experiment has been specifically so designed as not to be wasteful of animals.
4. The experiment has been so designed as to minimise discomfort, stress and distress to the animals and to use the least number and the lowest order of animals.
5. The benefits of the experiment to science and ultimately to the animals exceed the suffering and sacrifice of the experimental animals.
6. All alternatives have been carefully considered and I/we are satisfied that it is impossible to obtain the objectives in any other way.
7. I/we have familiarised ourselves with the relevant legislation and regulations such as “National Code for the use of Animals in Research, Education, Diagnosis and Testing of Drugs and Related Substances in South Africa” and will abide by these principles.

DECLARATION CONFIRMED		
	NAME	SIGNATURE
RESEARCHER		
SUPERVISOR		
PERSON RESPONSIBLE FOR THE VETERINARY CARE OF THE ANIMALS		

ANIMAL USE AND CARE COMMITTEE FOR APPROVAL	
Signature	Date

RESEARCH COMMITTEE APPROVAL

Signature	Date
-----------	------

RESEARCH CATEGORIES

(Extracted from: Special Issue, Laboratory Animal Science, January 1987, p 12 and adapted)

Category A1

Experiments involving either no living materials or use of plants, bacteria, protozoa or invertebrate animal species

Biochemical, botanical, bacteriological, microbiological, or invertebrate animal studies, tissue cultures, studies on tissues obtained from autopsy or slaughterhouse, studies on embryonated eggs. Invertebrate animals have nervous systems and respond to noxious stimuli, and therefore must also be treated humanely.

Category A2

Studies on vertebrate animals during the course of routine examination, sampling, procedures and treatment

Animal patients referred to the clinics or OVAH outpatients by the owner for veterinary care, serving as a source of study material originating from the normal, and nothing over-and-above the normal, minimum routine procedures, sampling for diagnostic purposes, and treatment. The kind of study that normally does not require owner consent. Any procedure above the normal as described under this category falls under Categories B, C, D or E.

Category B

Experiments on vertebrate animal species that are expected to produce little or no discomfort.

Mere holding of animals captive for experimental purposes; simple procedures such as injections of relatively harmless substances and blood sampling; physical examinations; experiments on completely anaesthetised animals which do not regain consciousness; food/water deprivation for short periods (a few hours); standard methods of euthanasia that induce rapid unconsciousness, such as anaesthetic overdose or decapitation preceded by sedation or light anaesthesia.

Category C

Experiments that involve some minor stress or pain (short-duration pain) to vertebrate species.

Exposure of blood vessels for long-term or implantation of catheters under anaesthesia; behavioural experiments on awake animals that involve short-term stressful restraint; immunisation employing Freud's adjuvant; noxious stimuli from which escape is possible; surgical procedures under anaesthesia that could result in some minor post-surgical discomfort. Category C procedures incur additional concern in proportion to the degree and duration of unavoidable stress or discomfort.

Category D

Experiments that involve significant but unavoidable stress or pain to vertebrate animal species.

Deliberate induction of behavioural stress in order to test its effect; surgical procedures under anaesthesia that result in significant post-operative discomfort; induction of anatomical or physiological deficit that will result in pain or distress; application of noxious stimuli from which escape is impossible; prolonged periods (up to several hours or more) of physical restraint; maternal deprivation with substitution of punitive surrogates; induction of aggressive behaviour leading to self-mutilation or intra-species aggression; procedures that produce pain in which anaesthetics are not used, such as toxicity testing with death as an end point; production of radiation sickness, certain injections, and stress and shock research that would result in pain approaching the pain tolerance threshold, i.e. the point at which intense emotional reactions occur. Category D experiments present an explicit responsibility on the investigator to explore alternative designs to ensure that animal distress is minimised or eliminated.

Category E

Procedures that involve inflicting severe pain near, at, or above the pain tolerance threshold of unanaesthetised, conscious animals.

Use of muscle relaxants or paralytic drugs such as succinyl choline or other curareform drugs used alone for surgical restraint without the use of anaesthetics; severe burn or trauma infliction on unanesthetised animals; attempts to induce psychotic-like behaviour; killing by use of microwave ovens designed for domestic kitchens or by strychnine; inescapably severe stress or terminal stress. Category E experiments are considered highly questionable or unacceptable irrespective of the significance of anticipated results. Many of these procedures are, in the USA for example, specifically prohibited in national policies and therefore may result in withdrawal of federal funds and/or institutional USDA registration.

4.3 WHERE TO FIND RESEARCH FUNDING

Funds are generally available. Consult the specific Heads of Departments or your study leader or promoter for more information.

Choice of the most suitable source for funding depends on the area of research, specific projects, personal abilities, etc. A document on research funding is available at Academic Administration on request.

5. THESIS / DISSERTATION

5.1 GENERAL

The University will not accept a thesis/dissertation that has been submitted for a degree at another university. A student may include material from existing publications in the thesis/dissertation, provided it is clearly indicated as such. However, any thesis/dissertation or published work, which has already been accepted for other degree purposes, will not be accepted.

The title of the thesis must be submitted for editorial approval, to the Title Committee, Faculty of Veterinary Science. The appropriate form is available at Academic Administration.

5.2 TECHNICAL ASPECTS

Format

The thesis/dissertation must be typed in the A4 format, on good quality paper, which does not permit undue show-through, using at least one and a half spacing and leaving a left margin of at least 2 cm. At least a 10-font type size must be used. Pages must be numbered. Paragraphs must be blocked on the left with double spacing between paragraphs.

The thesis/dissertation must not be typed on stencils and must, in the opinion of the University, be suitable for microfilming.

A summary in English of approximately 350 words, approved by the supervisor, must be included in all copies of the thesis/dissertation. It must be placed after the title, acknowledgements and list of contents, figures and tables.

Language

The thesis/dissertation must be in English. The text must be typed in one and a half spacing, in sentence case. Bold, italics and word-underlines may be used but be consequent in their use.

Title page

This is the first page of the thesis/dissertation and the title must be evenly distributed over the page and centered.

Example of the title page:

THE EFFECTS OF LONG-TERM INGESTION OF ESSENTIAL FATTY ACIDS ON
PROSTAGLANDIN METABOLISM

By

PATRICK GRAHAM MURRAY

Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the
Department of Physiology in the Faculty of Veterinary Science, University of Pretoria

Date submitted: May 1992

Acknowledgements

A page in which the candidate acknowledges and expresses appreciation to the people and institutions that contributed towards the completion of the thesis is generally included. This follows the title page. It is not compulsory, however, to include these acknowledgements but it is considered customary, desirable and recommended to do so.

List of Contents

All the headings and subheadings of the thesis/dissertation with the correct numbering system must be summarized on this page. The page numbers must also be indicated.

List of Figures and Tables

A list of all the figures and tables in the thesis/dissertation with the page numbers on which they occur follow the list of contents.

Summary

A summary of not more than 350 words must be bound into the thesis. The summary shall include the following:

- The title of the thesis/dissertation
- The word 'by' (see below)
- The first names and surname of the candidate
- The title, initials and surname of the promoter/s
- Department
- For which degree the thesis is submitted

Example of summary page:

SUMMARY

THE EFFECTS OF LONG-TERM INGESTION OF ESSENTIAL FATTY ACIDS ON
PROSTAGLANDIN METABOLISM

By

PATRICK GRAHAM MURRAY

Promoter: Prof ZA Gerits
Co-promoter: Dr PGH Tsobu
Department: Veterinary Physiology
Degree: PhD

The aim of this study

Numbering of headings and Figures and Tables

Numbers are used for numbering tables, figures and graphs. **TABLE 1.10** means it is the 10th table of chapter 1. And **FIGURE 5.6** is the sixth figure of chapter 5, etc. The caption of a table is placed above the table.

Example:

TABLE 4.2: LEGEND

TABLE

The legend of a figure is placed below the figure.

Example:

FIGURE

FIGURE 1.1: LEGEND

The word 'Figure' can, if described, be abbreviated to 'Fig.' or 'FIG.' both in the text and in the legend.

Use of numerals in the text

Numbers from one to ten are spelt out in the text. Numerals, e.g. 11, 55, are used for all numbers above ten. However, if the numbers are part of a series, e.g. 1 – 10 cattle or form part of a unit of measurement e.g. 1ml, 2mg, numerals are always used. Use 1 sheep, 2 dogs, 300 cattle, except where the number is the first word in a sentence e.g. Fifty six cattle.....

Numbers are used to number headings and/or paragraphs. If it is necessary to number or highlight paragraphs within the text, symbols can also be used e.g. •, *, – etc.

The use of scientific names

Correct scientific terminology must be used which in some cases may have to be defined so that the reader is able to understand the meaning.

The latest taxonomic nomenclature must be used; and as is customary, the names of organisms, plants, etc. are italicized or underlined e.g. *Bacillus anthracis*

References

Purpose of referring

When the ideas, arguments or methods of other people are used, they must be referenced in order not only to acknowledge their contribution, but also to enable the examiners and others to have access to them and if necessary to verify them.

The correlation between references in the text and list of references

The references cited in the text must correlate meticulously with the references in the reference list, and *vice versa*. Make sure that the spelling of names and dates in the text tally with those in the reference list.

Technique of referring

The candidate must use an accepted method or style for references cited in the text and in the reference list. Once a particular method has been decided on this must be used consistently throughout the thesis/dissertation.

The following publications are suggested only as guidelines. The candidate should, however, give priority to departmental preferences in making a decision.

Musiker, R., 1980. Style guide for thesis and dissertations. Johannesburg: University of the Witwatersrand

Roux, PJA.,1981. Reference technique. Pretoria: University of South Africa

The following can be used: Guide for authors. 1997. *Onderstepoort Journal of Veterinary Research*. **64**: 89 – 97.

Examples:

References in text:

Journals/Textbooks

According to Swart (1989) the following happened....

Swart (1989) indicated the following....

In more than one year:

Swart repeatedly showed (1989, 1990, 1991).....

More than one author:

Swart (1989) and Tsibo (1990) showed

It was demonstrated that.....(Swart, 1989; Tsibo, 1990)

According to Swart, Tsibo and Gerits (1990) the following.....

The following was noted to be (Swart, Tsibo & Gerits, 1990).

Where there are three or more authors, the first name is used followed by 'et al.' (=and others) in italics.

Swart *et al.* (1990) proved

No author only title:

.....(Communication in practice, 1998).

Reference list:

References are generally listed alphabetically by the name of the first author. If there are several references by the same author they are customarily listed chronologically. The method or style of punctuating should be consistent throughout.

Journals

The sequence of information referring to an article in a Scientific Journal:

- AUTHORS followed by initials (all in capital letters) e.g. SWART, J.S.
- Year e.g. 1979 or (1979)
- Title of the article. Capital letter for the start of the sentence and then small letters.
- Information about the journal
 - Title of the journal – this is either underlined or in italics, and written out in full, with no abbreviations
 - Volume and/ or number
 - Page numbers e.g. 1 - 10

Thus,

HOWITT, J. 1990. Online catalogues. *Library trends* 9(3): 131 – 140.

Textbooks

The sequence of information when referring to a book

- AUTHOR – followed by initials (all in capital letters)
- Year
- Title of book, can be underlined or in italics
- Edition – not if it is the first one
- Place of publishing and name of publisher
- Page numbers used in text – can be omitted, depends on study leader

EXAMPLES:

- Book with one author

BARNARD, P.B., 1985. Communication and instruction. 2nd ed. Durban: Butterworth.

- Book with two authors

CAWOOD, S.R. & BARNARD, P.B., 1986. Education in South Africa. Goodwood: Nasou.

- Book with three authors

CAWOOD, S.R., BARNARD, P.B & VAN ZYL, G.H., 1988. Scientific publications. New York: Harper & Row.

- Book with more than three authors

Two options:

Name all the authors (and in text only one i.e. the senior author followed by *et al.*)

or

Use the title of the book to refer to.

INFORMATION retrieval. 1978. By J. Trehan....(*et al.*) Los Angeles: Wiley.

- Book where the author is not mentioned

INFORMATION retrieval. 1990. Second edition. Los Angeles: Wiley.

- Book, which has been edited by another author

BARNARD, P.B., 1985. Communication and instruction. Edited by A. C. Pretorius. Durban: Butterworth.

- Book by an author/s, which has been translated by another author

CAWOOD, S.R., BARNARD, P.B & VAN ZYL, G.H., 1988. Scientific publications. Translated by Una Mey. New York: Harper & Row.

- Book of which the author is not mentioned and translated by another author

The TEACHER'S guide to classroom management. 1990. Translated by Gwen Jones. London: Bodley Head

- Book, which has been released by an editor

Two options:

- Use the title of the book to refer to.

COMMUNICATIVE aspects of information organization. 1985. Edited by A. Rennie McElroy. London: Library Association.

- Use the editor

McELROY, A. Rennie (ed) 1985. COMMUNICATIVE aspects of information organization. London: Library Association.

- Book, which is part of a series of books

WATSON, E. & VARTY, W. 1987. World focus. Volume 1, Southern Africa. London: McGraw-Hill.

- Book with corporate authors (organization, business)
BRITISH MUSEUM. 1994. Catalogue of paintings in the British Museum. London.
 - Publications from the government
REPUBLIC OF SOUTH AFRICA. Department of National Education. 1992. General framework of education programs for Universities. Pretoria.
- TRANSVAAL. 1958. Ordinance. Pretoria: Government Printer.
- Proceedings from congresses
CONFERENCE OF BRITISH TEACHERS OF MARKETING AT ADVANCED LEVEL (3RD: 1986: Harrogate). 1987. Proceedings. Lancaster: University of Lancaster.
 - Dissertations
DE JAGER, Cilla. 1989. The history of technicon libraries. M.Bibl. Dissertation, University of Pretoria.

Because this is not published, the title is not underlined.

Editorial care of a thesis or dissertation

A thesis must be comprehensive but to the point. Do not repeat yourself, keep sentences short and be brief. The following may help:

- Make complex statements into short points
- Do not use sophisticated words when you can explain things easier
- Do not use 'empty' phrases e.g. 'it is interesting to know.....'
- Avoid the use of unnecessary words
- Avoid the use of personal words e.g. mine, you, they, etc.

Sentences:

Do not use long sentences. Sentences consisting of more than 25 words may not be clearly understood.

Paragraphs:

Paragraphs are used to help the reader to construct thoughts:

- A paragraph must contain one main thought assist by facts
- In a technical document the main statement will be in the beginning of the paragraph and convincing statements at the end of the paragraph
- It is encouraged that there be a flow of facts, through overlapping between paragraphs
- Paragraphs should not be too long

Abbreviations:

Avoid the use of abbreviations in the text. The use of abbreviations must be spelled out in a glossary in the beginning of the thesis. However, use abbreviations for units of measurement, e.g. 1 mℓ , 30 ℓ , 500 g, 10 μm, 3 mm, 5 ha, °C, % (percentage). Use metric units (SI system) throughout.

Editorial

This includes the reading, finishing off and all the corrections of the text and is the responsibility of the author. The following is a helpful tick-off list:

- The accuracy of the facts
- Eliminate ambiguous statements
- Emphasize important statements or ideas
- If the facts are meaningful and significant
- Facts must not be prejudiced or have a double meaning
- Easy to understand

- Applicable to the subject
- Flow of facts must be logical
- Use of correct language
- Numbering system chronological
- Numbers in text must correspond to the list of contents
- Figures, tables and references correct

5.3 GUIDELINES FOR THE SUBMISSION OF DISSERTATIONS/THESES

5.3.1 SUBMISSION DATES

GRADUATION CEREMONY

- | | | | |
|-----|----------------|-----|---------------------------------|
| (a) | End of May | for | September (Spring graduation) |
| (b) | End of July | for | November (Summer graduation) |
| (c) | End of October | for | March/April (Autumn graduation) |

5.3.2 DOCTORAL CANDIDATES

Copies required : One for each supervisor and examiner plus one bound copy and one unbound copy for the library (The library copies may be submitted later). The copies for the examiner's need not be bound – on condition that the final approved thesis be bound and presented to the examiners by the student.

Bound :

- Title page in front.
- An abstract of not more than 500 words each in Afrikaans and English (in front or at the back). (A list of at least 10 key terms in lay person's language compiled in co-operation with the supervisor should be added to the summary.)

Unbound :

- Title page in English plus an abstract in English of no more than 350 words** (on two separate A4 pages). (NB. A list of at least 10 key terms should be added to the summary)
- Submission form** (signed by supervisor) obtainable from the Academic Administration Office).
- R35 for microfilming** (payable to the cashier before submission).
- A completed "abstract" form** (obtainable from Academic Administration Offices).
- Curriculum Vitae*, in consultation with supervisor, of not more than 170 words. Last paragraph of 100 words. (Typed in double spacing.) (Signature of supervisor required.) (Example obtainable from Academic Administration Offices.)
- Draft article for publication** (in consultation with supervisor).

5.3.3 MASTERS' DEGREE CANDIDATES

Copies : One for each supervisor and examiner plus one bound copy and one unbound copy for the library (The library copies may be submitted later) The copies for the examiner's need not be bound – on condition that the final approved thesis be bound and presented to the examiners by the student.

Bound :

- Title page in front.
- An abstract of not more than 500 words each in Afrikaans and English (in front or at the back). (A list of at least 10 key terms in lay person's language compiled in co-operation with the supervisor should be added to the summary.)

Unbound :

- A list of at least 10 key terms should be added to the summary.
- Submission form** (signed by supervisor) obtainable from the Academic Administration Office).
- R35 for microfilming** (payable to the cashier before submission).
- Draft article for publication** (in consultation with the supervisor).

5.3.4 TECHNICAL DETAILS

Copies must be bound in a hard cover with :

- the title of the thesis/dissertation and initials and surname of the candidate on the front cover; and
- year, surname and initials on the spine.

Copies must be printed on good quality paper and in letter quality.

A4 or A5 paper size may be used and printing may be done on both sides of the page.

Unbound copies submitted for microfilming must be printed on A4 high contrast paper.

For further details consult Part I of the University's General Calendar.

CURRICULA VITARUM (example)

The degree DLitt

DALENE VAN VUREN

Dalene van Vuren was born in Springs and matriculated at St Dominic's Convent, Boksburg. She obtained a BA degree from Unisa, the H Dip Ed (PG) from Wits, a BA Hons and MA degree from the Rand Afrikaans University. She also holds a Liscentiate in Speech and Drama from the University of South Africa and an international diploma in the didactics of French as a foreign language from the Alliance Francaise in Paris. She has taught drama, ballet and French.

In her thesis, entitled **The seduction of genre: a study of organic narrative techniques in the novels of Margaret Atwood,**

The promovenda argues that Atwood's manipulation or "seduction" of conventional genres imbues these novels with an inimitable organic realism. Atwood's technique of conflating several genres with a single novel, her use of subtext and a myriad of cameo analogies conjoin to create a complex palimpsestic patchwork, which defies closure and allows for a multiple layering of interpretation.

Miss van Vuren contends that each novel ensures a dynamic kaleidoscopic effect whereby nuances and meanings shift and change in relation to whichever genre or viewpoint the critic selects as analytic approach.

Supervisor : *Prof Dr R A Gray*
External Examiners : *Prof Dr Leclaire (Université de Rouen, France)*
: *Dr M J Williams (University of South Africa)*

Signature (supervisor)

6. GUIDELINES FOR EXTERNAL EXAMINERS

6.1 GUIDELINES FOR EXTERNAL EXAMINERS OF MASTERS DEGREE DISSERTATIONS IN THE FACULTY OF VETERINARY SCIENCE, UNIVERSITY OF PRETORIA

The goal of masters degree studies is to enable the candidate to undertake some measure of research on his/her own, but the research need not be original. The basic objectives for a Masters' degree at the Faculty of Veterinary Science, University of Pretoria, are, firstly, that the student shall be able to plan, execute and write a research project, and secondly, that the candidate is capable of interpreting and discussing the findings. Please note that explicit hypothesis-testing, i.e. experimental work is not necessarily mandatory.

The candidate is also permitted to submit appropriately bound, earlier, applicable, published work as part of the dissertation, but this must be accompanied by sections on Introduction, Materials and Methods, and Discussion of the results.

Your attention is drawn to the fact that each examiner is required to submit a written report independently on the dissertation, with particular reference to the following aspects of the dissertation:

- a) Whether the candidate:
 - is conversant with the purpose of the investigation;
 - is familiar with and has evaluated the relevant literature;
 - has mastered the techniques required in the investigation;
 - is conversant with the methods of scientific investigation;
 - has arranged his research findings meaningfully; and
 - is capable of interpreting and discussing the relevance of the findings.
- b) Any possible deficiencies which you found in the dissertation.
- c) What corrections or amendments, if any, you would suggest in order to improve the dissertation? If there are any corrections, typographic errors, etc., which you feel need to be corrected, these may be indicated in the text of the dissertation, which is then returned, so that the candidate can effect the required alterations.
- d) Comments on the manner of writing, style and organisation of the dissertation if so desired.
- e) Any other aspects of the dissertation which may be of importance.
 - Your report will be expected to clearly state whether you recommend that the dissertation:
 - be accepted;
 - be accepted but returned to the candidate for corrections;
 - be returned to the candidate for revision or extension;
 - be rejected.

A specific mark out of 100 shall be awarded for the dissertation by the external examiner. Please state clearly in your report whether you recommend that the dissertation be accepted or rejected. If you recommend that the dissertation be rejected please give reasons. A mark below 50% indicates that the dissertation has failed, and 75% and above that it has passed with distinction.

The following may serve as a guide for the allocation of marks:

• Subject, objectives, problem definition, hypothesis	10%
• Research methodology, scientific organization	15%
• Literature review	15%
• Results and discussion	35%
• Summary, conclusions and recommendations	15%
• Literary style and quality, technical compilation and editorial care	10%
<u>TOTAL</u>	<u>100%</u>

If there are any questions you may wish to have put to the candidate please incorporate them in your report so that the University Board of Examiners can do so on your behalf, if deemed necessary. Submit your report at The Head: Academic Administration.

Your report is a confidential document, which may not normally be made available to any unauthorized persons.

6.2 GUIDELINES FOR EXTERNAL EXAMINERS OF PhD THESES IN THE FACULTY OF VETERINARY SCIENCE, UNIVERSITY OF PRETORIA

The main objective of doctoral studies is to enable the candidate to undertake original research in all its semi-fractions, under supervision. The basic requirements and expectations of a PhD at the Faculty of Veterinary Science, University of Pretoria are, firstly, that the project should have been planned, executed and the results written up by the candidate, and secondly, that the findings should make an original, meaningful contribution to science. Please note that explicit hypothesis-testing, i.e. experimental work is not necessarily mandatory.

Your attention is drawn to the fact that each examiner is required to independently submit a written report on the thesis in which the following aspects are to be covered:

- a) Whether the candidate:
 - is conversant with the nature and purpose of the investigation;
 - is familiar with and has critically evaluated the relevant literature;
 - has mastered the techniques required in the investigation;
 - is thoroughly conversant with the methods of scientific investigation;
 - has arranged his research findings meaningfully
 - is capable of interpreting and discussing the relevance of the findings; and
 - has made an original contribution to science.
- b) Any possible deficiencies which you found in the thesis.
- c) What corrections or amendments, if any, you would suggest in order to improve the thesis. If there are numerous corrections, typographic errors, etc., which you feel must be corrected; these can be indicated in the text of the thesis, which then must be returned so that the candidate can effect the required alterations.
- d) Comments on the manner of writing, style and organization of the thesis.
- e) Any other aspects which may be of importance.
 - Your report will be expected to state clearly whether you recommend that the thesis:
 - be accepted;
 - be accepted but returned to the student for corrections;
 - be returned to the candidate for revision or extension;
 - be rejected.

It is not necessary to allocate a specific mark for the thesis, but please state clearly in your report whether you recommend that the thesis be accepted or rejected. If you recommend that the thesis be rejected please give reasons.

The following may serve as a guide for the allocation of marks:

• Subject, objectives, problem definition, hypothesis	10%
• Research methodology, scientific organization	15%
• Literature review	15%
• Results and discussion	35%
• Summary, conclusions and recommendations	15%
• Literary style, technical compilation and editorial care	10%
<u>TOTAL</u>	<u>100%</u>

If there are any questions you may care to have put to the candidate please incorporate them in your report so that the University of the Board of Examiners can do so on your behalf, if deemed necessary. Submit the report at The Head: Academic Administration.

Your report is a confidential document, which may not normally be made available to any unauthorized person.