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GRADUATE STUDIES IN PHYSIOLOGICAL SCIENCES

College of Veterinary Medicine
University of Florida
Gainesville, FL 32610

These guidelines have been developed by the College of Veterinary Medicine, Physiological Sciences Graduate Studies Committee. The purpose is to provide prospective graduate students and faculty with written statements of policy. The student should consult the graduate catalog as well as this information.

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COLLEGE OF VETERINARY MEDICINE GRADUATE PROGRAM

1. The Department of Physiological Sciences accepts candidates for the Ph.D. degree only. Application for admission to the Graduate School must be made to the Director of Admissions as described in the Graduate Catalog. In addition to requirements stated in the catalog, the College of Veterinary Medicine requires the following:
 - A. Grade Point Average (GPA): Admission is normally limited to students with an undergraduate GPA of 3.2 or above. Particular attention will be paid to grades received in basic science courses.
 - B. Graduate Record Examination (GRE): A GRE total score of 1,150 or above for verbal and quantitative parts will normally be required for admission. Special attention will be given to results of the quantitative portion of the GRE examination.
 - C. Letters of Recommendation: Letters from at least 2 former teachers or persons with knowledge of the applicant's academic record and personal characteristics are required.
 - D. TOEFL Examination: Foreign applicants must present their scores on TOEFL (Test of English as a Foreign Language) and the Graduate Record Examination (GRE) before consideration for admission. A TOEFL score of 550 or higher is required for admission. Students with a score of less than 550 may be conditionally admitted if they enroll in a special English course for foreign students and meet other admission requirements. GRE scores of foreign applicants will be reviewed by the admissions committee.
2. Types of Admission
 - A. Direct: A student who meets the above requirements is classified by the College as a regular graduate student.
 - B. Conditional: An applicant who fails to meet fully the above admission requirements, but is deemed to have potential as a graduate student may be admitted conditionally.
 1. A conditionally admitted student must attain regular graduate status by maintaining satisfactory academic progress.
 2. The program of a conditionally admitted student will be reviewed each semester by the Physiological Sciences Graduate Coordinator.

GRADUATE ASSISTANTSHIPS

A limited number of College of Veterinary Medicine assistant-ships are available and are awarded on the basis of academic and other qualifications. Conditionally admitted students are not eligible for an assistantship until they attain regular graduate status. Limits are placed on the amount of support which will be approved for any one student as follows: Doctoral candidates with an M.S. degree should complete their program in 3 years, and doctoral candidates without

an M.S. should complete their program in 4 years. Assistantships may not be recommended beyond these time limits.

The College graduate studies committee will use the following guidelines in recommending applicants for financial support:

I. Graduate Assistantships in the College of Veterinary Medicine

A. Students presently holding assistantships are given first priority, provided they are making satisfactory academic progress and their work as an assistant has been satisfactory. Satisfactory academic progress will be defined as follows:

1. Compliance with time limitations for degree completion as previously described.
2. A minimum grade point average of 3.0 for all courses taken. Dissertation, problem, or thesis credits will not be counted in computing the average.
3. For doctoral candidates, the qualifying examination should be passed by the beginning of the 5th semester.

B. New applicants for assistantships will be rated as previously described under Admission to the Veterinary Medicine Program, namely based on GRE and TOEFL scores, GPA, and letters of recommendation.

II. Fellowship Applicants

The above guidelines shall also apply to applicants for fellowships or traineeships.

APPOINTMENT OF SUPERVISORY COMMITTEES

Ph.D. candidates should form a supervisory committee of at least 4 members of the graduate faculty (preferably 5) by the end of the second semester of enrollment. The chairperson and at least one other member of the supervisory committee must have an appointment in the Department of Physiological Sciences (primary or joint appointment), and at least one member of the supervisory committee must have a primary appointment in the Department of Physiological Sciences. Each supervisory committee for Ph.D. candidates must also have at least one external member from a department outside of the College of Veterinary Medicine. The student must send an **appointment of supervisory committee form** with appropriate signatures to the Dean of the Graduate School.

CURRICULA

Students with advanced standing may apply for course exemptions when minimum requirements have been met. For example, the typical professional veterinary medicine/medicine course background may satisfy core course requirements C and D (see below), but the student must petition for exemption to the Physiological Sciences graduate studies committee. Exemption from core course requirements

will be based on the student's academic record in the courses under petition. A total of 90 course credits is required for the PhD.

- I. Prerequisite courses: The courses listed below are considered a minimal undergraduate academic background for Physiological Sciences graduate students. Deficiencies in prerequisite course-work must be removed before a student can be advanced to candidacy.
 - A. Mathematics: A minimum mathematics background is calculus through integral calculus.
 - B. Biochemistry: A minimum of 4 semester credits of general biochemistry is required.
 - C. A minimum of 6 semester credits of zoology or biology is required.

- II. Core courses: The following are the minimum course requirements for all Physiological Sciences graduate students. Should the student wish to substitute a course not listed below for one that is listed, the student's Major Professor must petition the Graduate Coordinator prior to registration. Any "equivalent" course may be used to satisfy requirements in only one of the categories below.
 - A. Statistics Core: A minimum of 3 semester credit hours of graduate level statistics: STA 6166 (3 cr), STA 6934 (3 cr), or equivalent.
 - B. Biochemistry and Molecular Biology Core: A minimum of 3 semester credit hour of graduate coursework: BCH 5413 (Mammalian Molecular Biology and Genetics, 3 cr), BCH 6206 (Metabolism, 3 cr), BCH 6740 (Physical Biochemistry/Structural Biology, 3 cr), GMS 6051 (Signal Transduction, 1 cr), GMS 6052 (Ion Channels, 1 cr), or equivalent.
 - C. A minimum of 4 semester credit hours of graduate level physiology: GMS 6400C (Principles of Physiology, 6 cr), VME 5244 (Physiology of Mammals, 4 cr), GMS 6072 (Neuroendocrinology/Neuroimmunology, 1 cr), 6023 (2 cr ea), VME 6934B (Mammalian Pharmacology, 4 cr), PCB 6377C (Physiological Ecology of Vertebrates, 4 cr), or equivalent.
 - D. A minimum of 3 semester credit hours of vertebrate anatomy. Supervised teaching of anatomy in the veterinary curriculum can satisfy this requirement: VEM 5101 (Gross Anatomy, 3 cr), VEM 5112M (Large Animal Gross Anatomy, 3 cr). Also, these courses: GMS 6635, 6642, 6643 (Histology, 2 cr ea), GMS 6705 (Functional Human Neuroanatomy, 4 cr), GMS 6073 (Developmental Neurobiology, 1 cr), or equivalent.
 - E. All students are required to register for VME 6767, Issues in the Responsible Conduct of Research (1 credit), for one semester.
 - F. All students are required to register for VME 6932, Seminars in Physiological Sciences (1 credit), two semesters per year throughout the duration of the student's graduate enrollment.

- G. A minimum of a B grade in each core course (A-F) is required for fulfilling the core course requirements. Failure to achieve this performance will result in remediation, repeating the course, or dismissal from the program, as determined by the Graduate Coordinator in conjunction with the Supervisory Committee.

INTERDISCIPLINARY TOXICOLOGY CONCENTRATION

Students seeking a concentration in Interdisciplinary Toxicology have a somewhat different set of core course requirements.* The core course requirement for vertebrate anatomy is waived. However, the student is required to take the following toxicology courses:

- A. General Toxicology, VME 6602 (3 credits)
- B. Advanced Toxicology, VME 6603 (3 credits)
- C. Drug Biotransformation and Molecular Mechanisms of Toxicity, PHA 6425 (3 credits)
- D. One of the following elective toxicology courses: Risk Assessment, VME 6934 (3 credits), Toxic Substances, VME 6934 (3 credits), Functional Genomic Applications in Pharmacology and Toxicology, GMS 7593 (2 credits), or other course as approved by the Interdisciplinary Toxicology Concentration Committee.

* Formal designation as an Interdisciplinary Toxicology student requires approval by the Interdisciplinary Toxicology Concentration Committee, which has multi-departmental representation and is coordinated through the Center for Environmental & Human Toxicology.

III. Coursework Beyond the Core

- A. The supervisory committee has the responsibility for recommending individual courses of study for each student.
- B. The student must present a **proposed program of study form** to the Physiological Sciences Graduate Coordinator for approval and review by the graduate studies committee shortly after appointment of the supervisory committee.

EVIDENCE OF SATISFACTORY PROGRESS

A minimum average grade of 3.0 (B) must be maintained for all courses, excluding problems, research, and seminars.

TEACHING

- A. All students in the Physiological Sciences graduate program are required to have teaching experience during their graduate enrollment.
- B. The student must submit a plan for fulfillment of their teaching requirement at the time that the proposed program of study is presented. Approval by the Graduate Coordinator and Physiological Sciences graduate studies committee are required.
- C. The teaching requirement is defined as a minimum of one semester teaching that is equivalent to a 1/3 time teaching assistantship for a 3 semester credit hour course. This requirement may be fulfilled over the duration of the graduate student's enrollment. Students may register for VME 6940 - Supervised Teaching (2 credit minimum) while fulfilling this requirement.

GUIDELINES FOR SUPERVISORY COMMITTEES

- A. The supervisory committee should meet at least once a year and preferably twice a year to monitor the student's progress. A copy of the minutes for each committee meeting, signed by the chairperson and student, must be sent to the Graduate Coordinator.
- B. The qualifying exam must have written and oral portions for the Ph.D. candidate and is generally taken during or after the second year of graduate study.
- C. The qualifying exam will be administered by the student's supervisory committee. The supervisory committee must submit the proposed examination format to the Physiological Sciences graduate studies committee one month prior to the administration of the exam.
- D. The recommended format is a series of written questions, closed or open book, which cover the subject matter with which the supervisory committee feels the student should be familiar. In the written examination, the supervisory committee is strongly encouraged to test the student's knowledge of broad subject matter rather than focusing narrowly on specific aspects of a Ph.D. research project. This written portion will then be followed by an oral examination, which may focus on more specific aspects of the proposed research project.
- E. The Graduate Coordinator or a designated representative should be present at the oral examination. All graduate faculty will be notified in writing of the oral examination one week before the date of the examination and invited to attend.
- F. Upon successful completion of the qualifying examination, the chairperson of the supervisory committee must send an **admission to candidacy form** with appropriate signatures to the Dean of the Graduate School.

THESIS/DISSERTATION PROPOSAL

- A. A detailed plan for the thesis/dissertation research project should be presented to the supervisory committee after the successful completion of the qualifying examination.

- B. The finalized proposal must be presented in a seminar open to the graduate faculty and attended by the supervisory committee and members of the Physiological Sciences graduate studies committee.
- C. The approved thesis/dissertation proposal should be filed with the Graduate Coordinator.

THESES AND DISSERTATIONS

The recommended format for the thesis/dissertation is an introductory chapter followed by additional chapters equivalent to papers for publication. This format will facilitate publication of the thesis/dissertation in scientific journals.

The original and first copy are to be deposited in the Graduate School and the College. The Department of Physiological Sciences requires the third copy, and the fourth and fifth copies are for the chairperson of the supervisory committee and the student.

It will be the responsibility of the student to present the final copy of the thesis or dissertation to members of the supervisory committee at least 2 weeks before the final examination.

It will be the responsibility of the student to place a copy of their thesis or dissertation in the departmental office (room B2-3, Basic Science Building) at least 1 week before the final examination.

All graduate faculty will be notified in writing of the thesis or dissertation defense (final examination) one week before the date of the examination and invited to attend.

Upon successful completion of the thesis or dissertation defense, the chairperson of the supervisory committee must send a **report on thesis/dissertation form** with appropriate signatures to the Dean of the Graduate School.

DEPARTMENTAL SEMINARS

All graduate students are expected to attend departmental seminars and register 2 semesters per year for VME 6932 (Seminars in Physiological Sciences) throughout their graduate enrollment.

Graduate students are required to present a minimum of 2 seminars. One seminar must be a presentation of the thesis or dissertation proposal given after successful completion of the qualifying examination. A second seminar on the results of the thesis or dissertation research should be given during the last semester of enrollment prior to the thesis/dissertation defense. It is the responsibility of the student and the chairperson of the supervisory committee to schedule these seminars.

GRADUATE STUDENT CHECKLIST
Department of Physiological Sciences

NOTE: The student is responsible for fulfilling all requirements and meeting all deadlines.

Date done	What	
_____	1. Meet with Faculty Advisor	Upon arrival
_____	Complete forms for stipend	
_____	Get keys to building and lab	
_____	Decide which courses to take the first semester	
_____	2. Meet with Dr. Reep - Graduate Coordinator	Upon arrival
_____	Room B2-009, Basic Science Bldg.	
_____	reep@mbi.ufl.edu	
_____	392-2246, ext 3859	
_____	Orientation to Dept. of Physiological Sciences	
_____	Picture for departmental website	
_____	Familiarity with Physiological Sciences departmental website	
_____	http://www.vetmed.ufl.edu/college/departments/physio/	
_____	Familiarity with Graduate School website http://gradschool.ufl.edu/	
_____	3. Meet with Sally O’Connell - Graduate Program Assistant	Upon arrival
_____	Room V1-100H, VAB Bldg.	
_____	connells@vetmed.ufl.edu	
_____	392-4700, ext 5110	
_____	Orientation to CVM	
_____	Registration procedures	
_____	Ph.D. Students: Possible Transfer of 30 Credits from M.S. degree	
_____	4. Get Gator One ID card	Upon arrival
_____	Bookstore and Welcome Center	
_____	5. Get Parking permit	Upon arrival
_____	Traffic and Parking Bldg.	
_____	6. Attend Graduate School and Departmental orientation sessions	
_____	You will be notified of date, time and place	
_____	7. Appointment of Supervisory Committee	
_____	Form supervisory committee by the end of the second semester of enrollment or records will be flagged.	
_____	8. <i>Appointment of Supervisory Committee</i> form	
_____	This form with appropriate signatures must be sent to the office of the Associate Dean for Graduate Studies, CVM.	

- _____ 9. *Proposed Program of Study* form
This form must be submitted by all graduate students to the Graduate Coordinator shortly after the first committee meeting in which coursework is agreed upon.
- _____ 10. Qualifying Examination
Ph.D. candidates should take their qualifying examination by their 6th semester of graduate enrollment.
- _____ 11. *Admission to Candidacy* form
Upon successful completion of the qualifying examination, the chairperson of the supervisory committee must send this form with appropriate signatures to the Dean of the Graduate School.
- _____ 12. Registration for Doctoral Research
VME 7980 may be used only after the Qualifying Exam has been passed.
- _____ 13. Research Proposal
This is a detailed written proposal presented to the Supervisory Committee.
- _____ 14. Seminar on Proposed Research
Once a Ph.D. candidate and the supervisory committee have reached agreement on a research project, the student must present a seminar on the proposed research in the departmental seminar series (VEM 6932). This seminar is usually presented shortly after passing the qualifying examination.
- _____ 15. Seminar on Research Results
All Ph.D. candidates must present a seminar on the results of their research projects in the departmental seminar series (VEM 6932) during their last semester of enrollment.
- _____ 16. Guide for Preparation of Thesis and Dissertation
On the graduate school website
- _____ 17. Application for Degree
Must apply for the term you expect to graduate.
Check degree application deadline on Graduate School website
- _____ 18. First submission of Thesis or Dissertation to the Graduate School
Check deadline on Graduate School website
- _____ 19. Notify Sally O'Connell of Defense date and seminar title.
At least two weeks prior to defense.
- _____ 20. Dissertation Defense (Final Examination)
Upon successful completion of the final examination, the chairperson of the supervisory committee must send a report on dissertation form with appropriate signatures to the Dean of the Graduate School.

- _____ 21. Exit Interview with Graduate Coordinator – Dr. Reep
Prior to graduation.

- _____ 22. Return all keys to department office B2-003.
Prior to graduation.