

**GRADUATE STUDENT REQUIREMENTS FOR THE Ph.D. DEGREE  
DEPARTMENT OF ANIMAL SCIENCE**

**Adopted by Faculty Vote: January 12, 2018**

## DEPARTMENT OF ANIMAL SCIENCE GRADUATE STUDENT REQUIREMENTS FOR Ph.D. DEGREE

**Note: All students are bound by the rules and requirements outlined in the Graduate Catalog corresponding to their year of enrollment in the program. Each student must familiarize themselves with these requirements and those described in UConn's Graduate Catalog upon enrollment.**

**Overview:** The Doctor of Philosophy degree (Ph.D.) is offered in Animal Science. Several areas of concentration are offered within the Animal Science Field of Study including: Animal Genetics and Regenerative Biology, Growth and Reproductive Physiology, Animal Nutrition, and Food Microbiology and Safety. The Ph.D. degree requires demonstrated capabilities for conducting independent research plus related scholarly attributes. All graduate students receiving assistantship support are required to assist with the teaching of one (1) course per year of enrollment as part of their professional development.

### 1. GRADUATE ADVISORY COMMITTEE

The Graduate Advisory Committee is charged with guiding the student through all matters pertaining to graduate study, and will evaluate and vote on many matters relevant to the student's progress through the program. For many matters (e.g., General Examination, Dissertation proposal, and the final Dissertation defense) the vote must be unanimous among the Committee for passage. Each doctoral student in the Department of Animal Science should select and assemble their Graduate Advisory Committee, in consultation with their major advisor, within their first year of enrollment. The committee must be headed by a major advisor who is a member of both the Department of Animal Science (including jointly appointed faculty) and a member of the Graduate Faculty. The committee must also include at least two associate advisors whose expertise complements the area of anticipated research. Experts from outside of the department and/or University can be included on the committee (See Graduate Catalog). Students are encouraged to schedule annual committee meetings to discuss their research and academic progress.

### 2. PLAN OF STUDY

An approved Plan of Study form must be submitted to the Graduate School within the first or second year of matriculation prior to completion of eighteen (18) academic credits. The Animal Science department is diverse, with a large variety of student and faculty interests. As a result, each student's program is quite flexible, and is shaped by the student in consultation with their major advisor and Graduate Advisory Committee. Students should obtain a basic understanding of Animal Science, but may specialize in courses offered in other departments such as Nutrition, Pathobiology, Physiology and Neurobiology, or Molecular and Cell Biology. Plans of study will consist largely of courses at the 5000 level or above. A limited number of credits at the 3000 or 4000 level (ordinarily not more than six [6]) may be accepted as determined by the Graduate Advisory Committee. Delays in the submission of the Plan of Study can result in delays in promotion to higher pay levels (see below). Final approval of the Plan of Study must be obtained before permission to take the General Examination will be granted.

Each Ph.D. plan of study must include thirty (30) credits of course work beyond the baccalaureate degree or its equivalent, or at least fifteen (15) credits beyond the master's degree or other advanced degree in the same or a closely related field of study. All Ph.D. students must complete one credit of ANSC 5693 (Graduate Presentation Skills) and two credits of ANSC 5694 (Seminar). Students who have previously completed one credit of ANSC 5693 are exempt from that requirement. In addition to these course credit requirements, students must complete coursework necessary to satisfy the foreign language or related area requirements as prescribed by the Graduate School. In addition to this coursework, satisfactory completion of at least fifteen (15) credits of GRAD 6950 – Doctoral Dissertation Research or Grad 6960 – Full-Time Doctoral Dissertation Research is required.

### **3. GENERAL EXAM**

The doctoral General Examination is usually undertaken when the student has completed at least 75% of the content coursework listed on the approved plan of study and no later than eight (8) months prior to the final dissertation defense. Not fewer than five (5) faculty members, including all members of the student's Graduate Advisory Committee, must participate in the examination. All examiners are invited to submit questions and to evaluate answers, but the final decision as to whether or not the student has passed the examination shall rest solely with the Graduate Advisory Committee. The major advisor serves as chair of the exam committee and will solicit written or oral questions from the examination committee. The exam can consist of a "closed book," take-home and/or oral examination covering the student's didactic course work (as delineated in the Plan of Study). Additionally, questions examining the student's ability to read and critique the scientific literature, or develop research ideas are appropriate. Students are encouraged to consult with committee members in advance of the exam to discuss its scope. After discussing the responses on written and/or oral portions of the General Exam, the committee members will vote (pass/conditional pass/fail). Conditional passage of the exam may be given when the student demonstrates sufficient strength in all but one or two areas. Often the submission of a research paper or satisfactory completion of an additional course in the area of weakness is sufficient remedial action, but this decision is made by the Graduate Advisory Committee. After the examination, the Report on the General Examination, indicating the result of the entire examination and the names of all faculty members participating, must be signed by the members of the Graduate Advisory Committee and submitted to the Graduate School no later than the date of the submission of the Dissertation Proposal for final approval by the Graduate School (see below).

### **4. DISSERTATION PROPOSAL**

The Dissertation Proposal should be prepared in consultation with members of the Graduate Advisory Committee before the research is well underway. Its format will be determined by the Graduate Advisory Committee, but should consist of a detailed, hypothesis-based proposal in the format of an NIH, NSF or USDA grant application. Students should discuss these requirements with their major advisor before preparing the proposal. The proposal should be no more than ten (10) pages in length (single-spaced) and should include:

- a. Specific aims stating the purpose of the proposed research, hypotheses to be tested and specific questions to be asked.
- b. Background and significance. Briefly describe the background and significance of the research proposal. Discuss how the specific aims of the proposal, relate to the broader, long-term research objectives.
- c. Research and design methods. Provide an outline of the experimental design and the procedures to be used to accomplish the specific aims. A tentative sequence of investigations, statistical procedures by which the data will be analyzed, significance of the anticipated results, and a discussion of the handling of any hazardous materials should be included.
- d. Animals in research. Explain the use of animals if they are part of the research procedure. Provide rationale for the choice of the experimental animals and procedures that will be used following the IACUC guidelines.
- e. Literature cited (exclusive of the 10-page limit).

- f Submission: The Department Head should be advised of the oral dissertation proposal presentation date at least one (1) month in advance to make arrangements for two external reviewers to participate in the process. The written dissertation proposal must first be approved by the Graduate Advisory Committee, then submitted to the Department head at least two (2) weeks in advance of the dissertation proposal defense. In general, the external reviewers will be two (2) individuals within the department who are not on the student's committee. In some circumstances, reviewers outside of the department may be used. After review, the Department Head will forward the reviewers' comments to the student and their advisor for consideration by the Graduate Advisory Committee before a final decision is rendered.
  
- g Oral Presentation and dissertation proposal defense: A public presentation of the student's dissertation proposal is to be held prior to final approval. After the public seminar, attendees will be invited to further discuss the student's proposed project. After the general discussion, any remaining attendees will be excused and the committee and any external examiners will meet with the student for in-depth discussion of the dissertation research proposal as well as any follow up questions related to the general exam. Modifications of the dissertation research proposal may be required following the oral presentation and discussion. Following revisions and the Graduate Advisory Committee's recommendation, the Department Head will make a "pass/fail" decision, in consultation with the student's major advisor. This recommendation will then be communicated to the Graduate School. The dissertation proposal should be submitted to the Graduate School for final approval by the time the student has completed the ninth (9th) credit of GRAD 6950 or 6960. Submission to the Graduate School for approval must occur no later than eight (8) months in advance of the final dissertation defense, but it is highly advisable to complete the dissertation proposal 12- to 18-months in advance. Final approval from the Graduate school must occur before final dissertation defense.
  
- h This presentation may be used toward satisfying the departmental requirement of two ANSC 5694 presentations if it can be arranged during a regularly scheduled meeting of that class.

**5. GRADUATE STUDENT STATUS:**

Graduate students entering the Ph.D. program with a bachelor's degree will remain at Graduate Level I until they have completed 30 credits of advanced course work or have been granted a Master's degree. Students with a Master's degree will enter the program at the Graduate Level II. Once the General Exam, Dissertation proposal, and Plan of Study have been passed or approved, the student will attain Graduate Level III status. Foreign language and certain residency requirements (see Graduate Catalog) may also apply. Compensation for graduate assistantship support increases with each increase in level. The Office of the Vice President for Research webpage can be consulted for current rates.

**6. ANIMAL SCIENCE COURSEWORK REQUIREMENTS:** Students must successfully complete the Animal Science Seminar (ANSC 5694) twice, and Graduate Presentation Skills (ANSC 5693) once. The dissertation defense may not be scheduled to coincide with an ANSC 5694 presentation.

**7. FINAL EXAM—DISSERTATION DEFENSE:** Students must defend their dissertation at a well-advertised, public seminar. Advertising shall include posting flyers in conspicuous areas of relevant buildings, and by contacting the ANSC departmental secretary for email distribution. The oral defense of the dissertation must be announced publically by means of the University's online Events Calendar at least two (2) weeks prior to the date of the defense. At this time, electronic tentative approval of the dissertation and an electronic working copy of the entire dissertation must be filed with the Graduate School. The student must also submit a final "draft" of the dissertation to the Graduate Advisory Committee members at least two (2) weeks in advance of the defense date. Not fewer than five (5) members of the faculty, including all members of the candidate's Graduate Advisory Committee, must participate in the final examination, unless written approval for a lesser number has been secured in advance from the Dean of the Graduate School. After the public presentation, attendees will remain for in-depth discussion, followed by the committee alone. Following the presentation, the Graduate Advisory Committee will administer a final examination. The format of this examination is at the discretion of the major advisor and Graduate Advisory Committee, and its purpose is to assess the student's understanding of the area that they have emphasized, their research, and their dissertation. After discussion, the committee will vote on the outcome of the exam. The student is required to make all suggested revisions to the dissertation, in consultation with their major advisor, prior to final acceptance.

**8. PUBLICATION:** Students must submit at least one (1) first-author, full-length primary manuscript for peer reviewed publication before defending their final dissertation defense.

**9. Departmental Assistantships:** Partial or full assistantship support may be offered to students based upon the availability of funding. Funding can come from independent research grants, Hatch projects, or departmentally funded projects through an annual competition. As part of their professional training, all students are required to assist with teaching and/or laboratory assistance as required by the Department at least one course per year. Course assignments are arranged by the Graduate Committee before the start of the fall semester and are communicated by email. Students may not assist with the same course more than twice. Students will be given instructions regarding their duties and responsibilities prior to the first day of class by the instructors. Students will be evaluated on their performance by the course instructor, and possibly by the students in the class (at the discretion of the course instructor), and satisfactory performance is required. If a student's performance is judged to be unsatisfactory by the course instructor, future assistantship support may be cancelled (at the discretion of the Graduate Committee, in consultation with the Department Head). Students in the Ph.D. program may be limited to Departmental assistantship support to 3 years (or 4 if

both the Master's and Ph.D. degrees are obtained within the Department). [These requirements were adopted by faculty vote on 10/15/97 and 9/22/00].

**Exceptions:** Requests for exceptions to the above rules must be submitted to the Graduate Committee in writing by the faculty advisor. Requests for exceptions cannot override University of Connecticut graduate education regulations. In general, exceptions to departmental regulations are considered only in cases of extenuating circumstances.

Last revised: December 28, 2017

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## Ph.D. REQUIREMENTS CHECKLIST

- \_\_\_ SELECTION OF GRADUATE COMMITTEE. Within their first year of enrollment. See requirements above.
- \_\_\_ PLAN OF STUDY. Within the first or second year of matriculation prior to completion of eighteen (18) academic credits. See requirements above.
- \_\_\_ FOREIGN LANGUAGE/SUPPORTING AREA OF STUDY. Competent reading knowledge of at least one (1) foreign language, or at least six (6) credits of advanced work in a related or supporting area.
- \_\_\_ GENERAL EXAM. Usually undertaken when the student has completed at least 75% of the content coursework listed on the approved plan of study and no later than eight (8) months prior to the final dissertation defense. See requirements above
- \_\_\_ RESEARCH DISSERTATION PROPOSAL. Prepared in consultation with members of the Graduate Advisory Committee before the research is well underway.
- \_\_\_ DISSERTATION PROPOSAL EXAM. Submission to the Graduate School for approval must occur no later than eight (8) months in advance of the final dissertation defense, but it is highly advisable to complete the dissertation proposal twelve to eighteen (12-18) months in advance. Final approval from the Graduate school must occur before final dissertation defense. See requirements above.
- \_\_\_ SUBMISSION OF DISSERTATION. See requirements above
- \_\_\_ FINAL ORAL EXAM—DISSERTATION DEFENSE See requirements above
- \_\_\_ DISSERTATION—FINAL COPIES. See requirements above
- \_\_\_ APPLICATION FOR DEGREE. Formal application must be filed on official form at the Graduate School.

### “Other” requirements:

- \_\_\_ SUCCESSFUL COMPLETION OF ONE (1) CREDIT OF ANSC 5693 (GRADUATE PRESENTATION SKILLS) AND TWO (2) CREDITS OF ANSC 5694 (SEMINAR)
- \_\_\_ PUBLICATION: Students must submit at least one (1) first-author, full-length primary manuscript for peer reviewed publication before defending their final dissertation defense.
- \_\_\_ GRADUATE STUDENTS MUST MAINTAIN “CONTINUOUS REGISTRATION.”

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*This document was developed in consultation with Mr. Tom Peters (Assistant Dean, Graduate School) and through discussions at faculty meetings. It was originally supplied to us courtesy of the Pathobiology Department, then modified for the Department of Animal Science. It was adopted by faculty vote on 6/6/2002. Minor revisions to this document may be made by the Chair of the Graduate Committee for the purpose of clarity and correctness. Please check the Departmental Website for the most up-to-date version.*