

**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, before they complete 12 credits of degree program coursework. 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. In addition to the three or more members, another member, ordinarily a member of the Graduate Faculty outside the student's field of study but in a related field may be appointed by the Dean. A current graduate student may not serve as a member of another graduate student's advisory committee. If deemed appropriate by a graduate student's major advisor, the major advisor may request that a suitably qualified external associate advisor be appointed to the student's advisory committee by writing to The Graduate School. The request should be accompanied by a curriculum vitae for the individual being recommended for appointment. Such appointments are made on the basis of advanced training and significant experience in the field of study. Ordinarily, not more than one external associate advisor is appointed to any doctoral student's advisory committee. 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 (not more than six [6]) may be accepted as determined by the Graduate Advisory Committee. Final approval of the Plan of Study form must be obtained before permission to take the General Examination will be granted.

3. ANIMAL SCIENCE COURSEWORK REQUIREMENTS:

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. Students must successfully complete the Animal Science Seminar (ANSC 5694) twice, and Graduate Presentation Skills (ANSC 5693) once. Students who have previously completed one credit of ANSC 5693 are exempt from the Presentation Skills (ANSC 5693) requirement. 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.

4. 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. 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 form). 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 Office of the Registrar no later than the date of the submission of the Dissertation Proposal (see below).

5. 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:

- Specific aims stating the purpose of the proposed research, hypotheses to be tested and specific questions to be asked.
- 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.
- 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.
- 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.

o Literature cited (exclusive of the 10-page limit).

- a. **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 advisory 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.
- b. **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 an 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. 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.
- c. The department or program head's signature on the proposal when the review is completed confirms that the student has passed the proposal defense. The Dissertation Proposal, bearing the signatures of the members of the student's advisory committee as well as the signature of the department or program head verifying satisfactory review by two reviewers who are not members of the advisory committee (see the paragraph above), should be submitted to the Office of the Registrar by the time the student has completed the ninth credit of GRAD 6950 or 6960. The approved Dissertation Proposal must be on file in the Office of the Registrar before the public announcement of the oral defense of the dissertation. However, it is highly advisable to complete the dissertation proposal 12- to 18-months in advance of the final dissertation defense.

6. FINAL EXAM—DISSERTATION DEFENSE: Students must defend their dissertation at a well-advertised, public seminar. The dissertation defense may not be scheduled to coincide with an ANSC 5694 presentation. Advertising shall include posting flyers in conspicuous areas of relevant buildings, and by contacting the ANSC departmental main office for email distribution. The oral defense of the dissertation must be announced publicly by means of the University's online Events Calendar at least two (2) weeks prior to the date of the defense. 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. Following the dissertation defense, the major advisor communicates the results to the student and verifies that the official report has been

completed and signed for submission to the Office of the Registrar

7. **PUBLICATION:** Students must submit at least one (1) first-author, full-length primary manuscript for peer-reviewed publication to their major advisor before defending their final dissertation defense.
8. **ASSISTANTSHIPS:** Partial or full assistantship support may be offered to students based upon the availability of funding. Funding typically comes from independent research grants, Hatch projects (Capacity grants), or departmentally funded projects through an annual competition. As part of their professional training, all students are required to assist with teaching a lecture and/or laboratory course at least one course per year as required by the Department. Course assignments are arranged by the Graduate Studies Committee before the beginning of the academic year with a mid-year review and are communicated by email. Students should not assist with the same course more than twice. Students will be given instructions regarding their duties and responsibilities before the first day of class by the instructors. All Ph.D. students are required to submit a Graduate Student Annual Report at the end of each academic year unless they are not enrolled in coursework the following semester. If a student's performance is judged to be unsatisfactory by the course instructor and/or the major advisor, renewal of assistantship support may be impacted (at the discretion of the Graduate Studies 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].
 - a. **ELIGIBILITY CRITERIA:** To be appointed, to retain an appointment, or to be reappointed, a student must hold Regular (not Provisional) status, must maintain a cumulative average of at least B (3.00) in any coursework taken, must be eligible to register (i.e., must not have more than three viable grades of Incomplete on his or her academic record), must be enrolled in a graduate degree program scheduled to extend through the entire period of the appointment or reappointment, and must be a full-time student.
 - b. All students for whom English is not a native language must attain certification of oral proficiency in English before he or she is eligible to be considered for departmental assistantships (teaching assistantships). Certification of English proficiency may be obtained by meeting the requirements outlined on the International Teaching Assistant Services website (<https://ita.uconn.edu/testing-english-proficiency-certification-effective-for-teaching-assistants-starting-in-fall-2014-or-after/>)
9. **EXCEPTIONS:** Requests for exceptions to the above rules must be submitted to the Graduate Studies 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: February 2, 2021; April 2, 2019 and December 28, 2017

Ph.D. Degree: REQUIREMENTS CHECKLIST

- ___ SELECTION OF GRADUATE ADVISORY COMMITTEE. Before completion of 12 credits of degree program coursework. 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.
- ___ GENERAL EXAM. Usually undertaken when the student has completed at least 75% of the content coursework listed on the approved plan of study. See requirements above
- ___ RESEARCH DISSERTATION PROPOSAL AND EXAM. Prepared in consultation with members of the Graduate Advisory Committee before the research is well underway. Highly advisable to complete the dissertation proposal twelve to eighteen (12-18) months in advance of the 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.”

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 Studies Committee for the purpose of clarity and correctness. Please check the Departmental Website for the most up-to-date version.