

Animal Biology Graduate Group Information for oral qualifying exam committees

The **goal** of the qualifying examination is to evaluate the student's eventual ability to pursue independent research. The student is expected to:

- Answer evaluative questions based on coursework and on the proposed area of research.
- Demonstrate mastery of the breadth and depth of animal biology.
- Defend two distinct disciplinary areas of animal biology in depth. (Statistics is not an acceptable choice of disciplinary area in this context.)
- Demonstrate independent and creative thinking and the ability to synthesize broad concepts with critical evaluation.

Exam guidelines:

- At least half of the exam is to address integrative animal biology in a general context including whole animal biology; breadth at the level of ANS 2 (Reproductive biology, Endocrinology, Digestive physiology, Nutritional biology, Genetics, Environmental biology, Animal Behavior). Each member of the exam committee is expected to ask a breadth question. The Graduate Advisers will assign each two breadth areas to each committee member and each member will choose a breadth area question from one of these two.
 - Some depth is expected.
 - Knowledge of animals addressed in student's ABG 200B cohort
 - Depth in disciplinary areas (or interdisciplinary area) chosen by student
- No more than half of the exam should focus on the individual research proposal and related areas.
- Chair of the committee will determine the order of questioning.
- To facilitate examination of integrative abilities and critical reasoning related to the research proposal, the student will provide a written outline of the research proposal at least one week prior to the examination.

Required Coursework for Ph.D. in Animal Biology

-Integrated Animal Biology I and II

ABG 200A: Fall 07: Presentations by faculty on their disciplinary area (reproduction, endocrinology, nutritional biology, immunology, animal welfare, etc.). Students wrote and gave brief oral presentation on their proposed research. Students developed individual hypotheses to explain mechanism for recently observed interdisciplinary phenomena such as altered sex ratio at birth with altered lipid: carbohydrate ratios in isocaloric diet and proposed experimental designs to test (written and oral presentations).

ABG 200B: students prepared handbooks on their research species, including life history, husbandry and management, reviews of two disciplines relevant to the research project, and prospectus for the project as of that quarter. Students gave oral presentations during development of handbooks.

Catalog description 200A, 200B: Natural history, management, historical and current uses, and specialized disciplinary features of model and novel animal systems used in research. Development of conceptual approaches in organismal biology to improve experimental design and interpretation of interdisciplinary research studies.

- Interdisciplinary Area of Interest (8-20 u); at least 6 u as graded graduate level courses
- Statistical and Research Methods (at least 6 u graded graduate level from a series): PLS 205/206 recommended
- Scientific Writing/Grant Writing (1 course): NPB 270 or NUT 492C recommended
- Ethics and Professionalism in Animal Biology (ABG401, 2 units)
- Disciplinary Seminar (2 quarters)
- Teaching experience and course for guidance (ABG 300 recommended).