

AABI 398 SYLLABUS: 2009/2010
Research Methods in Applied Animal Biology
11:00 to 12:30pm Fridays, MacMillan 139

Instructors

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Course Description

An introduction to research methods in applied animal biology

Expected Learning Outcomes

By the end of this course, you will:

1. Become familiar with research approaches in applied animal biology
2. Learn how to present to a general audience
3. Learn how to present to a research audience
4. Gain experience in summarizing and critiquing published research articles and reviewing an area of research
5. Generate your own ideas for new research, and gain experience in the development of research proposals.

Course Structure

Learning Outcome # 1. The course is based on experiential learning. You will work together with a researcher to gain exposure to research techniques and ideas, and to develop a passion for your research area. You begin the year by volunteering with a researcher who then becomes your mentor, introducing you to the research techniques and topics.

Learning Outcome # 2. You will show their general understanding of the main research questions and approaches through a “news feature” style presentation, designed to be accessible to a general audience. This presentation will allow you to develop presentation skills, skills in scientific journalism, and exposes the other students in the class to this research area.

Learning Outcome # 3. You will show their specific understanding of the research area in a scientific conference style presentation general presentation, describing the aims, methods, results and conclusions of a specific study. This presentation will allow you to develop scholarly presentation skills and exposes the other students in the class to specifics of this research area.

Learning Outcome # 4. You will show your grasp of the research area, and your ability to summarize and critically evaluate research papers by writing a 10-page critical literature review of the research area, focusing on 2 or 3 published research papers of key importance.

Learning Outcome # 5. You will develop your ability to actively build upon your experience and understanding of an existing area of research by developing your own research proposal. This 10-page written proposal summarizes what is currently known, key areas that require further study, the specific aims of the proposal, the proposed methodology, and provides a timeline and a budget for the proposed study. Ideally this proposal provides a basis for your independent essay or thesis (AABI 498 / 499) required in 4th year.

Course Context and Prerequisites

This course is required for students in Applied Animal Biology – 3rd year standing in this program is a prerequisite. The course will introduce you to research methods in this field and will help you develop the research and critical thinking skills essential for the success in the essay / thesis (AABI 498/499) required in 4th year.

Assessment, Grading, Evaluation

There will be no formal examinations. You will be awarded a grade based on their volunteer activity with a researcher, presentations, papers, and participation during class.

Volunteer participation with researcher	15
First presentation	5
Second presentation	15
Critical review paper	25
Research proposal	25
Reflective journals	10
Class participation	5
Total	100

Estimated Schedule

Topic

1. Introduction to course, organization of course
2. Introduction to research teams – guest lectures by researchers working in Applied Animal Biology. These lectures provide students with contacts and ideas for potential mentorships, and model the presentation skills required in the course
3. Student presentations – “news features”
4. Students submit their critical review paper
5. Student presentations – “conference presentations”
6. Students submit their final research proposal