

**Course Title: Animal Behavior Lab (IB 430) Instructor: Alison Bell**  
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Hours/week: 1 discussion (Monday 10-11), 1 lab (Weds 9-12), behavioral observations outside of lab (average of 3 hours). Meet in 4074 NHB.

**Readings:** *Measuring Behavior* by Martin and Bateson

**Grading:**

Scientific Manuscript 1	20%
Scientific Manuscript 2	30%
Oral Presentation 1	15%
Oral Presentation 2	15%
Discussion and Online Participation	20%

**Prerequisites:** IB 329 (Animal Behavior) and/or IB 302 (Evolution)

**Student Learning Outcomes**

At the end of this course students will be able to:

- 1) Articulate and test hypotheses about animal behavior
- 2) Design a scientific experiment to test a scientific hypothesis or hypotheses
- 3) Collect and statistically analyze data
- 4) Report the results of an experiment in the form of a scientific manuscript and a scientific presentation

**Discussions**

Discussions will occur once per week and will be used as an opportunity to provide the background necessary for students to carry out inquiry-driven research projects from the initial formulation of a project through oral and written presentation of results. Topics covered include the scientific method and hypothesis testing, experimental design, methods in measuring behavior, scientific ethics and animal welfare, and discussion of papers from the primary literature that will serve as background for independent projects. Students will have online readings and activities prior to class as preparatory exercises for discussion. In class, we will use a variety of active learning exercises to engage the students in discussion of each topic. As one of the goals of the course is to acquaint students with 'scientific thinking', discussion sessions will emphasize how to design experiments. Students will work in small groups to design experiments. It is expected that some portion of each lab period will be devoted to discussing problems that students encounter during the design and implementation of their experiments.

**Lab**

The class will meet for three hours per week for inquiry-based labs. Activities during the labs will include behavioral observations and manipulations in either a field or laboratory setting. The instructor will help students to design and implement experiments that can be accomplished over roughly half of a semester. The first project will be more limited in scope and largely guided by feedback from the instructor. Students will be expected to work more independently on the second project. Students are expected to design and write up the results of the two projects and give a final presentation based on their independent project. Students should expect to work three or more hours each week outside of class to prepare, troubleshoot and collect data for their experiments.

<b>Week</b>	<b>Discussion</b>	<b>Readings for the week</b>	<b>Lab</b>	<b>Due</b>
1 – Aug 26	Exp. design. Intro. to project 1.	Chapters 1, 2, 3	Investigate organisms, develop hypothesis and predictions.	
2 – Sept 2	Labor Day holiday	Chapters 4, 5	Data collection for project 1.	Experimental design project 1
3 – Sept 9	Foundational readings project 1		Data collection for project 1.	Draft of methods.
4 – Sept 16	How to measure behavior	Chapters 6, 7	Data collection for project 1.	Draft of introduction.
5 – Sept 23	Considerations of Research design	Chapter 8. t-test, ANOVA, correlations, regression, chi-square test	Data collection for project 1.	
6 – Sept 30	Data analysis and statistics	Chapter 9, 10	Computer stats lab for project 1; distribute grading rubric and examples of final MS.	
7 - Oct 7	How to present findings	Chapter 11	Group presentations for project 1; peer review of MS1	Draft of results.
8 – Oct 14	Readings for project 2		Develop hypotheses and predictions, design project 2. Evaluate group-mates	Final report project 1.
9 – Oct 21	Readings for project 2.		Data collection for project 2.	
10 – Oct 28	Spring break		Spring break	
11 – Nov 4	Foundational readings for project 2.		Data collection for project 2.	Draft methods for project 2
12 – Nov 11	Data collection project 2.		Data collection for project 2.	Draft intro for project 2
13 – Nov 18	Data collection for project 2.		Computer stats lab for project 2	
14 – Nov 25	Thanksgiving break			
15 – Dec 2	Work on presentations		Group presentations for project 2, peer review of project 2 MS. Lab clean up.	Draft results for project 2.
16 - Dec 9	Work on final report.		Final report for project 2 due. Evaluate group-mates	Final report project 2

**Assignments**

Assignments are due at the beginning of class on the date marked on the syllabus. Failure to do so will result in a one letter grade reduction in the assigned grade for every day it is overdue. When it has been overdue for one week, a zero will be given.

**Re-grading policy**

If you believe that an exam or assignment has been graded incorrectly, submit a written request for a re-grade to the instructor within one week of when the graded exam or homework was returned. The written request should include an explanation of your position and be attached to the graded exam. If you suspect that a simple addition error has been made, speak to the instructor to have the error corrected.

**Credit/No-credit policy**

To receive credit for this course if you enrolled on the pass/fail basis, you must 1) show up and turn in all assignments or 2) receive the equivalent of a D or higher in this class.

**Academic integrity**

If you cheat or plagiarize, the university guidelines for disciplinary action will be followed. Any cheating or plagiarism will be reported to the Dean of Students and will result in failure of this course. For more information on UIUC policies, see [http://www.admin.illinois.edu/policy/code/article\\_1/a1\\_1-401.html](http://www.admin.illinois.edu/policy/code/article_1/a1_1-401.html)

**Attendance policy**

Students are expected to attend each class session. Almost all of the material on the final exam will come from topics discussed in class. I will post the slides used in class on the course website but I strongly discourage you from relying too heavily on these because the best way to learn this material is to hear the explanation of a concept that is given in class, and to participate in the classroom discussions and group activities.

**Accommodations**

I encourage students with disabilities to meet with me at the beginning of the semester to discuss any needs. Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) may arrange accommodations with the Division of Disability Resources and Educational Services. See [www.disability.illinois.edu](http://www.disability.illinois.edu)