Course Title: Animal Behavior Lab (IB 430)  
Instructor: Andy Suarez suarez2@illinois.edu

Hours/week: 1 discussion (Monday 9-10), 1 lab (Tues 9-12), behavioral observations outside of lab (average of 3 hours). Meet in 4074 NHB.

Readings: Measuring Behavior by Martin and Bateson (2007) (will be provided)

Grading:
Scientific Manuscript 1 25%
Scientific Manuscript 2 25%
Oral Presentation 1 15%
Oral Presentation 2 15%
In Class Participation and Discussion 20%

Welcome to IB 430! You will be working in teams to direct your own independent research projects in animal behavior. Expect a lot of trial and error, to take a deep dive into the literature, and to participate in the process of scientific discovery. It is a lot of fun!

Obviously, this is going to be yet another unusual semester given the current pandemic. We follow University and CDC guidance about COVID safety. You are strongly encouraged to wear a mask and if you are not vaccinated, you MUST get tested for COVID twice a week in order to be admitted to the building. If you haven’t been vaccinated yet, it’s easy! Head over to vaccines.gov to find available appointments or walk-in hours close by. If you have any concerns about COVID safety do not hesitate to reach out to one of the instructors.

If you exhibit any symptoms or test positive for COVID-19, please quarantine and take necessary precautions (as directed by CUPHD, University Housing, Private Certified Housing and Certified Greek Housing). We will work with you to make up any work you miss. Please see the campus COVID-19 website for more information: https://covid19.illinois.edu/

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.

<table>
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<tr>
<th>Week</th>
<th>Discussion</th>
<th>Readings for the week</th>
<th>Lab</th>
<th>Due</th>
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<td>2</td>
<td>Aug 29. Start project 1.</td>
<td>Chapters 4, 5</td>
<td>Aug 30. Data collection for project 1.</td>
<td>Experimental design project 1</td>
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<td>Sept 12. Considerations of research design</td>
<td>Chapter 7</td>
<td>Sept 13. Data collection for project 1. Distribute grading rubric for manuscript</td>
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<td>5</td>
<td>Sept 19. Data collection</td>
<td>Chapter 8</td>
<td>Sept 20. Data collection for project 1.</td>
<td>Draft of introduction project 1</td>
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<td>6</td>
<td>Sept 26. Data analysis and statistics</td>
<td>Chapter 9, 10</td>
<td>Sept 27. Computer stats lab for project 1. Brief lecture on stats – comparing means, looking for relationships via correlation and regression, ANOVA, t-test, Chi-Square</td>
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<td>7</td>
<td>Oct 3. Work on presentations; how to present findings</td>
<td>Chapter 11</td>
<td>Oct 4. Group presentations for project 1.</td>
<td>Draft of results project 1</td>
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<td>Oct 10. Readings for project 2.</td>
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<td>Oct 11. Develop hypotheses and predictions, design project 2. Peer review.</td>
<td>Final manuscript project 1</td>
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**Week 1**
- **Aug 22**: Exp. design. Intro. to project 1.
- **Aug 23**: Investigate organisms, develop hypothesis and predictions.

**Week 2**
- **Aug 29**: Start project 1.
- **Aug 30**: Data collection for project 1.

**Week 3**
- **Sept 5**: Labor Day – no class.
- **Sept 6**: Data collection for project 1. Peer review.

**Week 4**
- **Sept 12**: Considerations of research design.
- **Sept 13**: Data collection for project 1. Distribute grading rubric for manuscript.

**Week 5**
- **Sept 19**: Data collection.
- **Sept 20**: Data collection for project 1.

**Week 6**
- **Sept 26**: Data analysis and statistics.
- **Sept 27**: Computer stats lab for project 1. Brief lecture on stats – comparing means, looking for relationships via correlation and regression, ANOVA, t-test, Chi-Square.

**Week 7**
- **Oct 3**: Work on presentations; how to present findings.
- **Oct 4**: Group presentations for project 1.

**Week 8**
- **Oct 10**: Readings for project 2.
- **Oct 11**: Develop hypotheses and predictions, design project 2. Peer review.

**Week 9**
- **Oct 17**: Readings for project 2.
- **Oct 18**: Data collection for 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

Attendance policy
Students are expected to attend each class session and attendance is part of your participation / discussion grade.

Accommodations
We encourage students with disabilities to meet with us 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

If you have serious questions or concerns about your performance in this class due to extenuating circumstances, please talk to us as early as possible. We will always try to accommodate a student with a demonstrated desire and willingness to learn.

If you are interested in obtaining information to improve writing, study skills, time management or organization, the following campus resources are available to all students:

Writer’s Workshop, Undergrad Library, 217-333-8796
http://www.cws.illinois.edu/workshop
http://disability.illinois.edu/strategies
http://www.counselingcenter.illinois.edu/self-help-brochures/

Most college offices and academic deans provide academic skills support and assistance for academically related and personal problems. Links to the appropriate college contact can be found by going to this website and selecting your college or school: illinois.edu/colleges/colleges.html

If you are experiencing symptoms of anxiety or depression or are feeling overwhelmed, stressed, or in crisis, you can seek help through the following campus resources:

The Counseling Center offers a 24-hour Crisis Line, mental health services and online support: https://counselingcenter.illinois.edu/

The university has a wellness website with links to services and resources: https://wellness.illinois.edu/

McKinley Health Education offers individual consultations for students interested in learning relaxation and other stress/time management skills, call 333-2714.