

BIOL 385: Evolutionary Animal Behavior Laboratory

Instructor: Dr. Ellen Wisner

Office: 431 Colton Hall

E-mail: wisner@njit.edu

Course Website: <http://moodle.njit.edu/>

Class Meeting Times: Monday 1:00 – 5:25 PM

Class Meeting Location: Central King Building 326

Office Hours: Wednesday 10:30 – 12:00; Thursday 1:00 – 2:00pm



Course Description: This is a laboratory and field based course focused on designing and conducting experiments in animal behavior. Students will gain experience with experimental design, and all labs will be inquiry based with students designing experiments to test hypotheses. Topics in animal behavior that will be explored include: foraging, predator avoidance, territoriality, and mate choice.

Course Outcomes:

By the end of the course students are able to:

- 1) describe and analyze animal behavior using principles of evolutionary biology
- 2) design experiments in animal behavior
- 3) communicate science in both written and oral formats
- 4) locate and evaluate scientific literature

Prerequisites: Foundations of Ecology and Evolution Lecture and Lab (BIOL 205 & 206)

Required Materials: Research notebook (3-ring binder is fine); Readings and materials for the course will be posted on Moodle

Field Trips: For several classes we will be traveling to sites near NJIT to conduct our experiments. For these trips you must dress appropriately. For all trips you should wear closed-toe shoes. I would suggest either wearing sneakers or hiking boots. I would also suggest that you wear layers, perhaps a t-shirt and a jacket. Lastly, please make sure that you wear clothes that can get dirty.

Moodle: We will be using Moodle for our class website (<http://moodle.njit.edu/>). If you are a Rutgers student, you will need an NJIT UCID to get access to the site. If you do not already have one, you can request one at <https://mailsys.njit.edu/~accts/cgi-bin/new> PLEASE be sure that you have gone into your profile and changed your preferred e-mail to an account you check regularly. You will automatically be assigned an NJIT e-mail address and this will be the default unless you change it.

TENTATIVE Schedule of topics

Date	Topics	Reading and/or Assignment
Sept. 8	Introduction to Animal Behavior Lab 1: Statistics Lab	
Sept. 14*	Lab 2: Describing and Quantifying Behavior	Due at beginning of class: <ul style="list-style-type: none"> • Pre-lab 2 • Lab 1 Assignment
Sept. 21	Analysis of data collected in lab 2 Paper Discussion #1 Formal Lab Report Writing Seminar Mini-lecture on introduction to animal communication	Read paper for discussion #1 Read instructions for formal lab report
Sept. 28	Lab 3: Communication in ants	Due at beginning of class: <ul style="list-style-type: none"> • Pre-lab 3 • Lab 2 Assignment
Oct. 5*	Lab 4: Whirligig antipredator behavior	Due at beginning of class: <ul style="list-style-type: none"> • Pre-lab 4
Oct. 12	Analysis of data collected in Lab 4 Paper Discussion #2	Read paper for discussion #2 Study for Quiz 1
Oct. 19	Lab 5: Aggression in crayfish	Due at beginning of class: <ul style="list-style-type: none"> • Pre-lab 5 • <i>EITHER</i> Lab 3 or Lab 4 Assignment <p><i>Draft 1 of Formal Lab Report Due Oct. 23</i></p>
Oct. 26	Lab 6: Human Behavioral Ecology (Mate Choice)	Due at beginning of class: <ul style="list-style-type: none"> • Pre-lab 6
Nov. 2	Lab 5: Aggression in Crayfish	Due at beginning of class: <ul style="list-style-type: none"> • Lab 5 Assignment <p><i>Final Formal Lab Report Due Nov. 4</i></p>
Nov. 9	Analysis of data collected in lab 6 Paper Discussion #3 Introduction to Lab 7: Human Vigilance Behavior	Due at beginning of class: <ul style="list-style-type: none"> • Lab 7 Pre-lab <p>Read paper for discussion #3</p>
Nov. 16	Lab 7: Human Vigilance Behavior	<i>Draft 1 of Project Proposal Due 11/20</i>
Nov. 23	Individual meetings about project proposals	Due online 11/24 – Lab 7 Assignment
Nov. 30	Lab 8: Altruism and the Prisoner’s Dilemma Paper Discussion #4	Due at beginning of class: <ul style="list-style-type: none"> • Pre-lab 8 <p>Read paper for discussion</p>
Dec. 7	Student Presentations Quiz 2	Due at beginning of class: <ul style="list-style-type: none"> • Lab 8 Assignment <p>Study for Quiz 2 <i>Final Project Proposal Due 12/13</i></p>

*field trip

Grading Policy: Grades will be determined by performance on quizzes, lab assignments, a student presentation, a project proposal, a formal lab report, and participation in paper discussions. As this course is Honors/Writing Intensive there will be two writing assignments that are submitted twice, once as an ungraded draft, and then as a final version. These two assignments are the formal lab report and the project proposal. Deadlines for both draft and final versions of these writing assignments are listed on the course schedule.

Grading Scale:

Grades	Points
Quizzes (25 points each)	50
Formal Lab Report	50
Lab Assignments (20 points each)	140
Project Proposal: Presentation & Written Proposal	60
Paper Discussion	25
Participation	25
Total	350

Letter Grade	Percentage
A	90 – 100
B+	85 – 90
B	80 – 85
C+	75 – 80
C	65 – 75
D	50 – 65
F	0 – 50

Make-up quizzes and make-up/late materials: Quizzes and assignments in the course can be made up with appropriate documentation (i.e., a doctors note). If you miss a quiz or assignment, please notify Dr. Wisner as soon as possible. Late materials will be accepted, however you will lose 5% points for each day that the assignment is late.

Academic integrity: The university's academic integrity policy can be found here: <http://www.njit.edu/academics/pdf/academic-integrity-code.pdf>. This code will be enforced in this course. If you have any questions about this policy, please come and talk to me about it.