

Fall 2018

# BIOL 385-H01: Evolutionary Animal Behavior Lab

Caroline DeVan

Follow this and additional works at: <https://digitalcommons.njit.edu/bio-syllabi>

---

## Recommended Citation

DeVan, Caroline, "BIOL 385-H01: Evolutionary Animal Behavior Lab" (2018). *Biology Syllabi*. 15.  
<https://digitalcommons.njit.edu/bio-syllabi/15>

This Syllabus is brought to you for free and open access by the NJIT Syllabi at Digital Commons @ NJIT. It has been accepted for inclusion in Biology Syllabi by an authorized administrator of Digital Commons @ NJIT. For more information, please contact [digitalcommons@njit.edu](mailto:digitalcommons@njit.edu).

**BIOLOGY 385-H01: EVOLUTIONARY ANIMAL BEHAVIOR LAB - HONORS**

<b>INSTRUCTOR:</b>	Dr. Caroline DeVan	<b>EMAIL:</b>	<a href="mailto:caroline.m.devan@njit.edu">caroline.m.devan@njit.edu</a>
<b>OFFICE:</b>	Central King Building 340F	<b>COURSE WEBSITE:</b>	<a href="#">Moodle</a>
<b>OFFICE HOURS:</b>	T: 10:00am -11:00am; W: 2:30pm - 4:30pm; OR By Appointment	<b>COURSE SCHEDULE:</b>	R: 1:00pm–5:20pm [CKB 326]

**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 will be able to:

1. Describe and analyze animal behavior using principles of evolutionary biology
2. Use observation and experiments to investigate animal behavior
3. Use quantitative methods to describe and analyze data
4. Locate and evaluate scientific literature
5. Communicate science in both written and oral formats
6. Work in groups to design, conduct and interpret scientific studies

**PREREQUISITES:** Foundations of Biology: Ecology and Evolution (BIOL 205 & 206)

**REQUIRED MATERIALS:** Research notebook (3-ring binder is fine); reading materials for the course will be posted to [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.

**BIOLOGY 385-H01: EVOLUTIONARY ANIMAL BEHAVIOR LAB - HONORS**

**GRADING POLICY:**

Grades will be determined by performance on daily mini-quizzes, lab assignments, a student presentation, a project proposal, a formal lab report based on an independent research project, participation in paper discussions, and final exam. 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. Your grades will be posted to [Moodle](#) so you can keep track of your progress in the course.

Assignments	Points
Daily mini-quiz & participation	85 points
Formal Lab Report	60 points
9 Lab Assignments (20 points each)	180 points
Project Proposal: Presentation	25 points
Written Proposal	60 points
5 Paper Discussions (10 points each)	50 points
Final Exam	40 points
<b>Total</b>	<b>500 points</b>

**GRADING SCALE:**

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:**

Exams and assignments in the course can be made up with appropriate documentation (i.e. a doctor's note). If you miss an exam or assignment, please notify Dr. DeVan as soon as possible. Late materials will be accepted, however you will lose 5% points for each day that the assignment is late. *Daily quizzes cannot be made-up if missed.*

**Please let me know if you require accommodations for a disability or if you have any concerns about the course as soon as possible so that I can work with you to resolve them. I am here to help!**

**BIOLOGY 385-H01: EVOLUTIONARY ANIMAL BEHAVIOR LAB - HONORS**

**ACADEMIC INTEGRITY:**

The university's academic integrity policy can be found here: [Academic Integrity](#). This code will be enforced in this course. If you have any questions about this policy, please come and talk to me about it. There is ZERO tolerance for academic dishonesty in this course which includes both cheating and plagiarism. The punishment for dishonesty in this course will be a zero on the assignment and a consultation with the Dean of Students after which further action may be required.

**COURSE OUTLINE:** *Note: this is a tentative schedule, any changes will be posted to course website. All assignments are due at the beginning of class unless otherwise noted. \*field trip*

DATE	TOPICS	READING AND/OR ASSIGNMENT
Sept 10	Introduction to Animal Behavior <b>Lab 1:</b> Observations & Statistics Lab	Syllabus Bibliographic Scavenger Hunt
Sept 17	<b>Lab 2:</b> Evolution of Animal Behavior	➔ Lab 1 Assignment
Sept 24	<b>Lab 3:</b> Foraging Decisions in Squirrels <b>Paper Discussion #1</b> Discussion of Project Proposal Assignment & Brainstorm Session for Proposal Ideas	➔ Lab 2 Assignment ▪ <b>Read paper for discussion #1</b>
Oct 1*	<b>Lab 4:</b> Describing and Quantifying Behavior (Pollination)	➔ Lab 3 Assignment
Oct 8*	<b>Lab 5:</b> Alternative Anti-Predator Responses	
Oct 15	<b>Paper Discussion #2</b> Data Analysis for Lab 4 & 5 Independent Research Project Seminar	▪ <b>Read paper for discussion #2</b>
Oct 22*	Independent Research Projects	Topics for Independent Research Project Due ➔ Lab 4 Assignment
Oct 29	Data Analysis for Independent Research Projects <b>Paper Discussion #3</b> Formal Lab Report Writing Seminar Individual Meetings about Project Proposals	▪ <b>Read Paper for Discussion #3</b> ➔ Lab 6 Assignment Topics for Project Proposal Due
Nov 5	<b>Lab 6:</b> Human Behavioral Ecology (Mate Choice) <b>Paper Discussion #4</b>	▪ <b>Read paper for discussion #4</b> Draft 1 of Formal Lab Report Due (11/9)
Nov 12	Mini-Lecture: Introduction to Aggression & Agonistic Behavior <b>Lab 7:</b> Aggression in crayfish	▪ <b>Read paper for discussion #5</b> ➔ Lab 6 Assignment
Nov 19	Discussion of Experimental Design for Lab 8 Mini-Student Presentations on Project Proposals	<b>Draft 1 of Project Proposal Due 11/20</b>
Nov 26	<b>Lab 8:</b> Vigilance in Humans	➔ Lab 7 Assignment
Dec 3	<b>Lab 9:</b> Altruism and the Prisoner's Dilemma <b>Paper Discussion #5</b>	➔ Lab 8 Assignment <b>Final Formal Lab Report Due Today</b>

Dec 10	<b>STUDENT PRESENTATIONS</b> Final Exam	Lab 9 Assignment <b>IN-CLASS RESENTATIONS</b> <i>Final Project Proposal Due 12/12</i>
<b>FINALS</b>	<b>FINAL EXAM WEEK: DECEMBER 15-21, 2018</b>	