

BIOLOGY 382-002: ANIMAL BEHAVIOR

INSTRUCTOR:	Dr. Caroline DeVan	EMAIL:	caroline.m.devan@njit.edu
OFFICE:	340D Central King Bldg.	OFFICE HOURS:	T & F: 10:00AM- 11:30AM
COURSE SCHEDULE:	T & F: 2:30 PM - 3:50PM	COURSE WEBSITE:	https://canvas.njit.edu/
COURSE LOCATION:	CKB G08	OFFICE PHONE:	973-596-5404

COURSE DESCRIPTION: The objective of this course is to expose students to the broad field of animal behavior. The course will include the historical underpinnings of the field as well as the contemporary theories for a wide variety of behaviors. Behavioral ecology and the evolution of animal behaviors as adaptations will be intertwined throughout the course, as well potential applications of knowledge about animal behavior. Students will be able to analyze existing evidence and investigate modern practices in order to evaluate existing theories and consider potential future directions of animal behavior. Using current scientific literature, as well as case-studies, students will be able to come up with their own hypotheses and determine how different hypotheses related to animal behavior can be tested experimentally.

COURSE OBJECTIVES:

Students are able to:

1. Distinguish between the four major categories (mechanism, ontogeny, adaptive value, and phylogeny) of explanations for animal behavior
2. Explain how behavioral hypotheses are created and formulate hypotheses that explain a given behavior
3. Explain the procedures used to test these hypotheses and the types of data that can be used when testing hypotheses
4. Understand the role of natural and sexual selection in the evolution of behavior
5. Understand the ecological context of an animal's behavioral sequence
6. Understand some of the mechanisms involved in the production of a behavioral sequence by an animal
7. Explain how animal behavior can be used to understand human behavior.

PREREQUISITES: Foundations of Biology: Ecology and Evolution Lecture & Lab (BIOL 205 & 206 or R120:205 & 206) and Foundations of Biology: Cell and Molecular Lecture and Lab (BIOL 201 & 202 or R120:201 & 202).

REQUIRED MATERIALS:

- **Animal Behavior (11th edition)** by Dustin R. Rubenstein & John Alcock. This textbook will be the starting point for all class materials and I will add additional materials to the course website. It can be purchased at the NJIT bookstore. You can use a hardback, a paperback or an online version of the text. You can also use an earlier edition of the textbook, just be aware that some of the information may have changed and you should consult with me as needed.

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GRADING POLICY & SCALE: Grades will be determined by performance on three exams as well as weekly homework and participation. There will also be one required written report that will be submitted twice, once as an ungraded draft, and then as a final version. Deadlines for both draft and final versions of the writing assignment are listed on the course schedule. Your grades will be posted to the course website so you can keep track of your progress in the course.

Assignments	Points	Letter Grade	Percentage
Weekly Homework (5%)	20 points	A	90 – 100
Species Report (15%)	60 points	B+	85 – 90
Exam 1 (25%)	100 points	B	80 – 85
Exam 2 (25%)	100 points	C+	75 – 80
Final Exam (30%)	120 points	C	65 – 75
Total	400 points	D	50 – 65
		F	0 - 50

MAKE UP EXAMS AND 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 10% points for each day that the assignment is late.

ELECTRONICS / CELL PHONE POLICY: The use of cell phones is not allowed in class. If you are caught using a cell phone, or another electronic device (iPod, etc.), you will lose points from your grade. Laptops can be used to take notes in class; however, if you abuse this privilege by using them for non-class related purposes, you will lose points.

ACADEMIC INTEGRITY: The University's academic integrity policy can be found [here](#). 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. If you have any questions about this policy, please come and talk to me about it.

Accommodations: 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!

CANVAS: We will be using Canvas for our class website (<https://canvas.njit.edu/>). If you are a non-matriculated 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://myucid.njit.edu/>. 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.

Note: Below is a tentative schedule, any changes will be posted to Canvas

All assignments are due at the beginning of class unless otherwise noted.

* The final exam schedule will be posted here: <http://www.njit.edu/registrar/exams/>

**Do not schedule travel during the final exam period until after the NJIT final exam schedule has been announced.

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COURSE OUTLINE: *NOTE: The final exam WILL be held during the final exam period listed below. DO NOT make arrangements to leave town prior to this, as taking the exam early will NOT be an option.*

WEEK	LECTURE TOPIC	READING ASSIGNMENTS
Week 1 1/21 – 1/24	T: Introduction / Overview F: Integrative Study of Behavior I	Chapter 1
Week 2 1/28 – 1/31	T: Integrative Study of Behavior II F: Developmental & Genetic Basis of Behavior I	Species report proposals due Chapter 3
Week 3 2/4 – 2/7	T: Developmental & Genetic Basis of Behavior I F: Neural Basis of Behavior I	~ Chapter 4
Week 4 2/11 – 2/14	T: Neural Basis of Behavior II, Physiological Basis of Behavior I F: Physiological Basis of Behavior II	Chapter 5 Species report draft due
Week 5 2/18 – 2/21	T: Animal Personalities F: Exam 1	Online reading (Chapters 1-5 & online material)
Week 6 2/25 – 2/28	T: Avoiding Predators F: Finding Food	Chapter 6 (p186-203) Chapter 6 (p204-217)
Week 7 3/3 – 3/6	T: Where to Live F: Migration & Dispersal	Chapter 7 (p220-234) Chapter 7 (p235-254)
Week 8 3/10 – 3/13	T: Communication I F: Communication II	Chapter 8 ~
Week 9 3/17 – 3/20	MARCH 15-22: SPRING BREAK – NO CLASS THIS WEEK	
Week 10 3/24 – 3/27	T: Reproductive Behavior I F: Reproductive Behavior II	Chapter 9 Species report final due
Week 11 3/31 – 4/3	T: Mating Systems I F: Mating Systems II	Chapter 10 ~
Week 12 4/7 – 4/10	T: EXAM 2 F: GOOD FRIDAY – NO CLASS	On Chapters 6 – 10 ~
Week 13 4/14 – 4/17	T: Parental Care I F: Parental Care II	Chapter 11 ~
Week 14 4/21 – 4/24	T: Social Evolution I F: Social Evolution II , Social Behavior & Sociality I	Chapter 12 Chapters 12 - 13
Week 15 4/28 – 5/1	T: Social Behavior & Sociality II F: Human Behavior	~ Chapter 14
Week 16 5/5	T: Behavior in non-animals <i>**Tuesday 5/5 is a Friday Schedule. Last day of Classes**</i>	<u>Final Exam during Final Exam Week</u>
FINALS	FINAL EXAM WEEK: MAY 8-14, 2020	