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.
**Course Syllabus**

**SPRING 2020**

**BIOLOGY 382-002: ANIMAL BEHAVIOR**

**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.

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

**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.
**BIOLOGY 382-002: ANIMAL BEHAVIOR**

**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.*

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LECTURE TOPIC</th>
<th>READING ASSIGNMENTS</th>
</tr>
</thead>
</table>
| 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 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  
**Tuesday 5/5 is a Friday Schedule. Last day of Classes** | Final Exam during Final Exam Week |

**FINALS**  
**FINAL EXAM WEEK: MAY 8-14, 2020**