

Behavioral Ecology

Fall 2019

Meeting Time and Place	Mon/Wed/Fri 12:00-12:53pm Frey Hall 201
Instructor	Dr. Catherine Markham <i>Email:</i> catherine.markham@stonybrook.edu <i>Phone:</i> (631) 632-5755 <i>Office:</i> Social and Behavioral Sciences Building, Room North-533 <i>Office hours:</i> Tues 1:00-2:30pm or by appointment
Undergraduate TA	KeriLynn Cronin <i>Email:</i> kerilynn.cronin@stonybrook.edu <i>Office:</i> Social and Behavioral Sciences Building, Room South-524 <i>Office hours:</i> TBD or by appointment
Course Attributes	<i>None</i>
Prerequisites	BIO 201 or instructor permission

Course Description

A consideration of the patterns of animal behavior in relation to ecological circumstances and evolutionary history. Vertebrate examples are emphasized.

Course Learning Objectives

1. **Make** predictions about social behavior based on an individual's environment.
2. **Discover** the role that behavioral flexibility plays in maximizing individual fitness.
3. **Develop** novel hypotheses about social behavior using an evolutionary framework.
4. **Critically evaluate, synthesize, and extract** key elements of scientific arguments.
5. **Gain intellectual independence** by debating primary literature, interpreting data, and critiquing experimental design.

Course Delivery Mode and Structure

This course includes three lecture sessions each week. PowerPoint slides will be posted on Blackboard after each lecture. **Note that many lecture slides, however, are simply pictures – students are often not able to understand the material that was discussed unless they are present for lecture!**

How We Will Communicate

I cannot always recognize the confused, frustrated, or unhappy expressions on your face if you encounter problems, so you must communicate with me so that I can help! To make the experience go smoothly, remember that you're responsible for initiating contact and being direct, persistent, and vocal when you don't understand something. My preferred method of contact is via email at catherine.markham@stonybrook.edu. If you would like to talk on the phone or meet, email me so that we can set up a mutually agreeable time. I will reply to your emails as soon as possible, but please allow between 24-48 hours for a response. Also, please use your Stony Brook University email when getting in touch with me as that is the preferred method of contact from the institution.

Blackboard and Technical Assistance

This course uses Blackboard to facilitate communication between the instructor and students, taking quizzes, assignment submission, and grade posting. The Blackboard course site can be accessed at <https://blackboard.stonybrook.edu>. If you are unsure of your NetID, visit <https://it.stonybrook.edu/help/kb/finding-your-netid-and-password> for more information.

It is your responsibility to secure use of a reliable computer and internet connection throughout the term. Note that you will be at a disadvantage if you attempt to complete all coursework on a smart phone or tablet and it may in fact be impossible to submit the files required for your assignments. The following list details a minimum recommended computer set-up and the software packages you will need: PC with Windows 8 or Macintosh with OS 10.11; Intel Core i5; 250 GB hard drive; 8 GB RAM; high speed internet connection; word processing software; speakers (either internal or external) or headphones; and Adobe Flash player with the latest update.

If you need technical assistance at any time during the course or to report a problem with Blackboard you can call Stony Brook University Client Support at (631) 632-9800. You can also submit a help request ticket online at <https://it.stonybrook.edu/services/itsm> and/or you can visit Stony Brook University's Walk-Up Tech Support Station in the Educational Communications Center Building.

Required Readings

Students are required to read select chapters from the text listed below. Note that earlier editions of this textbook are not compatible with this course; students will be at a disadvantage if they do not have the most up to date text. A copy of this textbook has been placed on reserve in the library.

Rubenstein DR, Alcock J. 2019. Animal Behavior 11th Edition. Sinauer Associates: New York, NY.

Assessment and Evaluation

Attendance: In lectures, we will present and discuss new material. **You are expected to attend each class and you are expected to arrive on time.**

Homework: There are a total of 4 assignments based off of select "Thinking Outside the Box" prompts in your textbook. **The due dates for these assignments are Sep 16, Oct 11, Nov 8, and Dec 4.** These assignments will require students to develop their own hypothesis or argument in response to the specific prompt; hypotheses will be tested and arguments defended using resources available online (e.g. peer-reviewed journal articles, publicly-shared datasets). Assignments will culminate in a 1-2 page (12 point font, single-spaced) write-up. Details on each assignment are available under the "Assignments" menu item on Blackboard, and a rubric for how assignments will be evaluated is posted under the "Rubrics" menu item in Blackboard. **Assignments must be submitted via Blackboard by 11:59pm on the date listed on the course calendar.** Note that completing each assignment will require considerable time and independent work. The assignments are designed to be fun and engaging, but they are challenging! Be sure that you allot enough time (typically 3 hours) to complete each assignment before the opportunity to submit your work closes. **Late work will not be accepted.**

Exams: You will take 4 in-class exams comprised entirely of multiple choice questions. **Dates for these exams are Sep 20, Oct 18, Nov 13, and Dec 9.** Any questions concerning your exam grade must be brought to the instructor's attention within *one week* of the graded exam's return. After one week, we can discuss your exam but re-grades will not be considered.

On exam days, students are not permitted to wear hats or use electronic devices. Any use of a cell phone or other unauthorized electronic device during an examination will lead to an accusation of scholastic dishonesty. Also note that all backpacks, book bags, purses, etc. must be left at the front of

the classroom during exams. You need only a pen or pencil to take an exam. If you're worried that someone might take your bag by mistake, don't bring it to class on an exam day.

Students seeking exam accommodations through the Student Accessibility Support Center (SASC) are responsible for coordinating taking the exam at SASC at least one full week prior to the exam date. To avoid confusion, students should email me to confirm that I am aware of this testing location. For more information on SASC, visit them online at <https://www.stonybrook.edu/dss/>

Make-up Exams: Make-up exams will be given only under exceptional circumstances and only if the student can provide written evidence for the cause of their absence. For planned absences, you must provide this documentation in advance of the exam date and time. For unplanned absences, students must contact me (either by email or voicemail) no later than the 5:30pm on the date of the exam. Make-up exams will be given for students missing the exam for official University functions. *The make-up exam will be different from the regular exam with increased emphasis on short answer and essay questions.*

Grading: This course is a 3-credit course. Students will receive a grade between A and F based on three exams according to the following calculations:

<i>Homeworks (4 total)</i>	20%
<i>Exam 1</i>	20%
<i>Exam 2</i>	20%
<i>Exam 3</i>	20%
<i>Exam 4</i>	20%

Your final letter grade for the semester will be assigned based on the following ranges. Note that there is no "extra credit" offered for this course and that grades are not curved.

A	93 to 100	B+	87 to <90	C+	77 to <80	D+	67 to <70
A-	90 to <93	B	83 to <87	C	73 to <77	D	63 to <67
		B-	80 to <83	C-	70 to <73	F	0 to <63

Struggling students: If you are struggling in class, please come to me *during* the semester. Do not wait until the end of the semester to ask for help! By then it is too late for me to help you. If your performance during the semester is adversely affected by personal problems (death of a family member, mental health issues, etc.), contact your dean's office as soon as possible to discuss your options. Other available resources for academic help include Student Success Resources (<http://www.stonybrook.edu/for-students/> and <http://www.stonybrook.edu/due>) as well as the Academic Success and Tutoring Center (http://www.stonybrook.edu/commcms/academic_success/).

Use of Electronics

Ringed phones, texting, etc. are disruptive so remember to turn off your phone before you come to class. You can use your computers in class for note-taking and other purposes related to this class. However, you will lose that privilege if you use your computer for other purposes during class.

Our Online Community

This course uses *optional* Discussion Boards on Blackboard to promote an exchange of ideas among peers. Our online classroom – just like our physical classroom – is a professional environment where academic debate and learning take place. I will make every effort to make this environment safe for you to share your opinions, ideas, and beliefs. In return, you are expected to respect the opinions, ideas, and beliefs of other students and adhere to the standards set in the Student Code of Conduct. Students who violate these standards are subject to disciplinary action. If your behavior does not follow the course etiquette standards stated below, I reserve the right to remove any discussion messages that display inappropriate language or content.

I expect all students to respect the following guidelines for postings:

- Offensive language or rudeness will not be tolerated. Discuss ideas, not the person.
- Avoid cluttering your messages with excessive emphasis (stars, arrows, exclamations).
- Be specific and clear, especially when asking questions.
- Be forgiving of other people's mistakes.
- Use standard punctuation and capitalization. Using all uppercase characters can give the appearance of shouting and makes the message less legible.
- Remember that not all readers are native English speakers, so make allowances for possible misunderstandings and unintended discourtesies.

Within our online community, I will serve as a “guide” to our online discussions. While I will not respond to every post, I will read what is posted and reply when necessary. Expect instructor posts in the following situations:

- To assist each of you when it comes to making connections between discussion, lectures, and textbook material.
- To fill in important things that may have been missed.
- To re-direct discussion if discussions get “out of hand”.
- To identify key points or especially valuable posts.

Student Accessibility Support Center Statement

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Academic Integrity Statement

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at

http://www.stonybrook.edu/commcms/academic_integrity/index.html

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow

their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

Course Evaluations

Each semester, Stony Brook University asks students to provide feedback on their courses and instructors through an online course evaluation system. The course evaluation results are used by the individual faculty, department chairs and deans to help the faculty enhance their teaching skills and are used as part of the personnel decision for faculty promotion and tenure.

Stony Brook contracts with an outside vendor to administer the surveys and all results are completely anonymous. No individually identifiable data are ever reported back to the university or instructor. Students who have completed previous evaluations can view all faculty ratings at <https://www.stonybrook.edu/celt/services/assessment/course/course-evaluations>

Copyright Notice

Unless otherwise noted, all materials in this course are the intellectual property of the professor and you may not reuse and/or duplicate the material in printed or electronic form without prior written permission from the owner. The University requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. **YOU ARE INDIVIDUALLY AND SOLELY RESPONSIBLE FOR VIOLATIONS OF COPYRIGHT AND FAIR USE LAWS. THE UNIVERSITY WILL NEITHER PROTECT NOR DEFEND YOU NOR ASSUME ANY RESPONSIBILITY FOR EMPLOYEE OR STUDENT VIOLATIONS OF COPYRIGHT AND FAIR USE LAWS.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability as well as disciplinary action under University policies.

Course Schedule

See below for key dates. Note that dates are subject to change!

AUGUST

- Aug 26 Introduction
No reading
- Aug 28 **Chapter 2: The integrative study of behavior – Part 1**
- Aug 30 **Chapter 2: The integrative study of behavior – Part 2**

SEPTEMBER

- Sep 2 No class – Labor Day
- Sep 4 **Chapter 3: Developmental and genetic basis of behavior – Part 1**
- Sep 6 **Chapter 3: Developmental and genetic basis of behavior – Part 2**
- Sep 9 **Chapter 4: The neural basis of behavior – Part 1**
- Sep 11 **Chapter 4: The neural basis of behavior – Part 2**
- Sep 13 **Chapter 5: The physiological basis of behavior – Part 1**
- Sep 16 **Chapter 5: The physiological basis of behavior – Part 2**
Assignment 1 due!

Sep 18 *TBD*

Sep 20 **Exam 1**

Sep 23 *Chapter 6: Avoiding predators and finding food – Part 1*

Sep 25 *Chapter 6: Avoiding predators and finding food – Part 2*

Sep 27 *Chapter 6: Avoiding predators and finding food – Part 3*

Sep 30 *Chapter 7: Territoriality and migration – Part 1*

OCTOBER

Oct 2 *Chapter 7: Territoriality and migration – Part 2*

Oct 4 *Chapter 7: Territoriality and migration – Part 3*

Oct 7 *Chapter 8: Principles of Communication – Part 1*

Oct 9 *Chapter 8: Principles of Communication – Part 2*

Oct 11 *Chapter 8: Principles of Communication – Part 3*
Assignment 2 due!

Oct 14 **Fall break**

Oct 16 *TBD*

Oct 18 **Exam 2**

Oct 21 *Chapter 9: Reproductive behavior – Part 1*

Oct 23 *Chapter 9: Reproductive behavior – Part 2*

Oct 25 *Chapter 9: Reproductive behavior – Part 3*

Oct 28 *Chapter 10: Mating systems – Part 1*

Oct 30 *Chapter 10: Mating systems – Part 2*

NOVEMBER

Nov 1 *Chapter 10: Mating systems – Part 3*

Nov 4 *Chapter 11: Parental care – Part 1*

Nov 6 *Chapter 11: Parental care – Part 2*

Nov 8 *Chapter 11: Parental care – Part 3*
Assignment 3 due!

Nov 11 *TBD*

Nov 13 **Exam 3**

Nov 15 *Chapter 12: Principles of social evolution – Part 1*

Nov 18 *Chapter 12: Principles of social evolution – Part 2*

Nov 20 *Chapter 12: Principles of social evolution – Part 3*

Nov 22 **Chapter 13: Social behavior and sociality – Part 1**

Nov 25 **Chapter 13: Social behavior and sociality – Part 2**

Nov 27 Thanksgiving break

Nov 29 Thanksgiving break

DECEMBER

Dec 2 **Chapter 13: Social behavior and sociality – Part 3**

Dec 4 **Chapter 14: Human behavior – Part 1**
Assignment 4 due!

Dec 6 *TBD*

Dec 9 **Exam 4**