

# ZOO 4926 – Introduction to Animal Behavior

## Section 0972

### Syllabus for Spring 2017

#### I. Course Description and Prerequisites

The scientific study of the mechanistic and evolutionary causes of animal behavior, including communication, foraging and anti-predator behavior, spatial behavior, mating behavior, parental care, and social behaviors. 3 credits.

**Prerequisites:** BSC 2010/2011 and labs or the equivalent with a minimum grade of “C”. PCB 4674 suggested (previously or concurrently) but not required.

#### II. Course Meetings

**Lectures:** T periods 9-10, 4:05-6:00 p.m., 112 Newins-Ziegler Hall  
R period 9, 4:05-4:55 p.m., 112 Newins-Ziegler Hall

**First day of classes:** Wednesday 04 January 2017

**Last day of classes:** Wednesday 19 April 2017

**Final Exam:** Group 25E, Tuesday 25 April 2016, 5:30-7:30 p.m.

#### III. Instructors

**Course Instructor:**

**Dr. Nicole Gerlach**

Department of Biology

Office: 520 Carr Hall

Phone: 352-392-2419

Office Hours: Thursday 2-3 p.m. or by appointment

E-mail: [ngerlach@ufl.edu](mailto:ngerlach@ufl.edu)

#### IV. Course Communications

- A. **Course Website:** <https://ufl.instructure.com/courses/336746/>
- B. **Contacting Your Instructor:** If you have a question about course mechanics or course material that cannot be answered from the syllabus, course announcements, or the course FAQ, please post it to the Discussion Boards on Canvas (see section IX “Getting Help”, below). If you have a question involving a personal/grade-related issue, please e-mail Dr. Gerlach. E-mail is by far the best way of contacting Dr. Gerlach (rather than the phone). All e-mail correspondence must originate from your @ufl.edu account, have your full name in the body of the e-mail, and contain “ZOO 4926” in the subject line. E-mails not meeting these requirements may not be recognized by our e-mail filters, and thus may not be answered. Barring unusual circumstances, we do our best to reply within 24 hours during the week, and 48 hours over the weekend. E-mails and Discussion Board posts are checked at least once per day, but sometimes not more than that.
- C. **Communications From Your Instructor:** Each student is solely responsible for reading and following the instructions, guidelines and schedules in this syllabus and on the course webpage, or announced in class. Not having read the information in this syllabus, on the webpage, or in course announcements will not constitute an excuse for missing deadlines, assignments, or other assessments. Please set your

preferences in Canvas so that you receive timely notifications of course announcements and other information.

## V. Course Resources

### A. Textbook

*Animal Behavior: Concepts, Methods, and Applications, 1e* by Shawn E. Nordell & Thomas J. Valone. Oxford University Press (publisher), 2013.

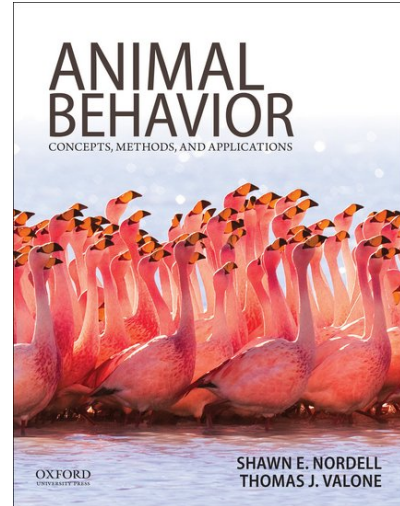
Textbook publisher web site:

<http://global.oup.com/us/companion.websites/9780199737598/>

A copy of this textbook is on reserve at the Marston Science Library.

### B. Learning Catalytics

We will use the Learning Catalytics Classroom Response System for clicker/quiz questions during class, as well as for out-of-class response questions. Learning Catalytics allows students to use a laptop, tablet, smartphone, etc. to participate in a variety of types of questions. Information on correctly registering for Learning Catalytics will be available in Canvas. When setting up your account, **you must use your Gatorlink (ufl.edu) e-mail address**. Using an e-mail address other than your UFL e-mail address will result in you receiving NO credit for Learning Catalytics questions.



### C. Course Website (Canvas)

Class material - including the syllabus, handouts, assignments, and gradebook – will be posted on the course Canvas website (<https://ufl.instructure.com>). For help with Canvas, call the UF Computing Help Desk at 352-392-4357, or visit the e-Learning support website: <http://help.instructure.com/>.

## VI. Course Objectives

Behavior is one of the most important and interesting aspects of animal biology. Behaviors permit flexibility that allows animals to respond rapidly to environmental changes. This course exposes students to the broad field of animal behavior. Students will come to understand the historical foundations of the field, as well as current theories and evidence for a broad range of behavioral topics. We will also focus on how the science underlying our theoretical understanding of behavior is conducted, and how behavioral hypotheses at all levels of analysis can be tested experimentally. Students also participate in practical exercises to learn some fundamental techniques used to study behavior, and will practice reading and analyzing current scientific literature. Behavioral ecology and the evolution of behaviors as adaptations will be recurring themes interwoven through all topics discussed.

By the end of this course, students should be able to:

- Distinguish between the four types of questions that may be asked about animal behavior, and formulate hypotheses of each type to explain a given behavior.
- Explain how behavioral hypotheses are formulated, the procedures used to test them, and the types of data that can be collected.
- Understand some of the mechanisms involved in the production of a behavioral sequence by an animal.
- Understand the role of natural and sexual selection in the evolution of behavior.
- Explain how these principles can be used to understand human behavior.

## VII. Course Policies

### A. Time Commitment

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course during the regular semester. Because ZOO 4926 is 3 credits, each student should therefore expect to devote 9-12 hours per week to this course in a 15-week semester.

### B. Attendance

Students are expected to attend all scheduled classes, and are responsible for all material presented in lecture, online, and in the assigned readings. Students who miss class are welcome to ask to borrow the notes of their classmates; the instructor will not be responsible for providing notes. Please note that no in-class questions or participation points can be made up, regardless of the reason for missing class.

### C. Exams

Students are expected to arrive on time; no extra time will be given for students who arrive late. Any material covered during the lecture period or assigned in the reading may be included in the lecture exams. This can include textbook illustrations, films, Powerpoint slides, and actual lectures. Take notes!

I will either hold post-exam review sessions or post exam keys that highlight the salient points for which credit is awarded. Please see Dr. Gerlach immediately if 1) your score is incorrectly summed, or 2) your posted score on Canvas does not agree with the score written on your exam. I will consider other re-grade requests on a case by case basis, however, I will not argue about point assignments. To request a regrade, write a brief paragraph explaining why you believe your answer to a question was incorrectly scored, make specific reference to the posted key and submit it after class or in office hours (so that an instructor can look over your request and be sure it is clear). Regrade requests must be submitted within one week of the exam scores being posted.

Make-up exams will **only** be available in cases of medical and/or family emergencies when documented by an accompanying letter from the Dean of Students, or for official academic activities (in which case the instructor should be contacted a minimum of two weeks in advance). The student must notify the instructor either ahead of time or within 24 hours of the missed exam, and the student is responsible for scheduling a timely make-up exam with the instructor.

### D. Late Work

Assignments should be submitted by the assigned deadline. Late work will be subject to a 20% penalty for every day it is late. For example, an assignment initially worth 10 points will be subject to a 2 point penalty if it is submitted up to 24 hours after the deadline, a 4 point penalty up to 48 hours, etc.

### E. Classroom Behavior

Readings should be done in advance of class; you are expected to come ready to discuss the topics. Please be courteous to others during both lecture and lab, particularly during in-class discussions. Students exhibiting disruptive behavior in class will be asked to leave, with the subsequent loss of participation points for that day. Use of electronic devices in class to take notes or otherwise participate in classroom activities is approved, but all electronic devices should be set to silent mode before coming to class. Approved electronic devices are laptop computers, cell phones, smart phones, tablets, iPod touch, and voice recording devices. Other uses of these devices or the use of unapproved devices will be considered disruptive. Unapproved electronic devices include video recorders, digital cameras and MP3 players.

### F. Office Hours

Please see instructors during posted office hours whenever possible. If you have a conflict with those hours, I am happy to make an appointment to meet you and address questions at a mutually agreeable time. However, I cannot meet with students on a drop in basis – please send me an e-mail to set up an appointment before stopping by!

**G. Grammar**

Correct grammar, punctuation, spelling, capitalization and paragraphing should be used in any college level submission, including exams and typed reports. We will take note of spelling and grammar and we will grade accordingly.

## VIII. UF Policies

**A. Academic Honesty**

All students registered at the University of Florida have agreed to comply with the following statement:

*“I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”*

In addition, on all work submitted for credit the following pledge is either required or implied:

*“On my honor I have neither given nor received unauthorized aid in doing this assignment.”*

Cases of plagiarism or other academic dishonesty will not be tolerated, and may result in assignment penalties, course grade penalties, and/or other sanctions. If you have knowledge of any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at:

<https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx#honesty>.

**B. Accommodations for Students With Disabilities**

Students who will require a classroom accommodation for a disability must contact the Dean of Students Office of Disability Resources, in Peabody 202 (phone: 352-392-1261). Please see the University of Florida Disability Resources website for more information at: <http://www.dso.ufl.edu/drc/>. Note that the student should provide documentation of a requirement for accommodation to Dr. Gerlach **by the second week of classes** or as soon as possible thereafter. No accommodations are available to students who lack this documentation, and accommodations are not retroactive. It is the policy of the University of Florida that the student, not the instructor, is responsible for arranging accommodations when needed. Once notification is complete, the Dean of Students Office of Disability Resources will work with the instructor to accommodate the student.

**C. Drop/Add/Withdrawal**

A student can drop/add during the drop add period with no penalty. After drop/add, a student who drops will receive a W until the date listed in the academic calendar. After that date, the student may be assigned an “E” (fail). Note: it is the responsibility of the STUDENT to withdraw from a course, not the instructor. Failure to participate/complete the class is NOT a drop.

**D. Teacher Evaluations**

Anonymous course evaluations will be open via UF’s online evaluations system (<https://evaluations.ufl.edu>) near the end of the semester; you will receive e-mail notifications of when the evaluations open.

## IX. Getting Help

**A. Computing Problems**

For issues with technical difficulties with Canvas, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)

- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

It is each student's responsibility to check their LearningCatalytics gradebook in a timely fashion to be sure their submissions are being properly recorded. **For problems with Learning Catalytics, call the following support number:** 1- 800-677-6337 or visit <https://learningcatalytics.com/pages/support> .

#### B. University Support Services

College can be a very stressful time in a person's life. Resources are available on campus to help students meet academic goals and solve personal problems, which may interfere with their academic performance. If you find that you are having difficulty emotionally or academically, there is substantial support available. See "[A Self Help Guide for Students](#)" or contact on of the following services:

1. [UF Counseling and Wellness Center](#), Radio Rd Facility, 392-1575
2. [Dean of Students Office](#), 202 Peabody Hall, 392-1261
3. [Career Resource Center](#), Reitz Union, 392-1601
4. [CLAS Academic Advising Center](#), Farrior Hall, 100 Fletcher Drive, 392-1521

#### C. Other Questions

If you have non-tech-support questions about other aspects of the course, check the following sources first to see if it is already answered, **before** e-mailing your instructors:

- Course Syllabus
- Course Announcements (this is the primary means that your instructor has to communicate with you in a timely manner)
- Course FAQ Discussion Boards

If you still cannot find the answer to your questions:

- If it is a question that others might find useful to know the answer to as well (regarding the course material, specifics of an assignment, etc.), post it to the discussion board.
- If it is a question specific to you (e.g. account or grade specific), contact Dr. Gerlach via e-mail.

**X. Assessments and Grading**

**A. Course Structure**

Final grades will be based on 3 exams (20% each) and short homework assignments and participation in lecture activities including Learning Catalytics questions (40%). A more detailed breakdown of grading proportions can be found in the Canvas gradebook.

**B. Assignments**

Homework assignments will fall into two categories:

1) A semester-long project that asks students (in stages) to observe animal behavior, formulate a research question and hypothesis, and develop an experiment to test that hypothesis. All assignments in this category are required and will count towards the final grade.

2) Short weekly (or bi-weekly) assignments in which students will be asked to read and evaluate the primary literature, consider case studies, and/or answer questions related to the course material that week. There will be eight of these assignments available throughout the semester; students must choose a minimum of four (and a maximum of five) of these to complete. Only the first five submitted assignments will be graded for each student, and the four highest scores from those five grades will count towards the final grade.

**C. Extra Credit**

There will be three extra-credit opportunities in this course, corresponding to each of the three lecture exams. More information regarding these assignments and their due dates will be available on the Canvas course site. No individualized extra credit opportunities will be available.

**D. Grading**

Minimum grade cutoffs are listed below. These cutoffs will not be raised; in other words, if you receive 93% of the possible points, you are guaranteed to earn an A grade. A curve may be applied to individual exams or to the final overall scores, depending on the class average, and will be communicated clearly. However, we will *not* adjust or round-up grades on an individual basis for any reason.

Point Range (%)	Letter Grade
≥ 93	A
≥ 90	A–
≥ 87	B+
≥ 83	B
≥ 80	B–
≥ 77	C+
≥ 73	C
≥ 70	C–
≥ 67	D+
≥ 63	D
≥ 60	D–
< 60	E

Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

**E. Incomplete(“I”):** If a student has completed the majority of the course work with a passing grade and particular DOCUMENTED circumstances prevent completion of the course in the time allotted, the student may, with the agreement of the instructor, be assigned an “I” pending resolution of the grade. All

incompletes **MUST** be resolved by the end of the following term or the student will receive a grade of “E” (failing).

**F. Special Treatment**

Please do not request individual special treatment regarding grading at the end of the semester; **we do not adjust grades for individuals for any reason**. Plan to do well on all exams and other assignments from the beginning of the semester; if you are having difficulty in the class, please let your instructors know sooner rather than later.

## XI. Disclaimer

This syllabus represents the current plans and objectives; however, schedules, requirements, and assignments may change throughout the semester as the need arises. Such changes, communicated clearly, are not unusual and should be expected.

## XII. Weekly Schedule

NOTE: The following schedule is tentative; lecture topics and coverage may change. Updated schedule and specific reading assignments will be posted on the course website throughout the semester.

Week #	Lecture #	Date	Lecture Topic		Chapter
1		T 03 Jan	ADD/DROP – NO CLASS		
	1	R 05 Jan	Introduction to Animal Behavior		1
2	2	T 10 Jan	Tinbergen's Four Questions	Methods for Studying Animal Behavior	2
	3	R 12 Jan	Ultimate Causes – Selection I		2
3	4	T 17 Jan	Ultimate Causes – Selection II	Ultimate Causes – Phylogenies	2
	5	R 20 Jan	Proximate Causes – Genetics		4
4	6	T 24 Jan	Proximate Causes – Hormones I	Proximate Causes – Hormones II / Neuro I	3, 5
	7	R 26 Jan	Proximate Causes – Neuro II		5
5	8	T 31 Jan	Proximate Causes – Learning I	Proximate Causes – Learning II	5
	9	R 02 Feb	Communication I		6
6		<b>T 07 Feb</b>	<b>EXAM I (Lectures 1-8)</b>		
	10	R 09 Feb	Communication II		6
7	11	T 14 Feb	Communication III	Intro to Sexual Selection	6, 11
	12	R 16 Feb	Female Choice I		11
8	13	T 21 Feb	Female Choice II	Male-male competition	11
	14	R 23 Feb	Mating systems I - Polygyny		12
9	15	T 28 Feb	Mating systems II - Polyandry / Leks	Mating systems III - Monogamy and EPCs	12
	16	R 02 Mar	Parental care I		13
		T 07 Mar	SPRING BREAK – NO CLASS		
		R 09 Mar	SPRING BREAK – NO CLASS		
10	17	T 14 Mar	Parental Care II	Parental care III	13
	18	R 16 Mar	Foraging		7
11		T 21 Mar	<b>EXAM II (Lectures 9-17)</b>		
	19	R 23 Mar	Antipredator Behavior		8
12	20	T 28 Mar	Navigation	Migration	9
	21	R 30 Mar	Dispersal		9
13	22	T 04 Apr	Habitat Selection	Territoriality	10
	23	R 06 Apr	Intro to Game Theory		10 & 14
14	24	T 11 Apr	Aggression	Dominance	10 & 14
	25	R 13 Apr	Sociality & Cooperation		14
15	26	T 18 Apr	Kin Selection & Eusociality	Altruism	14
		R 20 Apr	READING DAYS – NO CLASS		
<b>FINALS</b>		<b>T 25 Apr</b>	<b>EXAM III (Lectures 18-26)</b>		