

Biology/Psychology 388/588: Animal Behavior Syllabus

Spring 2023

Class information posted on Canvas.

Course Overview:

Course Description:

At first glance, we may be amazed by eels that resist eating prey fish that are providing a dental cleaning service, or by the elaborate displays of male birds in their attempts to woo females, or by kangaroo moms that guard their toddler-like young in their own bodies. But at closer inspection, we realize that all these animals are facing similar challenges: All animals are driven to eat and not be eaten, to stay healthy, to make babies, and to keep their babies alive. And animals have developed behavioral tools to achieve these goals, such as ways of finding or making food and a place to live, ways to defend these things, techniques for attracting the opposite sex, and parental methods. The details are diverse across species, but the ultimate goals and many of the strategies are common. And amazingly, the brain and hormonal systems that regulate these behaviors are common too. In this course, we will explore what some of those challenges are, some alternative behavioral solutions to them, the physiological bases of these behaviors and the evolutionary pressures that have molded them.

Studying animal behavior, either as a Biologist or Psychologist, requires careful recording of observations and descriptions of behaviors. From these observations and descriptions of behaviors, both disciplines work towards explaining causes of behavior. These causes can be evolutionary (ultimate) or the immediate results of social interactions or changes in physiological functions (proximate). Through this course, we will gain experience making behavioral observations of animals and describing those behaviors as they occur in the context of an animal's habitat.

Course Learning Objectives:

- 1) Describe ultimate and proximate causes of a variety of animal behaviors
- 2) Collect animal behavior data using a range of techniques used in biological and psychological fields
- 3) Describe what the fields of biology and psychology each contribute to an understanding of animal behavior and the benefits of being able to combine these contributions
- 4) Critically read and evaluate scientific journal articles in biology and psychology
- 5) Demonstrate effective writing for both scientific and lay audiences

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Times: Lectures: T/Th: 9:30-10:45 a.m. in CBB 135
Final Exam Time: Monday May 15 12:30 a.m.-2:30 p.m. in CBB 135

Texts: *Animal Behavior: An Evolutionary Approach*, 11th Edition by Rubenstein & Alcock (2018), Oxford University Press (required rental)

Measuring Behavior: An Introductory Guide, 3rd Edition by Martin and Bateson (2007), Cambridge University Press (required rental)

Other readings: We will read and discuss several papers over the course of the semester. These are **required** reading and will be posted at Desire2Learn.

Key Dates: Exam 1 = **February 21** (will include material presented prior to 1st exam)
Exam 2 = **March 16** (will include material presented between 1st and 2nd exams)
Exam 3 = **April 18** (will include material presented between 2nd and 3rd exams)
Exam 4 = **May 15** (will include material presented between 3rd and 4th exams)

Course Requirements and Grading:

Point Distribution:

Practical Assignments	2 X 10 points each = 20 points
Participation Quizzes	12 X 10 points each = 120 points
Pop-Science Paper	40 points
Partner Paper	60 points
Discussion Notes	4 X 10 points each = 40 points
Unit Exam 1	100 points
Unit Exam 2	100 points
Unit Exam 3	100 points
Unit Exam 4	100 points

Total **700 points**

Letter Grades:

93-100% = A; 90-92.9% = A-; 87-89.9% = B+; 83-86.9% = B; 80-82.9% = B-;
77-79.9% = C+; 73-76.9% = C; 70-72.9% = C-; 60-69.9% = D; 0-59.9% = F

Course Expectations:

Exams:

Unit Exams will focus on content from the assigned readings and lecture and will not be cumulative. The format of the exams will be a combination of multiple choice, fill in the blank, and short answer.

Participation Quizzes:

Participation quizzes serve as exam practice, to ensure you are engaging in the material in a timely manner, and that you are not getting behind in the course. Each quiz will be between 2-5 questions for a total of 10 points, and the content will focus on material covered in that week's modules. You may repeat these quizzes to get a better score.

Discussions:

Periodically we will have an assigned primary research paper to read and discuss in class. You will be assigned a set of discussion questions prior to each paper discussion. Read the assigned paper before class and think about/take notes on each of these questions with regard to the paper. Your notes will be due (submitted on Canvas) prior to the start of lecture and you should also bring a copy to class for discussion and note-taking purposes. Discussion is intended to clarify any confusion about the paper and foster critical thinking. Answers to each of these questions for each paper are fair game on the exams.

Practical Assignments:

We will have two individual practical assignments for you to gain experience with animal behavior data collection methods in biological and psychological fields. More details on these assignments will be provided later. Briefly, the assignments will include:

- 1) **Create an ethogram for a captive, domesticated, or wild species:** Using observation strategies learned in class, describe and define the behaviors of a captive, domesticated or wild species based on lab or field observations.
- 2) **Recording methods for a single animal or a social group of animals:** Choose a sampling method, identify individuals, and collect behavioral data on a single animal or on multiple animals simultaneously using observation strategies learned in class.

Tinbergen's 4 Questions Partner Paper:

You will be assigned a partner for this exercise. Together, you will choose a behavior, and explain that behavior, answering Niko Tinbergen's 4 questions: How does it develop? How does it work? How did it evolve? How does it improve fitness? You will use journal articles to support your answers, and explain why it is important to describe your chosen behavior using both ultimate and proximate approaches.

Pop-Science Article:

You will write an individual pop-science (short for "popular science") article presenting primary research on a primary research article of your choice. This paper will be written for a broad audience, high school age and up, and will include accompanying pictures. You will be given more information on this later in the semester.

Absence Policy:

Attend all your classes regularly. We do not have a system of permitted "cuts". Please arrive to lectures on time and turn your cellphone off.

As per the UWSP Attendance Policy, students are expected to attend the first meeting of class or have permission from the instructor or department chair to be absent. Those who do not attend the first one or two days of class may be required to drop the course if there are others who wish to add the course.

If required to drop the course, it is the student's responsibility to officially drop the course through the Registration & Records Office or on the web.

Exam Policies:

Everything covered in lecture is fair game on exams. If you miss a lecture, we strongly advise you to make arrangements with another student for notes and to review what was covered. We will post most lecture slides on Canvas prior to class, but they only serve as an aid for taking notes, not a replacement. You may only make up exams if you provide evidence of personal or medical emergencies. If this occurs, you must contact us *prior to* the exam, and you will have 5 days in which to complete the exam.

To maintain the integrity of in-class exams, the use of electronic devices will not be permitted during exams without prior documented approval from the Disability Services office or other pertinent offices on campus. This includes, but is not limited to, requests to use cellular or wireless network-enabled mobile devices for foreign language translation assistance. Students who are found using these devices will be dismissed and receive a zero for their exams. Other penalties will be considered under the misconduct policy. Moreover, students who arrive late to an exam will only be allowed to take it if they arrive before the first student finishes and leaves the room. After that point, requests to take exams will be declined unless they are consistent with the makeups policy.

Likewise, recording of lectures and taking of photos during class is not permitted without permission of the instructor.

UWSP Community Bill of Rights and Responsibilities:

UWSP values a safe, honest, respectful and inviting learning environment. In order to ensure that each student has the opportunity to succeed, we have developed a set of expectations for all students and instructors. This set of expectations is known as the *Rights and Responsibilities* document, and it is intended to help establish a positive leaning environment at UWSP. For more information go to <http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx>.

Academic integrity is central to the mission of higher education in general and UWSP in particular. Academic dishonesty (cheating, plagiarism, etc.) is taken very seriously. So don't do it!! The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment. For more information, see the UWSP "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities document*, Chapter 14, which can be accessed at the following site: <http://www.uwsp.edu/dos/Documents/CommunityRights.pdf#page=11>

One goal of this course is for you to work on developing the discipline-specific writing skills that you will need to be successful as a professional in this field. We acknowledge that recent buzz about ChatGPT and other generative AI tools poses some interesting questions about the need for developing these skills, and how such tools can be used in higher education. Given that this technology is still in its infancy and that my goal is for you to develop your skills as a writer, the unauthorized use of ChatGPT, or other AI writing tools, is not permitted in this course. Students found to be using such tools will be considered as engaging in conduct aimed at making false representations of a student's academic performance, and will be subject to disciplinary action as defined in the [UWSP Academic Misconduct Policies](#)."

Accommodations:

In compliance with the Americans with Disabilities Act, we will make every effort to honor requests for reasonable accommodations made by individuals with disabilities. If you have a disability and require accommodations, please register with the Disability Resource Center (108 Collins Classroom Center) and *let us know as soon as possible*. Requests for accommodation can be responded to most effectively if we receive the requests early in the semester. Such requests are confidential.

For more information about UWSP's policies with respect to the Americans with Disabilities Act (ADA), check here:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>

You can also find more information on services provided at: <http://www4.uwsp.edu/special/disability/>

Title IX:

Under several federal and state laws, and according to several university guidelines, we are required to report acts of a criminal or offensive nature. This includes acts of sexual harassment and assault, bias and hate crimes, illicit drug use, and acts of violence. Any disclosure or description of these incidents – both current and in the past – may be reported to the Dean of Students office (<http://www.uwsp.edu/dos/>) or the local authorities.

Emergency Preparedness:

In the event of a medical emergency, call 911 or use the red emergency phone located in the hallways of the CBB. Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure or any of the hallways in CBB. Avoid wide-span rooms and buildings. For floor plans showing severe weather shelters, see <http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx>.

In the event of a fire alarm, evacuate the building in a calm manner. Meet in the parking lot across from the CBB. Notify instructor or emergency command personnel of any missing individuals.

In the event of an active shooter, your first priority should be to run and escape. Once you are safely out of range, call 911. If you are not confident that you can get out safely, then lock doors, turn off lights, spread out, hide, and remain quiet (turn your phone ringer and vibration off). Look around for potential weapons in case you will need to fight. If an active shooter enters the room and is aware of your presence and/or the presence of others, fight with everything you've got. Follow the instructions of emergency responders when they arrive.

For details on all emergency response plans at UW-Stevens Point See UW-Stevens Point, please view the Emergency Management Plan at www.uwsp.edu/rmgt.

Lecture Topics, Reading Assignments, and Key Dates:

Lecture topics and reading assignments (readings from the textbooks or assigned papers):

Date	Topic	Readings and Due Dates
Tues Jan 24	Course Expectations	
Thurs Jan 26	Introduction to Animal Behavior	Alcock Ch 1
Tues Jan 31	The Integrative Study of Behavior	Alcock Ch 2; Discussion reading 1 on Canvas, Participation Quiz 1 due
Thurs Feb 2	Library Search Refresher/Writing Assignment Instructions	Meet in Room D326 Science Building
Tues Feb 7	Methods 1: Defining Behaviors	Martin and Bateson Ch 1-3, Participation Quiz 2 due
Thurs Feb 9	The Development and Genetic Bases of Behavior	Alcock Ch 3
Tues Feb 14	...continued	Participation Quiz 3 due
Thurs Feb 16	Exam Review	Ethograms due
Tues Feb 21	UNIT EXAM 1	
Thurs Feb 23	Methods 2: Measuring Behaviors	Martin and Bateson Ch 4-7, Participation Quiz 4 due
Tues Feb 28	The Neural Basis of Behavior	Alcock Ch 4
Thurs Mar 2	...continued	Participation Quiz 5 due
Tues Mar 7	The Physiological Basis of Behavior	Alcock Ch 5
Thurs Mar 9	...continued	Discussion reading 2 on Canvas, Participation Quiz 6 due
Tues Mar 14	Exam Review	Behavior data due
Thurs Mar 16	UNIT EXAM 2	
Tues Mar 21	SPRING BREAK	
Thurs Mar 23	SPRING BREAK	
Tues Mar 28	Principles of Social Evolution	Alcock Ch 12
Thurs Mar 30	...continued	Participation Quiz 7 due
Tues Apr 4	Social Behavior and Sociality	Alcock Ch 13
Thurs Apr 6	...Social Behavior continued	Discussion reading 3 on Canvas, Participation Quiz 8 due
Tues Apr 11	Principles of Communication	Alcock Ch 8, Ch 14 pages 512-523
Thurs Apr 13	Exam Review	Pop-science articles due, Participation Quiz 9 due
Tues Apr 18	UNIT EXAM 3	
Thurs Apr 20	Tinbergen Partner Paper Work Day	Bring laptops to class
Tues Apr 25	Reproductive Behavior	Alcock Ch 9
Thurs Apr 27	...continued	Discussion reading 4 on Canvas, Participation Quiz 10 due
Tues May 2	Mating Systems	Alcock Ch 10
Thurs May 4	...continued	Participation Quiz 11 due
Tues May 9	Parental Care	Alcock Ch 11
Thurs May 11	Exam Review	Tinbergen Partner Paper due, Participation Quiz 12 due
Mon May 15	UNIT EXAM 4: 12:30-2:30 PM Rm 135 CBB	