

# BIOSC 1445: Animal Communication

Fall 2022, Mondays, Wednesdays and Fridays, 9:00-9:50 AM  
232 Cathedral of Learning

Instructor: Dr. David Outomuro Priede

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Office: 257 Langley Hall

Office hours at Clapp-L10:

Mondays: 10:00-11:00 AM

Wednesdays: 10:00-11:00 AM

Thursdays: 12:00-1:00 PM

## Course Description and Objectives

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Effective communication is a fundamental process in animals that impacts nearly every aspect of their lives. The objective of the course is to integrate general principles of biology, physics, chemistry and economics to understand the diversity and evolution of animal communication. The first half of the course will introduce the mechanisms by which animals produce and perceive signals such as sound, light, chemicals, touch, hydrodynamics and electricity. The second half will examine the evolution of signals based on processes of decision making, the economics of information and conflicts of interest such as sexual and social interactions.

**Prerequisites:** BIOSC 0370 or 0371 or BIOL 1430 or 1515 (MIN GRADE 'C').

## Attendance

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The class will combine lectures with active learning. **Attendance is not mandatory but strongly encouraged. 15% of the final grade will be based on attendance and in-class activities.** The students are expected to come to class on time, having read the assigned chapters of the textbook, and actively participate in class discussions.

## Course Materials

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### Textbook

*Principles of Animal Communication*, 2nd edition, by Jack W. Bradbury and Sandra L. Vehrencamp, published by Sinauer Associates.

Inclusive Access program is available for the eBook (trial period of 14 days).

Companion website (free access):

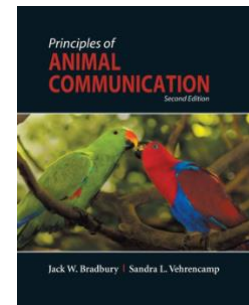
<http://sites.sinauer.com/animalcommunication2e/>

### Top Hat

In-class student response system. The students are expected to participate and answer the questions in class. Free access through an electronic device (laptop, tablet, phone). Join Code: 321788

### Other Materials

Course handouts and other materials will be available in Canvas.



## COVID-19 Statement

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During this pandemic, it is extremely important that you abide by the [public health regulations](#), the University of Pittsburgh's [health standards and guidelines](#), and [Pitt's Health Rules](#). These rules have been developed to protect the health and safety of all of us. Universal [face covering](#) is required in all classrooms and in every building on campus, without exceptions, and regardless of vaccination status, **if the CDC COVID-19 Community Level is High** (check updated status [here](#)). This means you must wear a face covering that properly covers your nose and mouth when you are in the classroom. If you do not comply, you will be asked to leave class. It is your responsibility have the required face covering when entering a university building or classroom. For the most up-to-date information and guidance, please visit [coronavirus.pitt.edu](https://coronavirus.pitt.edu) and check your Pitt email for updates before each class.

## Grade Determination

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The final grade will consist of three exam grades (75%), attendance, participation and in-class assignments (15%), and a short review paper (10%).

### Exams

There will be three lecture exams and one final exam. The three highest scores out of the four exams will be used to calculate the final grade.

- The exams are not cumulative.
- The exams will be multiple choice or short answers, covering the textbook and materials presented and discussed in class.
- Students are required to bring student/photo ID to the exams and PeopleSoft number.
- No communication between students is allowed during the exams.
- Late arrival to an exam will not be compensated with extra time.
- No admittance to the exam after the first student has finished it.
- Each student requires only three exam grades out of four.
- A score of "0" on an exam earned by cheating/academic integrity violation will count towards the calculation of the final grade (it will not be "dropped").

### Review paper

The review will be done in pairs. The paper will consist of a short review on an animal communication topic of choice (previous discussion with the instructor). The topic must be related to the materials covered in the course and *contain an evolutionary and/or ecological approach*. For example, papers that just describe the physiology, morphology and/or function of a certain sensory modality are not acceptable.

The review paper will contain the following sections:

- First page: Title of the paper and authors.
- Starting on page 2, Introduction (0.5-1 page): background information (what do we know?), objectives/gap of knowledge (what would we like to know?).
- Body (up to 3 pages): your review of the topic, trying to answer the questions posed in the introduction. Finish the body with a conclusions paragraph. The conclusions paragraph is not a summary, but persisting problems/gaps, future research, etc.

Figures can be included in the body of the paper (and appropriately referenced), but they cannot use more than 20% of the text space.

- Reference list: appropriately referenced throughout the text. See citation rules in Canvas.

The main text of the paper (introduction, body and conclusions) will be 3-4 pages long. Shorter papers will be not acceptable. The reference list does not account towards those pages. The text should be 12-point font, 1.5 line spacing.

There will be two submissions, via Canvas - Turnitin:

- The first submission should consist of a fully realized draft, with all the expected components, submitted by **October Friday 14<sup>th</sup> 11:59PM**. The draft will be evaluated over 10 points, and feedback will be provided. The feedback will need to be addressed by the final submission.
- Final review paper, reviewed and improved, submitted by **December Friday 9<sup>th</sup> 11:59PM**. The final paper will be evaluated over 30 points.

Students are encouraged to attend office hours to discuss topics and any questions on the review paper throughout the semester.

### Final grade calculation

Assessment	Points
Exams <sup>1</sup> (75%)	
Exam 1	100
Exam 2	100
Exam 3	100
Final exam	100
Attendance, participation and in-class assignments (15%)	60
Review paper (10%)	40
Total:	400

<sup>1</sup>The three highest scores out of the four exams will be used to calculate the final grade

The following scale will be used to convert the percentage (400 points = 100%) into a letter grade:

A+ 97.5% and up	A 92.5% - 97.4%	A- 90.0% - 92.4%
B+ 87.5% - 89.9%	B 82.5% - 87.4%	B- 80.0% - 82.4%
C+ 77.5% - 79.9%	C 72.5% - 77.4%	C- 70.0% - 72.4%
D+ 67.5% - 69.9%	D 62.5% - 67.4%	D- 60.0% - 62.4%

Percentages below 60.0% earn a grade of "F".

### G Grades

According to the Dietrich School Undergraduate Catalog, a G grade may be awarded when students who have been attending a course and making regular progress are prevented from completing the course due to extenuating personal circumstances.

## **Policy on Accommodations to Account for Absences**

Given the unprecedented times we are living in, a number of strategies have been implemented to account for absences. An absence is here understood as any sort of emergency that does not allow the student to attend class, attend an exam, or do homework. Examples include, but are not limited to, COVID-19, medical emergencies, family emergency, etc. The strategies implemented in this syllabus include:

- Requiring three exam grades out of four exams (up to 300 points, 75% of the final grade). Due to this policy, no exam make-ups will be available. However, if more than one emergency occurs during two exam days, please reach out as soon as possible with relevant proof for the absence. An oral make-up exam will be scheduled as soon as possible after the exam date and no later than the return of the graded exams to the rest of the students.
- Attendance, participation and in-class activities account for 15% of the final grade, with a total of up to 60 points. There will be extra points accounting for this part of the final grade, accounting for about 12 extra points (20% of 60 points). Thus, a student that misses one or more classes will have the opportunity to recover those missing points. Due to this policy, no make-ups for participation or in-class activities will be offered. If by the end of the semester a student has more than 60 points, only 60 points will be added towards the final grade. The remaining points cannot be used towards any other sections of the final grade (e.g., exams or paper assignments).

All the students in this course are thus subject to the same accommodations.

## **Policy on Late Work**

Assignments turned in after the due date and hour will be considered late. Assignments handed in late will devalue by 10% per 24-hour periods following assignments due dates.

## **Course Expectations and Ethics**

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### **Class and Course Ethics**

The classroom is expected to be a learning, inclusive and safe environment that promotes diversity. The University does not tolerate discrimination, harassment, or retaliation based on disability, race, color, religion, national origin, ancestry, genetic information, marital status, familial status, sex, age, sexual orientation, veteran status or gender identity and expression, as stated in the University's Title IX Policy. The University responds promptly and equitably to allegations of discrimination, harassment, and retaliation (see also:

<https://www.diversity.pitt.edu/civil-rights-title-ix-compliance>).

If there are instances of the aforementioned issues, please contact the Title IX Coordinator, by calling 412-648-7860, or e-mailing [titleixcoordinator@pitt.edu](mailto:titleixcoordinator@pitt.edu). Reports can also be filed online: <https://www.diversity.pitt.edu/civil-rights-title-ix/make-report/report-form>.

If you wish to disclose related to sexual misconduct to a faculty/staff member, please be advised that they are required to reported to the Office of Civil Rights & Title IX, following the University's Responsible Employee Program (<https://www.diversity.pitt.edu/civil-rights-title-ix/make-report/responsible-employee-program-and-reporting>). Should you have experienced or

witnessed a bias incident and you wish to speak to someone confidentially, please refer to the University Counseling Center (412-648-7930).

### **Class Etiquette**

Punctuality is expected. Students are expected to actively use their computers or similar electronic devices during the class. However, students found using their devices for topics unrelated to the course will be politely asked to leave the class. Cell phones and other electronic devices should be set to silent mode. Texting is strictly prohibited.

### **Time Spent Outside of Class**

At the University of Pittsburgh, two hours of outside study for each hour of time in class per week for the semester are expected. This means that students should allocate at least 6 hours per week outside of class to work on the paper and prepare for the exams.

### **Statement on Classroom Recording**

Students are prohibited from making audio and/or visual recordings of lectures, discussions, or activities without prior written permission of the instructor.

### **Instructor Absence and Class Cancellation Policy**

Class cancellations will be notified as soon as possible. Last minute class cancellations will be announced on Canvas and email to the students.

### **Academic Integrity Policy**

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Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, from the February 1974 Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed. View the complete policy at [www.cfo.pitt.edu/policies/policy/02/02-03-02.html](http://www.cfo.pitt.edu/policies/policy/02/02-03-02.html)

### **E-Mail Communication Policy**

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Each student is issued a University e-mail address ([username@pitt.edu](mailto:username@pitt.edu)) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers (e.g., Hotmail, AOL, Yahoo). Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address. To forward e-mail sent to your University account, go to <http://accounts.pitt.edu>, log into your account, click on Edit Forwarding Addresses, and follow the instructions on the page. Be sure to log out of your account when you have finished. (For the full E-mail Communication Policy, go to [www.bc.pitt.edu/policies/policy/09/09-10-01.html](http://www.bc.pitt.edu/policies/policy/09/09-10-01.html))

## **Disability Resources**

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If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course. For more information, visit [www.studentaffairs.pitt.edu/drsabout](http://www.studentaffairs.pitt.edu/drsabout).

## **Office Hours**

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The posting of office hours on the office door is University policy, and the responsibility of the faculty member as a courtesy and convenience to students. (Source: [www.pitt.edu/~provost/ch3\\_off\\_hrs.htm](http://www.pitt.edu/~provost/ch3_off_hrs.htm)). Most administrative offices are open from 8:30 a.m. to 5:00 p.m., Monday through Friday. A few offices, such as the College of General Studies, have extended hours. In addition, according to the Academic Integrity Guidelines, under I. Faculty Obligations, Point 2, faculty are "To be available at reasonable times for appointments with students, and to keep such appointments." (Source: <https://www.as.pitt.edu/faculty/policies-and-procedures/academic-integrity-code>).

## **Turnitin**

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Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of Turnitin.com page service is subject to the Usage Policy and Privacy Pledge posted on the Turnitin.com site.

**\*\*\*Details of this syllabus are subject to change\*\*\***

## Course schedule Animal Communication Fall 2022

<b>Date</b>	<b>Topic</b>	<b>Assigned readings</b>
Weeks 1-4: 8/29-9/23	Introduction to Animal Communication Sound and sound signal production Sound signal propagation and reception Light and visual signal production	Ch. 1 Ch. 2 Ch. 3 Ch. 4
9/5	Labor Day, no class	
<b>9/23</b>	<b>Exam 1: Ch. 1-3</b>	
Weeks 5-8: 9/26-10/21	Visual signal propagation and reception Chemical signals Touch, hydrodynamic reception, and electroreception Decisions, signals and information	Ch. 5 Ch. 6 Ch. 7 Ch. 8
10/14	First submission review paper	
<b>10/21</b>	<b>Exam 2: Ch. 4-7</b>	
Weeks 9-12: 10/24-11/18	Economics of communication Signal evolution Conflict resolution Mate attraction and courtship	Ch. 9 Ch. 10 Ch. 11 Ch. 12
<b>11/18</b>	<b>Exam 3: Ch. 8-11</b>	
Week 13: 11/21-11/25	Thanksgiving recess, no class	
Weeks 14-15: 11/21-12/9	Social integration Environmental signals	Ch. 13 Ch. 14
12/9	Final submission review paper	
<b>Finals week: 12/12-12/16</b>	<b>Final exam: Ch. 12-14 (Location, date and hour TBA)</b>	