

**DEPARTMENT OF BIOLOGICAL SCIENCES
UNIVERSITY OF TORONTO SCARBOROUGH**

**Course Outline - Summer 2021
Animal Communication [BIOD45 LEC99]
Instructor: Dr. Jeneni Thiagavel**

Course Description

I'm super excited to welcome you to D45 this summer. It's a fun course where you'll get to learn about some of the awesome signals that animals produce and explore some very cool aspects of brain evolution. By the end of our course, I hope to help you appreciate the beauty of the relationships between sensory reliance and neuroanatomy.

Description of the course (from the calendar): This course will examine the importance of communication in the organization of animal behaviour and the ecology, behavior, neurobiology, and evolution of animal systems. Neural processes concerned with learning, memory, and decision-making and their ecology and evolution will be explored as well as the diverse array of cognitive and behavioural mechanisms used by different animals. Topics considered will include comparative cognition, behavioural ecology, neuroethology and evolutionary neuroscience.

Pre-requisite: BIOC54

Lectures:

2 Hours per week- Online

Lectures will be pre-recorded and posted under 'Modules' on 'Quercus'. Lecture slides will be uploaded with the recording.

Lectures will be uploaded on:

Tuesdays [2 hours]

I will be posting 2 separate 1 hour lectures on Tuesday (instead of one large 2 hour block)

Tutorials:

Student Presentations uploaded on Thursdays

More information about tutorials will be provided during the first lecture.

The Teaching & Course Administration Team

Instructor: Dr. Jeneni Thiagavel

Email: jeneni.thiagavel@utoronto.ca

- All e-mails must be sent from your UofT email and must include the course code in the subject line

Email me! I love hearing from you!

- Office hours: Blackboard Collaborate on Quercus [One-on-one appointments: Fridays- Email me to set up a time to chat!]

TA:

Andrew Masson (AJ) - andrew.masson@mail.utoronto.ca

- All e-mails must be sent from your UofT email and must include the course code in the subject line.

Course Website:

- The main source of information for BIOD45 is Quercus [<https://q.utoronto.ca/>].
- The course syllabus, schedule, and lecture slides can be found here. Also, important information about the course including the dates of exams will be posted here.

Textbook & Readings

The following two textbooks are optional:

- *Principles of Brain Evolution*, Author: Georg F. Striedter
- *Principles of Animal Communication 2nd Ed*, Authors: Bradbury & Vehrencamp

Primary Literature & Case Studies

- Lectures will be supplemented with more detailed examples drawn from classic and contemporary research in Animal Communication and Brain Evolution.
- Citation information/DOI's for the main papers relevant to these examples will be included on the lecture slides.

Lecture Slides: will be posted under 'Modules' on Quercus as both PowerPoint and PDF files on the day of the lecture

Assessment/Exams

Description	Weight
Online Presentation	15%
Researcher for a day assignment	15%
Midterm Test	30%
Final Exam	40%

Assessments:

1. Online Oral-presentation (15%)

Students will be giving lay-audience friendly presentations on various topics related to communication and brain evolution.

I'll be giving you much more details about the assignment in Lecture 1. Here, I'll go over the topic list itself.

Please note: Topics will be selected on a first-come-first-serve basis. The schedule of the presentations can be found on our course schedule at the end of the syllabus.

Topic selection will be between 12am on Wednesday May 12th – 11:59pm Friday May 14th

Emails sent me to before or after this time frame will NOT count. Students will need to send their first and second choice of topics. Students that have not selected a topic will be assigned a topic.

2. Researcher for a day (15%)

This assignment will be due by end of day on the student's presentation day

Students should

- (i) summarize the article they have presented
- (ii) use the findings of the study as a launch pad to propose their own follow-up question, formulate a hypothesis, outline potential methods by which they can go about testing the hypothesis and explain how their results may better our understanding of neurobiology and animal behaviour

This will allow students to make a connection between the general principles of animal communication & brain evolution they learn in the course and the implications they may have in the real world.

I'll be giving you much more details about the assignment in Lecture 1.

3. Midterm Test (30%)

- This test covers lectures 1-12 (inclusive) & student presentations
- The midterm test will be online [Quercus]
- Date & Time: TBD by the registrar's office

4. Final Exam (40%)

- This exam will test content covered in lectures 1-24 (inclusive) & student presentations
- The final exam will be online [Quercus]
- Date & Time: TBD by the registrar's office

Missed Midterm Test/ Late Assignments:

- You will need to provide a UTSC medical certificate within 48 hours of a missed exam, if you wish to be considered for a potential make up exam.
- One, single makeup midterm exam may be offered to students who provide significant evidence of extreme circumstances/ illness. The structure of the midterm will differ from the normal midterm, as determined by the instructor.

Missed Final Exam:

- you will need to declare your absence on ACORN and submit a petition via the registrar's office and provide them with documentation. The course instructor/ coordinator is not responsible for scheduling missed final exams.

Note that it is not sufficient to simply visit a doctor's office; the documentation must show that you were incapable of writing the test or completing the assignment on [date] for medical reasons. The medical certificate must include the statement "[Name of student] was unable to write the test on [date] for medical reasons". Documentation must show the physician was consulted within one day of the test/exam. A statement merely confirming the report of an illness made by a student is not acceptable.

Please note that the self-declaration of student illness reports cannot be used for any missed assessments in this course.

Academic Integrity

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

The University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences in papers and assignments include using someone else's ideas or words without appropriate acknowledgement, submitting your own work in more than one course without the permission of the instructor, making up sources or facts, obtaining or providing unauthorized assistance on any assignment. On tests and exams cheating includes using or possessing unauthorized aids, looking at someone else's answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes. All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters and could have serious consequences for students including suspension or expulsion from the university

Accessibility Needs

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach the AccessAbility Services Office who is available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations
Phone: 416-287-7560; Email ability@utsc.utoronto.ca

Course Schedule

Week	Lecture	Topic
Week 1 May 10-14	1	Introduction to the Course
	2	Signals & Communication I
Week 2 May 17 - May 21	3	Signals & Communication II
	4	Environmental Signals I
Week 3 May 24 - May 28	5	Environmental Signals II
	6	Studying Brains
Week 4 May 31 - Jun 4	7	Whole Brain Size I
	8	Whole Brain Size II
		<i>Student Presentations- Topic: Signals & Communication</i>
Week 5 Jun 7 - Jun 11	9	The Economics of Communication
	10	Brain Evolution & Trade-Offs I
		<i>Student Presentations- Topic: Whole Brain Size</i>
Week 6 Jun 14 - Jun 18	11	Brain Evolution & Trade-Offs II
	12	Sensory Systems & Brains I
		<i>Student Presentations- Topic: Brain Evolution & Trade-offs</i>
Jun 21 - Jun 25	Reading Week	
Week 7 Jun 28 - Jul 2	13	Sensory Systems & Brains II
	14	Sensory Systems & Brains III
		<i>Student Presentations- Topic: Sensory systems & Brains</i>
Week 8 Jul 5 - Jul 9	15	Brain Region Size I
	16	Brain Region Size II
		<i>Student Presentations - Topic: Sensory systems & Brains</i>
Week 9 Jul 12 - Jul 16	17	Brain Region Size III
	18	Neural Pathways I
		<i>Student Presentations- Topic: Brain Region Size</i>
Week 10 Jul 19 - Jul 23	19	Neural Pathways II
	20	Neuroanatomical Parameters I
		<i>Student Presentations- Topic: Neural Pathways / Neuroanatomical Parameters</i>
Week 11 Jul 26 - Jul 30	21	Neuroanatomical Parameters II
	22	Neuroanatomical Parameters III
		<i>Student Presentations- Topic: Neural Pathways / Neuroanatomical Parameters</i>
Week 12 Aug 2 - Aug 6	23	Evolution of the Human brain I
	24	Evolution of the Human Brain II
		<i>Student Presentations- Topic: Evolution of the Human Brain</i>