Faculty of Science Course Syllabus
Department of Psychology and Neuroscience

Animal Behaviour (NESC & PSYO 2160)
Winter 2025 edition

- Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.
- Dalhousie University also acknowledges the histories, contributions, and legacies of African Nova Scotians, who have been here for over 400 years.
- Dr. Gadbois acknowledges the histories, contributions, and legacies of Acadians, who have been here since 1604 and deported en masse from 1755 to 1763.
- All students are required to comply with health and safety requirements on campus, and should be considerate of others' health concerns. Non-compliance may be reported under the Code of Student Conduct.
- Please note that, as far as Dr. Gadbois is concerned, this class is a safe space. We can all contribute to a tolerant and discrimination-free atmosphere (for race, ethnicity, gender, sexual preference, language, religion, age, disability, etc.).
- Dalhousie is a scent-free working space.

Instructor:	Simon Gadbois (sgadbois@dal.ca) Please call me by my first name, "Simon" (pronounced the French way, i.e., silent n, or "sea-moh"), no "Dr.", "Prof", etc., needed.
Emails:	When sending an email to Simon Gadbois (sgadbois@dal.ca), please add "2160" to the subject line.
Office hours:	Monday, 3:00 to 4:00 and Tuesday 4:00 to 5:00 in LSC 3326 Office hours include midterm viewing except the week before the final when I will be focussing on answering questions pertaining to the upcoming exam.
Lectures:	Monday & Wednesday, 4:00 to 5:30, Chemistry 125
Laboratories:	N/A
Tutorials:	N/A
Course delivery:	In-person only; lectures are not recorded, but you are allowed to audio record them.
Course Description (official, calendar)	Using concepts from behavioural biology and psychology, animal behaviourists attempt to explain why animals behave the way they do. The course examines topics such as mating and social systems, mate choice, the evolution of behaviour, and animal communication. The behaviour of a wide range of animals is studied. FORMAT: Lecture LECTURE HOURS PER WEEK: 3
Course Prerequisites	PSYO 1011.03 (or PSYO 1021.03 or PSYO 1031.03) and PSYO 1012.03 (or PSYO 1022.03 or PSYO 1032.03); OR SCIE 1506.09/1507.09 (or SCIE1505X/Y.18) OR BIOL 1010.03 (or BIOL 1020.03) and BIOL 1011.03 (or BIOL 1021.03). All prerequisite courses must have a grade of B- or better.

	CROSS-LISTED: PSYO and NESC 2160.03
Animal Behaviour Certificate	This course is one of the Animal Behaviour Certificate (ANBH) available courses: https://www.dal.ca/faculty/science/psychology_neuroscience/programs/certificate-programs/animal_behaviour.html

Overview

In this course you will learn about animal behaviour from the perspective of behavioural biology and animal psychology. The course is integrative and synthetic in nature: Disciplines such as animal (comparative) experimental psychology, ethology, and behavioural ecology/sociobiology contribute to the perspectives presented in this course. Examples will focus on tetrapod vertebrates (i.e., amphibians, reptiles, birds, and mammals), although examples with fish and invertebrates may be given on occasion. The course balances proximate (physiology, cognition, etc) and ultimate (evolution, adaptation) explanations of behaviour.

Learning Objectives

We favour an integrative and synthetic approach to animal behaviour. At the end of this course, the student will be able to:

- Understand and explain the contribution of all the main sciences of animal behaviour: **Comparative psychology** and **behavioural biology** (ethology and sociobiology/behavioural ecology).
- Grasp the wide diversity of animal behaviour **within and between taxa**.
- Understand and explain the complexity of behaviours among vertebrates.

Course Materials

- There is no textbook for this course. If you really want a text to read, I suggest: Dugatkin, Lee Alan (2020). *Principles of Animal Behavior*. 4th Edition. New York: Norton.
- Other material: Scientific papers on specific topics may be suggested at any time during the term.
- The course is on Brightspace where the lecture notes (PDF) and grades will be posted.
- Note that:
    - Lecture notes are typically posted once a week, before class, but updates can be uploaded after class as well.
    - Lecture notes are organised by theme, i.e., the sections are more like chapters, and not organised by lecture. This is because some years the course is offered in the 60 mins slot, and other years, in the 90 mins slot.
    - You should be annotating the lecture notes provided (outline), or taking your own to supplement the material presented. I do not use "slides" as if they were a teleprompter. This means that missing lecture material translates into missing crucial information for an exam. You should be annotating the outline provided, or taking your own notes to supplement the material presented. For copyright reasons, some material will not be showing on the uploaded slides.
    - A note taker is required to assist one of your peers. If you are interested, please contact the Student Accessibility Centre, notetaking@dal.ca

Course Assessments

Assessment	% of final grade	Date	Location, time, duration
Midterm 1	30%	February 5th (Wednesday)	Regular class time/location, 80 minutes
Midterm 2	30%	March 12 (Wednesday)	Regular class time/location, 80 minutes
Final exam: **Cumulative**	40%	Scheduled exam period	TBD by the Registrar later this term. Do not make travel plans until the schedule has been published by the RO. **The final exam is 3 hours**.
Bonus point for participation in experiments	+ 1%	See the SONA system	psychology_neuroscience/research/credit-point-information.html

The exams (both midterms and the final) have a mixed format and will contain multiple choice questions, and true/false questions. Material is fully *cumulative* for the final exam.

Note that you will be tested on:

- Material from available lecture notes.
- Material presented in class not fully developed in the lecture notes: Your personal notes will matter.
- Remember: Lecture notes are only an outline. Your own notes will be important here as well.

In order to pass this course you need to:

1. Obtain a final grade of 50% or more (minimum D)
2. Write the two midterms and the final exam*. Please refer to the course policy on missed tests/exams in the section below.

- Note: Any missed exams that are not resolved according to course policy will result in an INC (incomplete) final grade for the course. An INC that is not addressed within a month of the end of a class will result in an F for the course.

* Academic Calendar regulation 16.1 "In order to complete a course satisfactorily, a student must fulfill all the requirements as set down in the course outline [Syllabus]."

Other course requirements

Although not a course requirement per se, attendance may be taken intermittently, and randomly.

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

F	D	C-	C	C+	B-	B	B+	A-	A	A+
<50	50-54	55-59	60-64	65-69	70-72	73-76	77-79	80-84	85-89	90-100

Course Policies on Missed or Late Academic Requirements

Missed lectures:

Although there is no direct penalty for missing lectures, it is particularly important that you realise you will be accountable for material covered during the lectures. As noted above, the slides decks provided are only an outline of what is discussed in class.

Missed tests/exams:

- No need for a SDA (student declaration of absence) in this class.
- Since SDA's are **not** valid for Final Exams, and finals cannot be missed like midterms, if you miss the final, only students with a valid and documented excuse will have the following option (following consultation with the Assistant Dean of Student Affairs): You write an essay question exam as a make-up in January.
- *There are no actual make-ups for a missed midterm in this course*: Your final exam adds the value of the missed midterm. In other words, your final exam will weigh more (value of the final + the value of the missed midterm).
- For logistical reasons, final exam make-ups will take place in May 2025. As such, late final exams delay submission of your final grade. **This could impact graduation, awards, etc**. Given this, it is important that you write the exam as scheduled unless doing so is not possible.
- **If you miss both midterms**, and if the absence is justified and approved, your final exam will be worth 100% of your grade.
- For long-term or chronic absences please speak with either:
    - An advisor at the Student Advising and Access Services if you have accommodations.
    - The Assistant Dean of Student Affairs (at the Faculty of Science): Patricia Laws, scieasst@dal.ca.
- Remember that the **final exam is fully cumulative**, and therefore **will be covering the material of the full term**.

Cancelled midterms

If a midterm is cancelled due to weather or other force majeure events, the new date and time for the midterm will be announced on Brightspace, otherwise, by default, the exam is re-scheduled to the next planned (regular) class.

Course Policies related to Academic Integrity

Please see the Dalhousie regulations: Last page of this document. A plagiarism detection system may be used in this course if relevant or appropriate.

Course Content

The course will present the following topics: The numbers in the "Sources" column are the corresponding chapters in Dugatkin (2020):

SECTIONS	THEME(S)	SOURCE(S)
§1	Animal kingdom and diversity: Zoological taxonomy and behavioural taxonomy.	Lecture notes
§2	Animal Behaviour: The sciences and concepts.	1
§3	Natural selection: Behaviour and evolution.	2
§4	Artificial selection: Domestication	Lecture notes
§5	Sexual selection: Mate choice, courtship, and mating behaviours.	7
§6	Reproductive behaviour and parental / alloparental behaviour. Cooperative breeding, and family systems.	9
§7	Mating systems (a.k.a., reproductive systems); focus on monogamy.	8
§8	*Social behaviour (e.g., affiliation, aggression, dominance, status, role) and social systems.*	*10, 15*

Note that in recent years, because of the updating of the monographs (see below), §8 is covered in 3162.

Themes in the table below are not covered in this class but rather in Biology, or in NESC/PSYO 3162 (Advanced Animal Behaviour) or in NESC/PSYO 2140 (Learning: Conditioning and Motivation):

Possibly §8 on social behaviour and social systems.	10, 15	Possibly covered in NESC/PSYO 3162
Play in vertebrates.	16	Covered extensively in NESC/PSYO 3162
Individual differences and "personality" (temperament) in animals.	17	Covered extensively in NESC/PSYO 3162
Learning and cognition.	5	Covered extensively in NESC/PSYO 2140
Surviving: Habitat selection, home ranges, territories, foraging, preys, and predators.	11, 12, 14	Covered extensively in BIOL 3062
Generalities on animal communication.	13	Covered extensively in NESC/PSYO 3162

Monographs:

Typically once a week, we will discuss a specific species or taxon (group of species) of **vertebrates, (fish, amphibians, reptiles, birds, and mammals)**, and discuss their behavioural profile. Below is a ***sample*** of **monographs** that have been presented in the past. Note that some are incorporated within sections of lecture notes (e.g., anatids, callitrichids, canids), others are stand-alone (e.g., mustelids, lagomorphs). Note that this list is more than what we can cover during the term, and that species or groups not listed here may also be covered. ***Note that taxa extensively covered in courses in Biology or Marine Biology, e.g., most fish, some birds (especially passerines, sea birds), and marine mammals, are not covered in this class to avoid overlap and repetition for the BIOL, MARI, Animal Behaviour Certificate students.***

Mammals	• The marmosets and tamarins (**callitrichids**) ~ in the mating systems section • The weasel family (**mustelids**) — martens, weasels, otters, etc. • The cat family (**felids**) — bobcats, Canada lynx, cougars • The dog family (**canids**) — wolves, coyotes, foxes, etc. ~ in the mating and social systems sections • The raccoon family (**procyonids**) — raccoons, coatimundis, kinkajous, etc. • **Lagomorphs**: Hares and rabbits • **Rodents**: general overview, porcupines, beavers, muskrats, squirrels, wild indigenous mice (*Peromyscus, Zapus, Napaeozapus*), voles (*Microtus*, etc.) • The shrew family (**Soricidae**): Shrews and moles of NS
Birds	• **Strigiforms** (owls of NS) • **Corvids** (crows, ravens, jays, etc., of NS) • **Anatids** (ducks, geese, etc., of NS) ~ in the domestication and mating systems sections
Reptiles	• **Turtles** of NS • **Snakes** of NS ~ typically not offered because of snake phobias being reported
Amphibians	• **Anourans** of NS: Frogs and Toads • **Urodela** of NS: Newts and Salamanders
Fish	• **Syngnathids**: Seahorse, pipefish, pipehorse and seadragons • **Mummichogs**: The freaks of the brackish waters of the Eastern seaboard • **Elephant nose fish**: Electric fish with the largest brain of all verterbates

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: http://www.dal.ca/cultureofrespect.html

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html