

**Faculty of Science Course Syllabus**  
**Department of Psychology and Neuroscience**

**Animal Behaviour (NESC & PSYO 2160)**  
Fall 2023 edition

*Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq.  
We are all Treaty people.*

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.).

<b>Instructor:</b>	Simon Gadbois <a href="mailto:sgadbois@dal.ca">sgadbois@dal.ca</a>
<b>Office hours:</b>	Monday, 12:00 - 14:00 LSC 3326 (Psychology/Neuroscience)
<b>Lectures:</b>	Wednesday & Friday, 11:30 to 13:00, LSC Common Area 242
<b>Laboratories:</b>	N/A
<b>Tutorials:</b>	N/A
<b>Course delivery:</b>	In-person only
<b>Course teaching assistant</b>	Lauren Bowen. Available by appointment online or in-person and <i>only</i> for discussing exam marking and grading. Lauren can be contacted at <a href="mailto:Lauren.Bowen@dal.ca">Lauren.Bowen@dal.ca</a>
<b>Course Description (official, calendar)</b>	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
<b>Course Prerequisites</b>	PSYO 1011.03 (o r 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
<b>Animal Behaviour Certificate</b>	This course is one of the Animal Behaviour Certificate available courses: <a href="https://academicalendar.dal.ca/~~/Catalog/ViewCatalog.aspx?pageid=viewcatalog&amp;catalogid=117&amp;topicgroupid=32795">https://academicalendar.dal.ca/~~/Catalog/ViewCatalog.aspx?pageid=viewcatalog&amp;catalogid=117&amp;topicgroupid=32795</a>
<b>Emails:</b>	When sending an email to Simon Gadbois or Lauren Bowen, please add “2160” to the subject line.

## Learning Objectives

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

1. Understand and explain the contribution of all the main sciences of animal behaviour: Comparative psychology and behavioural biology (ethology and sociobiology/behavioural ecology).
2. Grasp the wide diversity of animal behaviour within and between taxa.
3. Understand and explain the complexity of behaviours among vertebrates, with an emphasis on social species and social behaviours.

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.

## 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.
  - You should be annotating the lecture notes provided (outline), or taking your own to supplement the material presented. Dr. Gadbois does 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.

## Course Assessments

Assessment	% of final grade	Date	Location, time, duration
Midterm 1	25%	October 11	Regular class time/location, 80 min
Midterm 2	30%	November 8	Regular class time/location, 80 min
Final exam: Cumulative	45%	Scheduled exam period	TBD by the Registrar. Do not make travel plans until the schedule has been published by the RO.
Bonus point for participation in experiments	+ 1%	See the SONA system	<a href="https://www.dal.ca/faculty/science/psychology_neuroscience/research/credit-point-information.html">https://www.dal.ca/faculty/science/psychology_neuroscience/research/credit-point-information.html</a>

The exam (mid-terms and final) format is mixed and will contain multiple choice questions, true/false questions, and short answers 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:

- Obtain a final grade of 50% or more (minimum D)
- 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, if you miss the final, only students with a valid and documented excuse will have the following options (at the discretion of Dr. Gadbois, and following consultation with the Assistant Dean of Student Affairs):
  - You write an essay question exam.
  - You take an oral exam (~30 minute recorded session; ~10 questions).
  - The t.a./marker will be present to co-assess the answers.
- *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 will weigh more (45% + the value of the missed midterm).

- **If you miss both midterms**, you will need a special permission from the Assistance Dean of Student Affairs (see above), and your final exam, if the absence is justified and approved, 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 square brackets are the corresponding chapters in Dugatkin (2020). Themes in italics 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).

1. Animal Behaviour: The sciences and concepts. [1]
2. Categories and classifications: Zoological taxonomy and behavioural taxonomy. [n/a]
3. Behaviour and evolution (natural selection). [2]
4. Domestication. [n/a]
5. Sexual selection: mate choice, courtship, and mating behaviours. [7]
6. Reproductive behaviour and breeding systems (a.k.a. reproductive systems). [8]
7. Parental and alloparental behaviour. Cooperative breeding, family systems. [9]
8. Social behaviour (e.g., affiliation, aggression, dominance, status, role) and social systems. [10, 15]

*Play in vertebrates. [16]\*\*\**

*Individual differences and “personality” (temperament) in animals. [17]\*\*\**

*Learning and cognition. [5]\**

*Surviving: Habitat selection, home ranges, territories, foraging, preys, and predators. [11, 12, 14]\*\**

*Generalities on animal communication: Intra and inter species communication. [13]\*\*\**

\* Covered extensively in PSYO / NESC 2140

\*\* Covered extensively in BIOL 3062

\*\*\* Covered extensively in PSYO / NESC 3162

### **Monographs:**

Typically once a week, we will discuss a specific species or taxon (group of species) of **vertebrates, mostly tetrapods**, 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., 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., 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

*Please note that the current syllabus is written assuming a “normal” in-person term. If things change during the term, you will be advised of the procedures via Brightspace.*

## 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](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](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](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](mailto:elders@dal.ca)).

**Information:** [https://www.dal.ca/campus\\_life/communities/indigenous.html](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](https://www.dal.ca/academics/important_dates.html)

### University Grading Practices

[https://www.dal.ca/dept/university\\_secretariat/policies/academic/grading-practices-policy.html](https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html)