Topics in Animal Learning (NESC and PSYO 4140; PSYO 6240)

Department of Psychology and Neuroscience

Fall 2026 edition

General statements:

1. Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the **Mi'kmaq**. We are all Treaty people.
2. Dalhousie University also acknowledges the histories, contributions, and legacies of **African Nova Scotians**, who have been here for over 400 years.
3. Simon Gadbois acknowledges the histories, contributions, and legacies of **Acadians**, who have been here since 1604 and who were deported en masse from 1755 to 1763.
4. 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.
5. Dalhousie is a **scent-free** working space.
6. Please note that, as far as Simon 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.).

General course information:

- **Instructor**: Simon Gadbois sgadbois@dal.ca
    - Please call me by my first name, "Simon" (if possible, pronounced the French way, i.e., silent n), no "Dr.", "Prof", etc., needed.
- **Office hours:** Preferably by appointment: In person or online; otherwise, Monday, 4:00 to 5:00 and Wednesday, 1:00 to 2:00 in LSC 3326
- **Emails:** sgadbois@dal.ca ; When sending an email to me, please ***add "4140" to the subject line.***
- **Lectures:** Tuesday, 2:30 to 4:30; C 210.
- **Laboratories:** N/A
- **Tutorials:** N/A
- **Course delivery / modality:** ***In-person only***

    - Lectures are not recorded but ***students are allowed to audio-record the lectures***.
    - Attendance is required and expected.
- **Course Description**: 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: IN-PERSON Lectures
    - LECTURE HOURS PER WEEK: 2 for 4140 and 3 for 6240
- **Course Prerequisites**:
    - For undergraduate students:
        - PSYO/NESC 4140 Animal Learning Topics
        - CREDIT HOURS: 3
        - SIGNATURE REQUIRED
        - CALENDAR NOTES: PSYO 2140.03/NESC 2140.03 recommended
        - CROSS-LISTED: NESC/PSYO 4140.03
        - FORMAT: Seminar
    - For graduate students:
        - PSYO 6240 Topics in Animal Learning
        - CREDIT HOURS: 3
        - Different topics in the field of animal learning (such as classical and operant conditioning, quasi-neural modelling of learning phenomena, etc.) are covered.
        - FORMAT: Seminar
- **Course Exclusion**: N/A
- **Animal Behaviour Certificate**: 4140 can be used towards the Animal Behaviour Certificate or ANBH

Overview:

This course builds upon “Learning: Conditioning and Motivation” (NESC and PSYO 2140) to deepen your knowledge of:

- Respondent/Classical/Pavlovian conditioning
- Operant/Instrumental/Skinnerian conditioning
- Non-associative learning and associated “simple learning” phenomena (habituation, sensitisation)
- Cognitive forms of learning
- Incentive theories of learning and motivation
- Motivology (Woodworth’s term): Intrinsic vs extrinsic motivation, self-reinforcing

behaviour, etc.
- Habit, skill, motor learning.
- Many more (see below)

Simon will be teaching the first 3–4 weeks of class, depending on the presentation model (schedule) adopted.

Learning Objectives:

The course integrates both comparative (animal) psychology perspectives (conditioning principles) and biological perspectives (from ethology, neuroethology, behavioural ecology, cognitive ecology, neuroecology, etc) and beyond (behavioural economics, neuroeconomics, artificial intelligence). The adoption of topics will be flexible and adapted to the interests of the class. The choice of topics is discussed between each student and Simon under a "supervision" model (i.e., meetings to discuss the development of the topics by the student during the term). The goal of the class is to deepen your knowledge in the science of animal learning, learning theory, and the psychological, ethological, and neurobiological underpinnings of learning.

Course Materials:

None

Course Assessments:

We typically use the 2 or 3 presentation per term model, each presentation being 30 minutes plus 10 minutes of questions (40 minutes total) depending on the model and the number of students in the class. Much of this will be decided in the first two weeks of class. The schedule is below and will be determined within the first two weeks of class.

	Note, including % of final grade
Model 1: Three presentations	
Presentation 1	30%
Presentation 2	30%

	Note, including % of final grade
Presentation 3	30%
Model 2 : Two presentations	
Presentation 1	45%
Presentation 2	45%
Participation, questions, leading discussions, etc.	10%
Mandatory elements	Attendance is mandatory All slide decks must be submitted to Brightspace on the last day of class

Rubric used to assess the presentations by Simon and your peers:

	19–20	17–18	15–16	13–14	11–12	<10	Points
	Exceptional	Excellent	Good	Adequate	Poor	Very poor	100%
Organization, structure, flow, clarity, consistency in formatting, and spelling.							/ 20
Topic mastery, comprehension, ability to answer questions.							/ 20
Analysis and critical assessment / discussion of issues and implications.							/ 20
Synthesis and integration of the themes and topics.							/ 20
Creativity and originality in content and presentation.							/ 20
Presentation skills, engagement, autonomy from							/ 20