

Measuring Behaviour Syllabus

Department of Psychology and Neuroscience

NESC/PSYO 3161 Winter 2025

Dalhousie University acknowledges that we are in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq People and pays respect to the Indigenous knowledges held by the Mi'kmaq People, and to the wisdom of their Elders past and present. The Mi'kmaq People signed Peace and Friendship Treaties with the Crown, and section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights. 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.

Course Instructor(s)

Name	Email	Office Hours
Tamara Franklin	tamara.franklin@dal.ca	By appt (please contact via Teams chat)
Jamil Muradov	J.Muradov@dal.ca	By appt (please contact via Teams chat)

Course Description

Measuring behaviour is fundamental to behavioural neuroscience research, and to describing the link between brain and behaviour. This course focuses on the quantitative methods used to observe and describe rodent behaviours in a research laboratory setting, as well as the experimental design needed for these types of studies.

This course is online and asynchronous and thus it will require a significant amount of individual learning. Because it is a lab course, emphasis is on learning from doing. There will not be any long lectures provided in this course. There are short videos to highlight some key points, but much of this course does require you to learn from information provided in the textbook and from the primary research papers that you will find through your publication searches.

This course includes material that should not be accessed without appropriate context and training. In addition, intellectual property related to course development is particularly important in the online environment. Screenshots and/or sharing of any of the course content is not permitted unless it is requested by a member of the teaching team.

Course Prerequisites

PSYO 2000

Student Resources

The writing centre is an excellent resource and can help you to improve your written assignments. https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html.

The library also has a very useful Psychology and Neuroscience subject page (<https://dal.ca.libguides.com/psych>) and a helpful Psychology and Neuroscience librarian: Nicole Marcoux (Nicole.marcoux@dal.ca). You are encouraged to reach out if you feel like you need additional help with literature searches and/or citations.

Please join our course Teams page for Q&A. [NESC PSYO 3161 2025W | General | Microsoft Teams](#). This page is available for any questions with answers that you think are relevant to the entire class. For more individual question, please send a dm via Teams.

Course Delivery

This is an asynchronous online course. If any technology issues occur during quizzes/tests please notify the course instructor via a Teams chat immediately. The quiz/test will be re-scheduled as soon as technical issues are resolved (presumably within 24 hrs). Students connecting to online resources from outside Canada are responsible for ensuring awareness and compliance with any applicable laws in the country from which they are connecting.

Course Materials

Required Textbook: Measuring Behaviour, An Introductory Guide 4th edition. Ed: Melissa Bateson and Paul Martin. 2021. Cambridge University Press. ***Note, there have been previous editions of this book, but they are very different than the current 4th edition***

Online or paperback versions of the textbook can be purchased at the Dal Bookstore. [https://bookstore.dal.ca/CourseSearch/?course\[\]=SUB,WINT25,PSYO,PSYO3161](https://bookstore.dal.ca/CourseSearch/?course[]=SUB,WINT25,PSYO,PSYO3161).

All content will be provided on Brightspace but please use Microsoft Teams for quick correspondence.

Course Correspondence

If you have questions while completing your assignments, please contact your TA (Jamil Muradov) **at least 48 hours prior to the due date**. If the question is relatively short, please use the

Microsoft Teams chat feature. If the question is more involved, please use email with NES/PSYO 3161 in the subject heading. You will not receive a response to a last-minute email/message.

For general questions, please use the Teams course page ([NES/PSYO 3161 2025W | General | Microsoft Teams](#)) as described in the Brightspace announcement.

Do not expect a response outside of standard work hours (9-5 on weekdays).

Online meetings with your TA/instructor can be scheduled on request. To request a meeting, please dm via Microsoft Teams chat.

Assessment

Component	Weight (% of final grade)	Due Date
Short Quiz #1	Best 2 of 3 = 10	January 15, 2025
Short Quiz #2		January 29, 2025
Short Quiz #3		March 19, 2026
Ethics Test	10	January 22, 2025
Assignment #1 (Scoring)	10	February 5, 2025
Assignment #2 (IRR)	10	February 12, 2025
Assignment #3 (Oral Presentation)	5	February 26, 2025
Assignment #4 (Literature Exploration)	5	March 5, 2025
Assignment #5 (Project Proposal)	15	March 12, 2025
Assignment #6 (Data Organization)	5	March 26, 2025
Assignment #7 (Data Presentation and Discussion)	30	April 9, 2025

Conversion of numerical grades to final letter grades follows the

[Dalhousie Grade Scale](#)

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (0-49)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies on Missed or Late Academic Requirements

Each week runs Thurs – Wed.

Assignments, quizzes and the test are due on Wednesday at 23:59. All quizzes/test and the oral presentation (Assignment #3) have a hard due date on Wednesday 23:59. After this date, late penalties will apply.

FOR ASSIGNMENTS 1, 2, and 4-7 ONLY, I will allow a grace period of 72 hrs. Assignments submitted by Saturday at 23:59 will be late but will not receive a late penalty. However, no extensions will be provided beyond Saturday at 23:59 and if assignments are handed in beyond this grace period, late penalties will apply.

Late assignments will be penalized 10% if submitted within 24 hours of the end of the grace period, 20% if it is submitted within 24 and 48 hours, and 40% if it is submitted within 48 and 72 hours. E.g., if you hand in an assignment that is worth 10% within 24 past the grace period, the maximum you can receive is 9% towards your final mark. An assignment that is submitted more than 72 hrs after it was due will receive a 0.

It is strongly advised that you finish assignments as early as possible to avoid last minute complications.

You are required to work with a major online service to back up your work (e.g., OneDrive, iCloud, Google Docs, Dropbox etc.). Failure to back up your work is your responsibility.

Description of course components

Ethics Test: This test will be administered through Brightspace and will consist of multiple-choice and short-answer questions. All questions will be based on the assigned reading. See Brightspace for details.

The requirements for these assignments will be provided in more detail on Brightspace. Assignments must be submitted on Brightspace with the following file title: B00?????_Lastname_Firstname_Assn_x.pdf

Short Quizzes: There will be three short quizzes available on Brightspace which are based on assigned readings. See Brightspace for details. Your best 2 of 3 will be incorporated into your final grade.

Oral Presentation: You will be recording an 6-8 minute presentation. See Brightspace for details.

Project proposal: You will write a proposal detailing your research question, hypotheses, rationale, and methods (incl. statistical analyses) related to your chosen set of behavioural videos. A rubric for the project proposal is included on the Brightspace.

Data organization: You will hand in your spreadsheet(s) showing your raw behavioural measurements prior to any statistical analyses and include a metadata file describing your work. A template for the metadata file has been provided. Provide your spreadsheet in .xls or .csv format.

Data presentation and Project Discussion: You will hand in what is essentially the results and Discussion section of a lab report. Your results section will consist of written paragraphs describing the results with appropriate statistics reported, and Figures/Tables which will also be referenced in the text. Your discussion section will include a description of your interpretation of the results of the statistical analyses, as well as your immediate and broader conclusions including a discussion of how your results extend knowledge in the field. This assignment will be marked according to the rubric on Brightspace.

You will receive the opportunity to work with a complete set of mouse behavioural videos. Access to these videos will be provided in Brightspace.

Course Policies related to Academic Integrity

You may be discussing many aspects of this course with your classmates, but all assignments, quizzes and the test must be done individually. These must reflect your individual ideas. In addition, an originality-checking software will be used in this course. Students are able to request an alternative method of attesting to the authenticity of their work, but you must inform me no later than two weeks from the start of class. For this, you can do one of the following:

1. Submit copies of multiple drafts demonstrating development of the work. Drafts must be handed in as they are finished (e.g., not all at once on the due date).
2. Submit an annotated bibliography

The use of generative AI and large language models are not permitted.

Learning Objectives

- Identify the socio-historical basis of the debate on animal experimentation and the Canadian Council for Animal Care (CCAC) perspective
- Evaluate an experimental proposal in light of the three Rs, as they were defined by Russell and Burch in 1959
- Demonstrate knowledge about the concept of alternatives to animal experimentation and their limitations
- Perform a statistical test on interrater reliability
- Describe scientific findings in a concise way in an online presentation

- Develop and describe a scientifically sound behavioural experiment using rodents
- Organize behavioural data on a spreadsheet
- Create a metadata .txt file for behavioural experiment results
- Visualize behavioural data and describe it in a written report putting it into context of relevant literature
- Perform and interpret statistical tests comparing behaviours between two groups
- Discuss results from a behavioural neuroscience experiment in the context of the current scientific literature

Course Content

Week	Topic	Date	Assessment	Due date
1	01 - Introduction	Jan 9 - 15	Quiz 01	Jan 14-15
2	01 - Ethics in Animal Research	Jan 16 - 22	Ethics Test	Jan 21-22
3	02 - Behavioural Scoring	Jan 23 - 29	Quiz 02	Jan 28-29
4	02 - Manual Scoring	Jan 30 - Feb 5	Scoring Assignment #1	Feb 5
5	02 - Reliability	Feb 6 - 12	IRR Assignment #2a/2b	Feb 12
6-7	03 - Proposal Development	Feb 13 - 26 (incl. reading week)	Oral Presentation Assignment #3	Feb 26
8	03 - Proposal Development	Feb 27 - Mar 5	Literature Exploration Assignment #4	Mar 5
9	03 - Proposal Development	Mar 6 - 12	Project Proposal Assignment #5	Mar 12
10	03 - Data Collection	Mar 13 - 19	Quiz 03	Mar 18-19
11	03 - Data Organization and Visualization	Mar 20 - 26		Mar 26
12	03 - Data Interpretation	Mar 27 - Apr 2		

13	03 - Data Interpretation	Apr 3 - 9	Data presentation and Discussion Assignment #7	Apr 9
----	--------------------------	-----------	--	-------

University Policies and Statements

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 at 1321 Edward St or elders@dal.ca. Additional information regarding the Indigenous Student Centre can be found at: https://www.dal.ca/campus_life/communities/indigenous.html

Internationalization

At Dalhousie, 'thinking and acting globally' enhances the quality and impact of education, supporting learning that is "interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders." Additional internationalization information can be found at: <https://www.dal.ca/about-dal/internationalization.html>

Academic Integrity

At Dalhousie University, we are guided in all our work by the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, you are required to demonstrate these values in all 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. Additional academic integrity information can be found at: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. If there are aspects of the design, instruction, and/or experiences within this course (online or in-person) that result in barriers to your inclusion, please contact the Student Accessibility Centre (https://www.dal.ca/campus_life/academic-support/accessibility.html) for all courses offered by Dalhousie with the exception of Truro. For courses offered by the Faculty of Agriculture, please contact the Student Success Centre in Truro (<https://www.dal.ca/about-dal/agricultural-campus/student-success-centre.html>)

Conduct in the Classroom – Culture of Respect

Substantial and constructive dialogue on challenging issues is an important part of academic inquiry and exchange. It requires willingness to listen and tolerance of opposing points of view. Consideration of individual differences and alternative viewpoints is required of all class members, towards each other, towards instructors, and towards guest speakers. While expressions of differing perspectives are welcome and encouraged, the words and language used should remain within acceptable bounds of civility and respect.

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 (Strategic Priority 5.2). Additional diversity and inclusion information can be found at: <http://www.dal.ca/cultureofrespect.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. The full Code of Student Conduct can be found at:

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

Fair Dealing Policy

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie. Additional information regarding the Fair Dealing Policy can be found at: https://www.dal.ca/dept/university_secretariat/policies/academic/fair-dealing-policy-.html

Originality Checking Software

The course instructor may use Dalhousie's approved originality checking software and Google to check the originality of any work submitted for credit, in accordance with the Student Submission of Assignments and Use of Originality Checking Software Policy. Students are free, without penalty of grade, to choose an alternative method of attesting to the authenticity of their work and must inform the instructor no later than the last day to add/drop classes of their intent to choose an alternate method. Additional information regarding Originality Checking Software can be found at: <https://www.dal.ca/about/leadership-governance/academic-integrity/faculty-resources/ouriginal-plagiarism-detection.html>

Student Use of Course Materials

Course materials are designed for use as part of this course at Dalhousie University and are the property of the instructor unless otherwise stated. Third party copyrighted materials (such as books, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law. Copying this course material for distribution (e.g. uploading to a commercial third-party website) may lead to a violation of Copyright law.