DALHOUSIE UNIVERSITY

COURSE SYLLABUS

NESC/PSYO 3161
Measuring Behaviour
Faculty of Science, Department of Psychology and Neuroscience
Fall 2026

Dalhousie University operates in the unceded territories of the Mi'kmaw, Wolastoqey, and Peskotomuhkati Peoples. These sovereign nations hold inherent rights as the original peoples of these lands, and we each carry collective obligations under the Peace and Friendship Treaties. Section 35 of the Constitution Act, 1982 recognizes and affirms Aboriginal and Treaty rights in Canada.

We recognize that African Nova Scotians are a distinct people whose histories, legacies, and contributions have enriched that part of Mi'kma'ki known as Nova Scotia for over 400 years.

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Course Information

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.**

Prerequisites/Corequisites/Exclusions/Restrictions: ***PSYO 2000***

Course Learning Outcomes

Upon successful completion of this course, you will be able to:

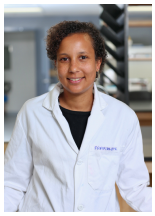
1. **Critically evaluate the ethical, regulatory, and historical foundations of animal experimentation**, including the CCAC framework and the principles of the Three Rs, and apply these perspectives to experimental design decisions.
2. **Design and justify scientifically rigorous behavioural neuroscience experiments**
3. **Implement best practices in organizing, documenting, and managing behavioural data** to support transparency, reproducibility, and effective scientific communication.
4. **Select, perform, and interpret statistical analyses for behavioural data**, including reliability measures and group comparisons, to draw valid scientific conclusions.
5. **Communicate behavioural research findings clearly and effectively in written formats**, integrating data visualizations and situating results within the broader scientific literature.
6. **Critically evaluate and responsibly use generative AI tools to support scientific inquiry,** including designing effective prompts, verifying AI-generated information, and reflecting on the strengths and limitations of AI in research contexts.

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 Contacts and Correspondence

Instructor Information



Instructor: Tamara Franklin
Email: tamara.franklin@dal.ca
Office: LSC 2526

Student Drop-in Hours: Monday 2:30-3:30 pm, Tuesday 10-11 am.
Teams Booking link.

TA Information



TA: Megan Babcock
Email: m.babcock@dal.ca
Office Hours: By appointment, contact via Teams.

Communications

If you have questions while completing your assignments, please contact your TA **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 email from your Dalhousie email account with NESC/PSYO 3161 in the subject line. You will not receive a response to a last-minute email/message. Do not expect a response outside of standard work hours (9-5 on weekdays).

For general questions, please use the Teams course page (General | NESC_PSYO 3161 2026F) as described in the Brightspace announcement.

Course Resources & Tools

To successfully complete this course, you should have access to a computer with a reliable internet connection, speakers and Microsoft Office for Windows/Mac. You will need to be able to download software, as outlined in the course Brightspace.

In addition, you will need the following resources and tools:

Resource/Tool	Required	Optional	Cost	How to Purchase/Access
Measuring Behaviour, An Introductory Guide 4th edition. Ed: Melissa Bateson and Paul Martin. 2021. Cambridge University Press.	☑	☐	$53.99 (print) or 180 days for $41.96 (virtual)	Dal Bookstore Link

Note, there have been previous editions of this textbook, but they are very different than the current 4th edition

This textbook has been used in previous years so there may be used copies in and around Halifax.

Brightspace Course Site

Only students registered in the course are permitted to view, download, upload, comment, or otherwise participate in the course site. You do not have permission to upload course materials to external/third-party websites. **Screenshots and/or sharing of any of the course content, including behavioural videos and associated instructional materials, are not permitted unless it is requested by a member of the teaching team.**

While you may be able to access the course from your phone, a desktop computer or laptop is recommended. **Brightspace functions best when using Google Chrome.**

If you need assistance with Brightspace or other online learning technologies, submit an online ticket at https://service.portal.dal.ca or call 902-494-4357 (toll-free 1-800-869-3931).

Course Assessments

The following table outlines the assessments in this course. Refer to Brightspace for assessment expectations, requirements, and rubrics.

Assessment	Final Grade Weight (%)	Descriptions	Completion/Due Date
Short Quiz #1	Best 2 of 3 = 5	Open book quiz completed on Brightspace. Note, only your **best two quiz scores out of the three** will count toward your final grade. Multiple choice.	Sep 15, 2026
Short Quiz #2			Sep 29, 2026
Short Quiz #3			Oct 20, 2026
Ethics Test	5	Open book test completed on Brightspace. Multiple choice, short answer, long answer.	Sep 22, 2026
Assignment #1 (Scoring)	10	Manually score rodent behaviour in an open field and use this data to determine intra-rater reliability of your scoring. Appropriately document your work.	Oct 6, 2026
Assignment #2 (IRR)	10	Evaluate your behavioural data by assessing inter-rater reliability	Oct 13, 2026
Assignment #3 (Literature Search)	15	Use Microsoft CoPilot develop a preliminary reading list for a proposed experiment and critically evaluate the accuracy, relevance, and limitations of AI-generated sources. Note: an alternative assignment can be given to students who do not wish to use Microsoft CoPilot. Please email for more information.	Oct 27, 2026
Assignment #4 (Project Proposal)	20	Write a proposal detailing your research question, hypotheses, rationale, and	Nov 17, 2026

		methods (incl. statistical analyses) related to your chosen set of behavioural videos.	
Assignment #5 (Data Organization)	10	Produce a spreadsheet with your raw behavioural measurements prior to any statistical analyses, alongside relevant documentation.	Nov 24, 2026
Assignment #6 (Data Presentation and Discussion)	25	Write 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.	Dec 8, 2026
BONUS: Discussion posts 0.333/post for max 1% bonus		The conversation around the ethics of animal research is an important one. You have the potential to gain up to 1% in bonus marks by learning about and engaging in this discussion throughout the term.	Sep 22/Nov 3/Dec 1

Due dates

Each week runs Wednesday – Tuesday and assessments are due Tuesday 23:59. All assessments are to be submitted through the Brightspace. For assignments, please use the following file title: B0???????_Lastname_Firstname_Assn_x.pdf

For quizzes/tests: There is a hard due date on Tuesday 23:59. After this date, late penalties will apply.

For Assignments: A 72-hr grace period is in place for all assignments. Assignments submitted by Friday at 23:59 will be late, but will not receive a late penalty. No extensions will be provided beyond Friday at 23:59. After this date, late penalties will be applied as outlined below.

Bonus Discussion Posts: The conversation around the ethics of animal research is an important one. You have the potential to gain up to 1% in bonus marks by learning about and engaging in this discussion throughout the term.

Missed and Late Assessments

Late submissions will be penalized based on how long after the deadline (or grace period, where applicable) the work is submitted:

- **Within 24 hours:** maximum grade reduced by **10%**
- **24–48 hours late:** maximum grade reduced by **20%**
- **48–72 hours late:** maximum grade reduced by **40%**
- **More than 72 hours late: 0% (no grade awarded)**

Late penalties are applied as **caps on the maximum grade**, not deductions from the earned grade.

Example: If an assignment is worth 10% of the final grade and is submitted within 24 hours past the deadline, the maximum possible grade becomes 9%.

Additional Expectations: Students are strongly encouraged to (1) complete assignments well before the deadline to avoid technical issues and (2) to maintain backup copies of their work using a cloud service (e.g., OneDrive, Google Drive, Dropbox).

Failure to back up work or technical issues do not constitute valid reasons for late submission.

Use of Generative AI (Copilot Chat)

AI and your learning: The goal of this course is to help you build a strong understanding of how behavioural neuroscience experiments are designed and conducted. AI tools can be useful for learning and studying, but using them to complete assessments may prevent you from developing the knowledge and skills that those assessments are designed to foster. This could impact your readiness for future exams, higher-level courses, and research opportunities. When using AI, make sure it supports your learning instead of doing the learning for you.

What AI tools are: AI tools use algorithms and large datasets to generate, summarize, analyze, or revise text, images, or code in response to prompts. Examples include text generators (e.g., ChatGPT), grammar and editing tools (e.g., Grammarly), AI search and summarization tools (e.g., Perplexity), and transcription or translation services (e.g., Otter.ai). They can speed up some tasks, but they do not replace independent thinking, subject knowledge, or scholarly judgment.

The Limitations of AI: AI tools generate content by identifying patterns in large amounts of text, rather than by understanding evidence or determining what is true. As a result, they can sometimes provide explanations that sound convincing but are inaccurate, and they may generate incorrect or nonexistent

citations. You are responsible for ensuring that all work you submit is accurate, original, and meets academic integrity standards.

While AI can be a useful learning aid, relying on it to complete coursework can limit the development of important skills such as critical thinking, data analysis, scientific reasoning, and evidence-based decision-making. Although AI may offer short-term convenience, overreliance on these tools can leave you less prepared for future courses, laboratory work, research opportunities, professional programs, and exams. To get the most benefit from your education, use AI in ways that support and strengthen your own learning rather than replace the thinking and problem-solving that help knowledge stick.

What is and isn't allowed: Even when AI use is permitted, students should carefully consider whether it supports their learning. The primary concern is not simply compliance with course rules, but the development of the knowledge and skills needed for future coursework, research, and professional practice.

1. Learning support and independent study — you may: have concepts explained in different words; generate practice questions or flashcards; summarize assigned readings or lecture material for study; clarify terminology or methods.

2. Recordings, slides, and posted materials — you may: create personal summaries, outlines, or study guides, and translate content for accessibility. **You may not:** upload lecture recordings, slides, assessments, or other instructor materials to external AI platforms without permission (these are protected by copyright).

3. Writing mechanics and language — you may: use AI for grammar and spelling, clarity and concision, and reference formatting. Help limited to mechanics is not misrepresentation when the ideas, structure, and analysis are your own.

4. Idea development — you may: brainstorm questions, generate outlines, or suggest analytical approaches—provided the final work reflects your own contribution. **You may not:** use AI to complete assessments meant to evaluate your individual learning.

5. Research and sources — you may: identify keywords or themes, get suggestions for literature you then verify, and summarize an article to aid comprehension. **You may not:** cite AI as a scholarly source, include fabricated or unverified references, or present AI-generated summaries as your own analysis.

6. Assessment-specific. Online quizzes: AI use undermines the purpose of the quiz and your learning, even where technically possible. Written assignments: AI may be used for grammar and clarity only—all analysis, interpretation, and written content must be your own. Students remain responsible for all submitted work. Any factual inaccuracies, misinterpretations, fabricated references, or unsupported claims produced by AI tools are the responsibility of the student.

The Table below clearly outlines which AI uses are allowed, and which are prohibited.

Activity	Allowed	Not allowed
Idea generation / brainstorming: exploring initial ideas or outlines for an assignment.	☑	☐
Language assistance: identifying and correcting grammar, spelling, or sentence-structure errors.	☑	☐
Study notes from recordings: converting lecture audio into a transcript or summary notes for personal use (mind copyright).	☑	☐
Study notes from slides: converting slides into summary notes for personal use (mind copyright).	☑	☐
Data analysis: using AI to help analyze data (subject to the data-protection rules).	☐	☑
Drafting / outlining: using AI to draft or outline part of an assignment.	☐	☑
Completing graded work: using AI to write papers, essays, or assignments meant to be independent student work.	☐	☑
Online quizzes / tests: using AI to answer online quiz or test questions.	☐	☑
Non-approved tools: using AI tools other than those the instructor permits. Permitted tool(s): _____.	☐	☑
Uploading course materials: sharing instructor or peer materials with external platforms without written consent / copyright permission.	☐	☑
Disclosing AI use: disclosing AI use when the course policy requires it.	☑	☐

AI and academic integrity: In this course, AI use is governed by the same expectations that apply to all academic work under Dalhousie's academic-integrity regulations (Intellectual Honesty; confirm the relevant Faculty regulation). Unless explicitly permitted by the instructor, AI use that replaces or obscures your own intellectual work is unauthorized assistance and a form of academic misconduct. You are also responsible for protecting the privacy and intellectual property of others.

Protecting Course Materials when Using AI: Course materials, including assigned readings, assignments, assessments, recordings, and any other instructional content, must **not be uploaded, shared, or entered into any generative AI tool** unless you are signed in with your institutional Microsoft account and

Enterprise Data Protection is active in Microsoft Copilot. This requirement helps protect intellectual property, confidential information, and institutional data.

Before entering any course content into Copilot, verify that you see the **green shield icon** and the message **"Enterprise data protection applies to this chat."** See red arrow below for location. If this protection is not active, you are not signed in and you must not upload or paste course materials into the AI tool.



Disclosure requirements: Any use of AI to complete assessments must be disclosed. ***A template is provided on Brightspace that should be used to disclose any and all AI use.*** Failure to disclose the use of AI tools may constitute an academic integrity violation.

Citing requirements: The disclosure template will be used in place of citation requirements.

You can find additional information on Dalhousie's AI policy here.

Academic Integrity

Dalhousie expects all students to be responsible learners, demonstrating the values of intellectual honesty, trust, fairness, and respect in your work. Key aspects of academic integrity include, but are not limited to: avoiding plagiarism, not engaging in cheating, submitting original work, and acknowledging sources of information and ideas when they are not your own. Refer to the Statement on Intellectual Honesty for definitions of various academic offences. Failure to meet Dalhousie's academic integrity standards will result in appropriate disciplinary and/or corrective measures.

Tentative Course Schedule

Refer to Dalhousie's Important Dates for holidays and academic dates such as course add, drop, and withdrawal dates.

Week	Topic	Assessment	Due date
1 Sep 8-15	01 - Introduction	Quiz 01	Sep 14-15
2 Sep 16-22	01 – Ethics in Animal Research	Ethics Test	Sep 21-22

		Discussion #1 (bonus 0.333%)	
3 Sep 23-29	02 – Behavioural Scoring	Quiz 02	Sep 28-29
4 Sep 30-Oct 6	02 – Manual Scoring	Assignment #1	Oct 6
5 Oct 7-13	02 – Reliability	Assignment #2	Oct 13
6 Oct 14-20	03 - Proposal Development	Quiz #3	Oct 19-20
7 Oct 21-27	03 - Proposal Development	Assignment #3	Oct 27
8 Oct 28-Nov 3	03 – Proposal Development	Discussion #2 (bonus 0.333%)	Nov 3
9 Nov 4 – 17 (incl. reading week)	03 – Proposal Development	Assignment #4	Nov 17
10 Nov 18-24	03 – Data Collection and Organization	Assignment #5	Nov 24
11 Nov 25-Dec 1	03 – Data Visualization and Interpretation	Discussion #3 (bonus 0.333%)	Dec 1
12 Dec 2-Dec 8	03 – Data Visualization and Interpretation	Assignment #6	Dec 8

*Current as of September 8, 2026. Schedule subject to change.

Syllabus Appendix: Student Supports & University Statements, Policies, and Guidelines

Select the link above for student supports available to all Dalhousie students, and University-wide statements, policies, and guidelines applicable to your academic studies.