Psychology/Neuroscience 3161.03 F
Measuring Behaviour
Fall 2016
(CRN 11941, 11942 for NESC; 12357, 12358 for PSYCH)

Professor: Richard Brown
LSC Room # 3335
Office hours: Tuesday and Thursday 11:30-12:30 or by appointment
E-mail: rebrown@dal.ca

Teaching Assistant: Emre Fertan
LSC Room #5231
Office hours: Wednesday 1:00-2:00 or by appointment
E-mail: emre.fertan@dal.ca

Measuring behaviour is essential in the study of ethology, behavioural neuroscience, developmental, social and clinical psychology. The function of this laboratory class is to teach methods of observing and scoring behaviour using qualitative and quantitative methods. Sampling methods, behaviour description and statistical analysis will be done in laboratory and naturalistic settings.

Prerequisites: Psychology 2000 or Neuroscience 2007.
Tuesdays and Thursdays, 10:05-11:25 am
Lecture Room: LSC 4208
Laboratory Room: LSC 4208 or Fourth Floor Computer Lab LSC 4207

The class will generally have lectures on Tuesdays and laboratory classes on Thursdays, but some lectures may be on Thursdays.


Course readings. Journal articles, research protocols and other papers will be assigned. If they are not available as PDF files through Novanet, they will be put on the course website.

Course website. A course website is available for students in the class on BRIGHTSPACE. Contact Jackie Benedict if you have problems with the website. [Jacqueline.Benedict@dal.ca]

Grade Breakdown. Grades will be based on two exams, four laboratory reports and one presentation/poster (200 marks total).

Exams: Midterm (50 marks), Final (50 marks). Exams will consist of short answer questions.

Laboratory: Lab 1 (10 marks); Lab 2 (30 marks); Lab 3 (20 marks); Lab 4 (30 marks);
Poster/oral presentation (10 marks).

Late assignments will be penalized at 5% of total value per day, including weekends. Electronic copies of lab reports as well as hard copies are required. Students requesting extensions for late reports due to illness are required to submit a signed doctor’s note.
Laboratory Summary:

Lab 1. Introduction to behavioural observation (10 marks).
Students will observe video tapes of mice in their home cages and describe and measure a number of different behaviours to create an ethogram.
Due Thursday 22 September 2016.

Lab 2. Locomotor an anxiety-like behaviour on the elevated plus maze (30 marks).
Students will observe videos of mice in the elevated plus maze test of locomotor and anxiety-like behaviour. The behaviour of mice will also be scored by an automated computer system. Students will observe, describe and measure their behaviours, and assess inter-rater, inter-test and computer-human reliability in measuring locomotor activity and anxiety.
Due Thursday 13 October 2016.

Students will observe videos of the grooming or stereotyped behaviour of mice and conduct a micro-analysis of the sequences of these behaviours in mice of different strains, sexes or test conditions.
Due Thursday 3 November 2016.

Lab 4. The quantified self. (30 marks [5 plus 25]).
According to Wikipedia: "The Quantified Self is a movement to incorporate technology into data acquisition on aspects of a person's daily life in terms of inputs (e.g. food consumed, quality of surrounding air), states (e.g. mood, arousal, physiological measures, and performance (mental and physical). Such self-monitoring and self-sensing, which combines wearable sensors and wearable computing is known as 'lifelogging'. The quantified self is self-knowledge through self-tracking with technology. Quantified self advancements have allowed individuals to quantify biometrics that they never knew existed, as well as make data collection cheaper and more convenient.

Students will design their own experiments to quantify their sleep, exercise, eating or some other aspect of their own behaviour for 2-4 weeks using smart phone apps or some other device, such as a pedometer, fitbit, etc. They will be required to submit a proposal for their experiment (5 marks) and an individually prepared lab report (25 marks).

Poster presentation (10 marks).
Students will create poster presentations from the results of Lab 2, 3, or 4, and submit this to Emre Fertan via e-mail.
Poster presentation due Thursday 8 December 2016.

Grades are assessed on the Faculty of Science scale:
80%; 85%; 90% = A-, A, A+
70%; 73%; 77% = B-, B, B+
55%; 60%; 65% = C-, C, C+
50% = D
Below 50% = F.
Class.    L= Lab    Date    Material to be covered.
          Overview of course and discussion of laboratories. Discussion of plagiarism.
          What is the definition of behaviour? Behavioural Bioassays.
          Introduction to methodology used in observation and description of behaviour.
          Defining behaviour units.
          Martin & Bateson, Chapter 1 (pages 1-9).
3.       Tuesday 13 Sept. Ethograms, behavioural phenotyping, and sampling procedures.
          Martin & Bateson, Chapter 2 (pages 10-24), Chapter 3 (pages 25-35),
          Chapter 5 (pages 48-61).
4.       Thursday 15 Sept. Lab 1: Introduction to behavioural measurement. Basic observation,
          description and quantitative recording of mouse behaviour in the home cage
5.       Tuesday 20 Sept. Quantitative analysis and recording methods.
          Martin & Bateson, Chapter 3 (pages 25-41).
          Martin & Bateson, Chapter 6 (pages 62-71).
          Lab 1 due. 10 marks.
          Martin & Bateson, Chapter 2 (pages 15-24), Chapter 3 (pages 25-41).
          Martin & Bateson, Chapter 7 (pages 72-85), Chapter 8 (pages 86-92), Appendices 1, 2 and 3.
          Martin & Bateson, Chapter 7 (Pages 72-85), Chapter 9 (page 103-114).
          in mice.
          Lab 2 due. 30 marks.
13.      Tuesday 18 Oct.   One hour exam on classes 1-12. 50 marks.

15. L Tuesday 25 Oct. Lab 3b: Analysis of behaviour sequences, continued. [Note 2 lab classes this week as I will be in China]


18. L Thursday 3 Nov. Lab 4a: The quantified self. Lab 3 due. 20 marks.

5-12 Nov. is the NEW Fall study break. Continue Lab 4b: The quantified self on your own time.


20. L Thursday 17 Nov. Lab 4c: The quantified self, continued.


23. Tuesday 29 Nov. Using equipment for behaviour recording and analysis. Martin & Bateson, Chapter 9 (pages 103-120), Appendices 2 and 3.


Tuesday 6 Dec. There is NO CLASS. Monday classes held today. How stupid is that?

Classes end on Tuesday 6 December 2016.

Poster presentation due Thursday 8 December 2016. 10 marks.

25. Final exam during exam period. 8-18 December 2016. 50 marks. Covers classes 14-24, but you are expected to know material from classes 1-12 as it relates to these classes. [I will be in Kenya. Emre will give the exam.]
ACCOMMODATION POLICY FOR STUDENTS

Students may request accommodation as a result of barriers related to disability, religious obligation, or any characteristic protected under Canadian Human Rights legislation. The full text of Dalhousie’s Student Accommodation Policy can be accessed here:

Students who require accommodation for classroom participation or the writing of tests and exams should make their request to the Advising and Access Services Centre (AASC) prior to or at the outset of the regular academic year. More information and the Request for Accommodation form are available at www.dal.ca/access.

ACADEMIC INTEGRITY

Academic integrity, with its embodied values, is seen as a foundation of Dalhousie University. It is the responsibility of all students to be familiar with behaviours and practices associated with academic integrity. Instructors are required to forward any suspected cases of plagiarism or other forms of academic cheating to the Academic Integrity Officer for their Faculty.

The Academic Integrity website (http://academicintegrity.dal.ca) provides students and faculty with information on plagiarism and other forms of academic dishonesty, and has resources to help students succeed honestly. The full text of Dalhousie’s Policy on Intellectual Honesty and Faculty Discipline Procedures is available here:
http://www.dal.ca/dept/university_secretariat/academic-integrity/academic-policies.html

STUDENT CODE OF CONDUCT

Dalhousie University has a student code of conduct, and it is expected that students will adhere to the code during their participation in lectures and other activities associated with this course. In general:

“The University treats students as adults free to organize their own personal lives, behaviour and associations subject only to the law, and to University regulations that are necessary to protect

• the integrity and proper functioning of the academic and non-academic programs and activities of the University or its faculties, schools or departments;
• the peaceful and safe enjoyment of University facilities by other members of the University and the public;
• the freedom of members of the University to participate reasonably in the programs of the University and in activities on the University’s premises;
• the property of the University or its members.”

The full text of the code can be found here:
SERVICES AVAILABLE TO STUDENTS

The following campus services are available to help students develop skills in library research, scientific writing, and effective study habits. The services are available to all Dalhousie students and, unless noted otherwise, are free.

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<tr>
<th>Service</th>
<th>Support Provided</th>
<th>Location</th>
<th>Contact</th>
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<tbody>
<tr>
<td>General Academic Advising</td>
<td>Help with understanding degree requirements and academic regulations</td>
<td>Killam Library Ground floor Rm G28</td>
<td>In person: Killam Library Rm G28</td>
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<td>- choosing your major</td>
<td>Bissett Centre for Academic Success</td>
<td>By appointment:</td>
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<td>- achieving your educational or career goals</td>
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<td>- e-mail: <a href="mailto:advising@dal.ca">advising@dal.ca</a></td>
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<td>- dealing with academic or other difficulties</td>
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<td>- Phone: (902) 494-3077</td>
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<td>- Book online through MyDal</td>
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<td>Dalhousie Libraries</td>
<td>Help to find books and articles for assignments</td>
<td>Killam Library Ground floor Librarian offices</td>
<td>In person: Service Point (Ground floor)</td>
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<td>Help with citing sources in the text of your paper and preparation of bibliography</td>
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<td>By appointment:</td>
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<td>Studying for Success (SFS)</td>
<td>Help to develop essential study skills through small group workshops or one-on-one coaching sessions</td>
<td>Killam Library 3rd floor Coordinator Rm 3104 Study Coaches Rm 3103</td>
<td>Identify your subject librarian (URL below) and contact by email or phone to arrange a time:</td>
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<td>Match to a tutor for help in course-specific content (for a reasonable fee)</td>
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<td><a href="http://dal.beta.libguides.com/sb.php?subject_id=34328">http://dal.beta.libguides.com/sb.php?subject_id=34328</a></td>
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<td>Writing Centre</td>
<td>Meet with coach/tutor to discuss writing assignments (e.g., lab report, research paper, thesis, poster)</td>
<td>Killam Library Ground floor Learning Commons &amp; Rm G25</td>
<td>To make an appointment:</td>
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<td>- Learn to integrate source material into your own work appropriately</td>
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<td>- Visit main office (Killam Library main floor, Rm G28)</td>
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<td>- Learn about disciplinary writing from a peer or staff member in your field</td>
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<td>- Call (902) 494-3077</td>
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<td>- email Coordinator at: <a href="mailto:sfs@dal.ca">sfs@dal.ca</a></td>
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<td>- Simply drop in to see us during posted office hours</td>
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<td>All information can be found on our website: <a href="http://www.dal.ca/sfs">www.dal.ca/sfs</a></td>
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<td>We are open six days a week</td>
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<td>See our website: writingcentre.dal.ca</td>
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