

# Neuroscience Lab Course Psych3L03

**Instructor:** Professor K. M. Murphy: Office - PC315  
kmurphy@mcmaster.ca  
Department of Psychology, Neuroscience & Behaviour

**Lectures:** Tuesday 11:30-2:30 pm

**Teaching Assistants:** Shawna Thompson -- [shawna.lee.thompson@gmail.com](mailto:shawna.lee.thompson@gmail.com)  
Steven Mancini — [mancinsj@mcmaster.ca](mailto:mancinsj@mcmaster.ca)

**World Wide Web** <https://basecamp.com/1928877/projects/12839535#team>

## Outline:

### Lectures, Discussions, Presentation:

- The theme for the course is Harnessing Neuroplasticity for Clinical Applications.
- Sept 5, Intro to translating neuroscience,
  - video -- Dr. Thomas Insel, [https://www.ted.com/talks/thomas\\_insel\\_toward\\_a\\_new\\_understanding\\_of\\_mental\\_illness](https://www.ted.com/talks/thomas_insel_toward_a_new_understanding_of_mental_illness)
  - Assignment 1: Translating Neuroscience
- Monday Sept 11 Assignment 1 Due
- Sept 12, Presentation/Discussion of translating neuroscience paper,
  - video Dr. Mriganka Sur, <https://www.youtube.com/watch?v=jWohfroAVIo>
  - Assignment 2: Autism & plasticity
- Monday Sept 18 Assignment 2 Due
- Sept 19, Presentation/Discussion of autism & plasticity assignment,
  - video Dr. Ramirez & Liu, [https://www.ted.com/talks/steve\\_ramirez\\_and\\_xu\\_liu\\_a\\_mouse\\_a\\_laser\\_beam\\_a\\_manipulated\\_memory?language=en](https://www.ted.com/talks/steve_ramirez_and_xu_liu_a_mouse_a_laser_beam_a_manipulated_memory?language=en)
  - Assignment 3: 21st century neuroscience techniques
- Monday Sept 25 Assignment 3 Due
- Sept 26, Presentation/Discussion of 21st century neuroscience techniques,
  - video Dr Allan Jones, [http://www.ted.com/talks/allan\\_jones\\_a\\_map\\_of\\_the\\_brain#t-1472](http://www.ted.com/talks/allan_jones_a_map_of_the_brain#t-1472)
  - Assignment 4: Human brain assignment
- Monday Oct 2 Assignment 4 Due
- Oct 5, Presentation/Discussion of neurobiology of the human brain
- Oct 10, Mid-term Recess
- Nov 28, video Dr Sinha, [http://www.ted.com/talks/pawan\\_sinha\\_on\\_how\\_brains\\_learn\\_to\\_see?language=en](http://www.ted.com/talks/pawan_sinha_on_how_brains_learn_to_see?language=en)
  - Assignment 5: Taking neuroscience research beyond the lab
- Monday Dec 4 Assignment 5 Due
- Dec 5, Presentation/Discussion of taking neuroscience research beyond the lab assignment
  - After the video there will be a discussion about the issues raised in the video.
  - Students will form groups and pick a topic from the video to research for the next class.
  - The group will write a short paper (2 pages double-spaced) with an annotated reference list.
  - These will be submitted to the class webpage by noon on Monday before class.

- Students will read and grade the written assignments before class.
- In class, each group will make a short presentation (~10 minutes) of their research.
- The presentations will be graded by all students, TAs & Professor.

**Sheep brain dissection: test date Oct 31.**

- October 3 - Oct 24.

**Laboratory experiment: Lab Report Due Thursday Dec 7.**

- We will develop this together. Students will work in pairs to analyze the data and write up a journal-style lab report.

**Evaluations:**

- 5 assignments: written and presentations-- 10% each, total 40% (lowest grade will be dropped).
- Neuroanatomy practical test -- 30%
- Lab Report -- 25%
- Participation -- 5%

90-100	A+
85-89	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
67-69	C+
63-66	C
60-62	C-
57-59	D+
53-56	D
50-52	D-
0-49	F

- Final marks may be adjusted up or down, on an individual basis, in light of special circumstances and/or the student's overall performance in the course.
- Lab Reports handed in late will lose one letter grade for each day past the due date. Weekly group research papers will not be accepted after noon on the due date.

**Academic Integrity:**

- Attention is drawn to <http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf> for the university academic integrity policy.

**Course Changes**

- If it becomes necessary to make changes to some part of the course during the term, reasonable notice and communication will be made with students in the class. The University reserves the right to change dates and/or deadlines etc. for any or all courses in the case of an emergency situation or labour disruption or civil unrest/disobedience, etc.