PNB 3L03 – NEURODEVELOPMENT & PLASTICITY LAB
2020 Fall Term

Instructor: K. M. Murphy | Email: kmurphy@mcmaster.ca | Office Hours: Thursday 1-2pm | Office: PC315

Lab time: Tuesday 11:30-2:30 pm |

TAs: TBA

COURSE DESCRIPTION
Seminars and laboratory experience in current problems in neurobiology

COURSE AND LEARNING OBJECTIVES
The objectives for this course are to introduce students to current questions and methods in neuroscience research. The learning objectives are to become proficient at: identifying an important research question; working as the member of a research team; communicating research ideas in writing and orally; using rigorous and transparent research methods.

MATERIALS & FEES – N/A

VIRTUAL COURSE DELIVERY
To follow and participate in virtual classes it is expected that you have reliable access to the following:

• A computer that meets performance requirements found here.

• An internet connection that is fast enough to stream video.

• Computer accessories that enable class participation, such as a microphone, speakers and webcam when needed.

If you think that you will not be able to meet these requirements, please contact uts@mcmaster.ca as soon as you can. Please visit the Technology Resources for Students page for detailed requirements. If you use assistive technology or believe that our platforms might be a barrier to participating, please contact Student Accessibility Services, sas@mcmaster.ca, for support.

COURSE OVERVIEW AND ASSESSMENT
Outline: Lectures, Discussions, Presentation

Sept 9, Introduction to COVID-19 and the brain


• Monday Sept 14 Assignment 1 Due

• Sept 15, Presentation/Discussion of COVID-19 and the brain

Assignment 2: SARS-CoV-2 neurobiological mechanisms in the brain
• Monday Sept 21 Assignment 2 Due
• Sept 22, Presentation/Discussion of SARS-CoV-2 neurobiological mechanisms in the brain

Assignment 3: How to study SARS-CoV-2 effects on the brain
• Monday Sept 28 Assignment 3 Due
• Sept 29, Presentation/Discussion of how to study SARS-CoV-2 effects on the brain

Assignment 4: Why study SARS-CoV-2 and the brain
• Monday Oct 5 Assignment 4 Due
• Oct 6, Presentation/Discussion of why study SARS-CoV-2 effects on the brain
• Nov 23, Discussion about the current state of COVID-19 research and the brain

Assignment 5: COVID-19 and the brain research beyond the lab
• Monday Dec 7 Assignment 5 Due
• Dec 4, Presentation/Discussion of COVID-19 and the brain research beyond the lab assignment

Assignment Information
• Assignments will begin with in class discussion and research about the topic to identify the research problems that are in need of further study.
• Students will form groups and pick a problem 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.

Brain Neuroanatomy: Test date Nov 3.
• October 6 - Oct 27.

Laboratory experiment: Nov 10, 17, 24, Dec 1, 8 — Lab Report Due Thurs Dec 10.
• We will develop this together. The focus will be on SARS-CoV-2 mechanisms in the brain. Students will work in pairs to develop a research question, analyze the data and write up a journal-style lab report.

COURSE EVALUATION

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>5 assignments: written and presentations</td>
<td>- 10% each, total 40%</td>
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<tr>
<td></td>
<td>(lowest grade will be dropped)</td>
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<tr>
<td>Neuroanatomy test</td>
<td>- 30%</td>
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<tr>
<td>Lab Report</td>
<td>- 25%</td>
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Participation - 5%

- 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.

REQUESTS FOR RELIEF FOR MISSED ACADEMIC TERM WORK

McMaster Student Absence Form (MSAF): In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”.

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a Program Coordinator. For further information, consult McMaster University’s Academic Accommodation of Students with Disabilities policy.

ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students should submit their request to their Faculty Office normally within 10 working days of the beginning of term in which they anticipate a need for accommodation or to the Registrar’s Office prior to their examinations. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

COURSES WITH AN ON-LINE ELEMENT

Some courses may use on-line elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in a course that uses on-line elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

ONLINE PROCTORING

This course may use proctoring software (TBD) for tests/exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins. If you have questions about whether this software will be used, or concerns about the use of this software, please contact your instructor.

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.
It is your responsibility to understand what constitutes academic dishonesty.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/

The following illustrates only three forms of academic dishonesty:

- plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
- improper collaboration in group work.
- copying or using unauthorized aids in tests and examinations.

AUTHENTICITY / PLAGIARISM DETECTION

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the Instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). For more details about McMaster’s use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

CONDUCT EXPECTATIONS

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all our living, learning and working communities. These expectations are described in the Code of Student Rights & Responsibilities (the “Code”). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, whether in person or online.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students’ access to these platforms.

Additional information about the Code and netiquette can be found here.

COPYRIGHT AND RECORDING

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, including lectures by University instructors.

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal
study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

**RESEARCH ETHICS – NA**

**EXTREME CIRCUMSTANCES**

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.