Instructor
Dr. Gabriel (Naiqi) Xiao, xiaon8 (at mcmaster dot ca)
Office hours: by appointment.

Course Assistance - TAs
TAs: TBD

Schedule
Monday 11:30AM - 2:20PM in ABB 270 (Jan 6, 2021- Apr 9, 2021)

Prerequisites
Students are expected to have taken at least one course in each field:

Neuroscience courses:
- LIFESCI 2CC3 - Fundamentals of Neuroscience
- PNB 2XB3 - Neuroanatomy & Neurophysiology
- PSYCH 2E03 - Sensory Processes
- PSYCH 2NF3 - Clinical Neuropsychology

Cognition courses:
- PNB 2XA3 - Human Perception & Cognition
- PNB 3MM3 - Cognitive Neuroscience Lab
- PSYCH 2H03 - Human Learning and Cognition
- ISCI 2A18 A/B - Integrated Science II

Statistics courses:
- ARTSSCI 2R03 - Applied Statistical Inference
- PNB 3XE3 - Inferential Statistics and Research Methods
- STATS 2B03 - Statistical Methods for Science
- STATS 2MB3 - Statistical Methods and Applications

Course Objectives
An introduction to cognitive neuroscience, which is aimed at the study of psychological, computational, and neuroscientific bases of perception and cognition. This course will survey findings in several major areas of cognitive neuroscience, using a range of methods including brain imaging, neural network modelling, and behavioural testing of neuropsychological patients, toward an understanding of the neural mechanisms underlying cognition. Lectures will cover both textbook chapters and selected readings from the current literature. Students are expected to develop an appreciation for the range of techniques used by cognitive neuroscientists, when they are applicable, and what they tell us about a range of cognitive and brain functions, as well as an ability to evaluate critically the scientific literature.

During the first three weeks, introductory material will be covered in a traditional lecture format. In subsequent weeks, for each of the 5 major topic areas, there will be a one-hour
introductory lecture given by the instructor followed by four hours of paper presentations and discussions, with the papers presented by students, and the instructor and TA's directing and facilitating the discussions.

Course Intended Learning Outcomes

1. Read, understand, and critically evaluate primary research articles in the field of cognitive neuroscience.
2. Communicate your understanding in both written and oral formats
3. Actively engage in classroom discussions

Required Course Materials

1. No required textbooks. Instead of this, there is a series of selected review articles that should provide adequate background for the course. These articles, which are freely available electronically from the McMaster library web pages (accessible from any on-campus computer), will be added soon.
2. Registration on www.classquestion.com/students using class code _ _ _ _ _, your @mcmaster.ca email account, and when prompted, enter your 9-digit student number as your student ID. This is a free alternative to iClickers®.

Avenue 2 Learn

We will be using A2L for announcements, reading lists, and assignment submissions. All course readings, lecture materials, and student presentations will be made available here. Students can post questions on the Psych 3BN3 discussion group on A2L so that all students can benefit from the instructor’s answer.

Overview and Assessment (TENTATIVE)

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<tr>
<th>Assessment</th>
<th>Details</th>
<th>Weight</th>
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<tr>
<td>Participation</td>
<td>Weekly</td>
<td>10</td>
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| Critiques      | • At least three 2-page critiques of papers (max 5 submissions, but only the best 3 critiques count).  
• Always due at the start of class on the day the paper is being presented. | 35     |
| Presentation   | 30-minutes presentation on a paper you did not critique.                | 20     |
| Final exam     | Take-home, long answer                                                  | 35     |

Participation: Marks for participation are based on 1) providing feedback to other students on their presentations, by filling out a very brief evaluation form at the end of each presentation, and 2) contributing to the class discussions of the 20 papers. The participation mark will be calculated as follows:
• Attendance at all presentations and Feedback provided to presenters: 1 mark for submitting 1-4 feedback forms with informative and helpful feedback, 2 marks for 5-8 forms, 3 marks for 9-12, 4 marks for 13-16, and 5 marks for 17 or more.
• Contribution to discussions: 1 mark for contributing in a substantial way (not just asking clarification type questions) to 1 paper discussion, 2 marks for 2-3, 3 marks for 4-7, 4 marks for 8-11, 5 marks for 12 or more.
Critiques: Students will each be randomly assigned 5 papers covering all 5 topic areas. Of those 5, they can choose at least 3 papers to critique. No matter how many critiques are turned in, only the best 3 scores will be counted. Critiques are due at the start of class on the day the paper is being presented. Late critiques submitted after the paper has been presented in class will not be accepted under any circumstances.

Presentation: Each student will be assigned a paper to be presented. Depending on course enrolment, each presentation will be either given individually or by a pair of students. Students’ requests to present individually or with a specific partner, and/or in a specific topic area, will be accommodated whenever possible but cannot be guaranteed.

Final exam: The final exam will be distributed during the regular final exam period. It is expected to take no more than one day to complete, but students will be given 1 week to fit this in around their other exams. There will be 5 exam questions, one per major topic area covered in the course, and students will be asked to provide (max 2 pages each, double-spaced) answers to 4 of the 5 questions.

Policy on Missed Work, Extensions, and Late Penalties

All students must complete a presentation and a minimum of three assigned critiques. Typical MSAF policy applies -- if you submit an MSAF for any form of assessment, you must follow-up with the instructor ASAP via email to discuss an alternate arrangement. However, due to the nature of the course, critiques should not be MSAF’d (your top 3 out of max 5 submissions will count towards your final grade), and you must still present should you miss your scheduled presentation. Hence, if you have any conflicts with deadlines/presentations, please discuss with the instructor as soon as possible so they can rearrange presentations and accommodate you. In cases where a missed presentation cannot be rescheduled into the regular class time, you will have to present for the instructor at an alternative time.

Inclusivity and a Culture of Respect

As a McMaster student, you have the right to experience and the responsibility to demonstrate respectful and dignified interactions within all of our living, learning and working communities. Expectations are described in Code of Student Rights & Responsibilities

   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.

Academic Integrity and Honesty

As a McMaster student, you are expected to exhibit honesty and ethical behaviour in all aspects of the learning process. The academic credentials that you earn are rooted in the principles of honesty and academic integrity.

   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 which
It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy. Some helpful information can be found here.

Academic Accommodation of Students with Disabilities

Students with disabilities who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Student Accessibility Services can be contacted by phone at 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. 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 requiring a RISO accommodation should submit their request to their Faculty Office normally within 10 working days of the beginning of the term in which they anticipate a need for accommodation or to the Registrar's Office before their examinations. Students should also contact the instructor as soon as possible to make alternative arrangements for classes, assignments, and tests.

Course Modification

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If a modification becomes necessary, reasonable notice and communication with the students will be given with an explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.