St. Francis Xavier University

Department of Psychology

PSYC 421: Advanced Topics in Cognition (Cognitive Neuroscience)

Fall 2021 Syllabus

We here at StFX acknowledge that we are on the traditional unceded territory of the Mi'kmaw people, known as Mi'kma'ki. Mi'kma'ki is also known as Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland & Labrador, and the Gaspe region in Quebec. In the 18th century, Mi'kmaq people and the British Crown entered historic Peace and Friendship treaties; these treaties were based on friendship, sharing, and peace. We are committed to reconciling and honoring these treaty relationships, as we are all Treaty people.

-Terena Francis, Coordinator of Indigenous Student Affairs, StFX

Instructor: Erin Mazerolle PhD, emazerol@stfx.ca
Extra help hours: Mondays 11:35 AM – 1:05 PM
Tuesdays 8:30 AM – 9:30 AM
Thursdays 10:00 AM – 11:30 AM
Extra help location: Our Collaborate classroom
Extra help is also available by appointment - email me to set one up. **Be sure to suggest a few times that work for you.**

Extra help hours tip: Put my hours in your calendar to help keep track of when I'm available.

Class meeting time: Mondays 8:15 AM - 11:05 AM
Classroom: J Bruce Brown 305 (BB305)

A Bit About Me



Welcome to Advanced Topics in Cognition! I'm looking forward to exploring cognitive neuroscience with you. I'm originally from Dartmouth NS, and lived in Ottawa, Montreal, and Calgary before settling in Antigonish. I'm a neuroimaging researcher with interests in brain function and structure in healthy control participants, as well as in persons with neurological diseases such as multiple sclerosis and tremor. My favourite brain region is the corpus callosum. I hope we can create a learning environment together that encourages critical thinking and supports diverse perspectives.

Course Objectives

Cognitive neuroscience is the study of the brain-based mechanisms of mental processes. After successful completion of this course, students will be able to:

- Consider the types of problems that can and cannot be solved with cognitive neuroscience
- Compare and contrast *functional segregation* and *functional integration* frameworks for understanding brain organization
- Find and use open science tools relevant to cognitive neuroscience
- Read, understand, and communicate about cognitive neuroscience research articles
- Describe what is known about the brain mechanisms of at least one mental process (e.g., memory, attention, face recognition)

Learning Management System

We will be using Moodle. On Moodle, you will find class announcements, readings, lecture slides, surveys, forums, assignments, feedback forms, our online classroom (Collaborate) and more.

Moodle and Collaborate are populated with information from Banner, and can only access students' legal names. However, many students do not go by their legal names. This is a known issue that StFX is working towards resolving. In the meantime, a guest link for our Collaborate classroom is available on Moodle, which allows you to input your name. You may also temporarily change your "first name" in Moodle by clicking on your profile picture in the top right, selecting Profile, clicking the gear, and selecting "Edit profile." However, this process must be repeated every day.

v. 30.08.2021

Schedule

Date	Topic (subject to change)	Reflection due?	Perusall participation required before class?
2021-09-13	Welcome and introduction, choice assignment meetings	No	No. We will practice Perusall in class.
2021-09-20	Contextualizing cognitive neuroscience, choice assignment meetings	Yes	Yes
2021-09-27	Methods of cognitive neuroscience	Yes	Yes
2021-10-04	Functional neuroanatomy/functional segregation	Yes	Yes
2021-10-11	**No class:** Thanksgiving holiday		
2021-10-18	Functional integration and brain networks	Yes	Yes
2021-10-25	Freely available data: OpenNEURO	Yes	Yes
2021-11-01	Meta-analyses: Neurosynth	Yes	Yes
2021-11-08	**No class:** Study break		
2021-11-15	Time to work on choice assignments, get feedback, etc.	Yes	No
2021-11-22	Student's choice	Yes	Yes
2021-11-29	Student's choice and/or presentations	Yes	No
2021-12-06	Presentations, course evaluations	Yes	No

Changes to the schedule may be made if deemed necessary and will be communicated in class and on Moodle.

Course format

The course will be primarily delivered **in-person** and has been designed with an in-person format in mind; however, I will have our Collaborate classroom open during all sessions in case you need to attend remotely (e.g., self-isolating due to COVID-19 symptoms or exposure). If I need to self-isolate, we will meet on Collaborate instead of in person. I will email the class as soon as possible should this occur. You may access the Collaborate classroom via Moodle. **Please check your email before each class to avoid an unnecessary trip to campus!**

Evaluation

Final grades will be made up of five components:

Component	Value
Syllabus quiz	1%
Weekly homework	34%
Choice assignments	45%
Final reflection	10%
Participation, effort, and integrity	10%

Syllabus Quiz
The syllabus quiz will take place on the first day of class. It is open book and intended to ensure that expectations are clear.

Weekly Homework
Due: 1:00 PM Friday, most weeks
The *Weekly Homework* will generally consist of two parts: Persuall readings/participation and writing reflections.

- **Reflections:** Each week, you will be asked to write a reflection based on what you learned about cognitive neuroscience during the previous week. The reflections should each be ¼-1 page, single spaced. Keep them together in a single file which will serve as your reflection journal for the course. Each reflection will be marked out of 2.
- **Perusall:** Before most classes, you will be asked to complete a reading and engage interactively on Perusall. Each week's Perusall participation will be marked out of 2. Go to Perusall and create an account (feel free to use your Google, Facebook, or Twitter account to register). Our course code is: MAZEROLLE-4LTTN.

Choice Assignments
Due: Dates vary
As the name suggests, the choice assignments are designed to allow students to choose assignment topics and formats that most interests them. This is an opportunity for students to have agency over their own learning. Details regarding the choice assignments can be found in a separate document.

Final Reflection
Due: December 13, 2021.
The final reflection should be 1-4 pages, single spaced (note: longer is not necessarily better). It is meant to provide an opportunity for you to consolidate your learning, identify themes that you found particularly relevant, and demonstrate that you can connect those themes to the topics we covered throughout the semester.

Participation, Effort, and Integrity
Every student starts with 5/10 for participation, effort, and integrity. Points will be earned (or lost) for attendance, participating in class, creating and maintaining a welcoming classroom environment, taking ownership of your own learning, helping other students learn, etc. I will keep notes on my assessments of these criteria throughout the semester. A summary will be available for both midterm and final grades.

Midterm Grade
StFX regulations states that midterm grades must reflect at least 20% of the final grade. Your midterm grade will primarily reflect Weekly Homework grades. For students who submit completed Choice Assignment(s) by October 18, those marks will be included in your midterm grade. Other students will be asked to submit a progress report for a Choice Assignment. The progress report will be due on October 18 and be worth 5%, to ensure your midterm grade make up at least 20% of your final grade.

Readings and pre-class videos

There is no textbook for this class. Readings will be provided each week on Perusall (see "Weekly Homework" under "Evaluation" below for more details). Occasionally, links to videos will be posted to Moodle. Please watch the videos before class.

Extra-Curricular Book Suggestion
The Human Brain Coloring Book by Diamond et al.

Communicating With Each Other

We will begin each class session with an opportunity to discuss any questions you may have. This is the most effective manner to deal with non-urgent questions that are likely to be of interest to the class in general.

Extra help (office) hours are also an excellent option. This year, extra help hours will take place in our Collaborate classroom. **You don't need to have a specific question related to class material to join us for extra help hours.** I am available for mentorship on a range of subjects including, but not limited to research; careers; graduate school; professional development; science outreach; scientific writing; computer science and coding; and equity, diversity, and inclusion. I may not have all the answers, but I can help find them!

I invite students to email me if they wish to contact me outside of class or extra help hours. Please use my StFX email address (emazerol@stfx.ca) and include "PSYC 421" in the subject line. In most cases, I will respond to emails within 24 hours during the work week.

There is also the option of providing anonymous feedback, which will be available on Moodle throughout the semester.

Class Recordings

Course instructors may choose to record classroom and lab activities for various reasons, such as (but not limited to) sharing with a student who is experiencing COVID-19 symptoms and needs to self-isolate, and providing recordings as study material to members of the class. In addition, students who have received prior written permission from the instructor or with an approved Accommodation Plan in place may record classes.

Whether it is instructor- or student-initiated classroom recording, it is important to protect intellectual property and maintain the privacy rights of individuals. The following list governs the use of recorded lectures by instructors and students in this class:

1. Recordings are provided to students who are unable to attend the class and are not meant to replace attendance in normal circumstances.
2. The instructor recording a class will do so using the Learning Management System approved by the university (Blackboard Collaborate).
3. The instructor may only approve the distribution of the recorded material to students who are enrolled in the course and only while the course is in progress.
4. All permitted recordings made by students are for personal academic use only. Unauthorized distribution or display of recorded lectures, in full or in part, to anyone inside or outside of the course (including other students) without additional permission from the instructor and any other presenters will be subject to disciplinary action.
5. The recorded lecture is the intellectual property of the instructor.
6. It is the instructor's responsibility to ensure that any third-party intellectual property is used in accordance with the terms of the license governing the use of such intellectual property and applicable intellectual property laws.

EXPECTATIONS FOR this class

Attendance
Do not attend class in person if you are experiencing any symptoms of illness or have been exposed to COVID-19. Please let me know (in advance if possible) if you cannot attend class. You may attend the class remotely via Collaborate, but please note that the class is not specifically designed as an online or hybrid class.

Format
Our scheduled sessions will include lectures by me, group discussions, student presentations, and hands-on activities. Outside of scheduled sessions, you will be expected to watch assigned videos, complete assigned readings, participate in Perusall, write reflections, and work on choice assignments.

Material
I strive to make the course material relevant to my students. This works best if students are thoughtful and open about their interests, career goals, etc. Learning in this course is dependent on students to take an active role in identifying topics of interest and selecting projects that are relevant to them. Students will have multiple opportunities to share their interests.

Workload
Assuming a full-time schedule, students take five classes and devote 35-40 hours per week to learning. This works out to 7-8 hours per week, per class. For PSYC 421, three hours per week are spent in class. The remaining 4-5 hours per week should be spent on readings, weekly homework, and choice assignments. I anticipate the readings and weekly homework will take 1-2 hours per week. These are naturally spread out across the semester. The remaining 2-4 hours per week should be spent on choice assignments. Note that these durations are estimates only and that all students work at their own pace depending on their backgrounds and skills. That said, if the assigned work is taking you significantly longer than the estimates above, please get in touch with me as soon as possible.

Backing Up Your Work

Except in extreme circumstances, extensions will not be granted for data loss or computer problems. It is the student's responsibility to frequently back up all their work. It is strongly recommended that you save copies of all your work in two different physical locations, so that computer failures are less likely to cause you to lose your work. You may choose to do this any way you wish. StFX students have a OneDrive license which can be used to automatically save your files to both your local computer and the cloud. Information on OneDrive can be found here. You may also consider Dropbox or Google Drive. **I have personally had two hard drives fail simultaneously – please learn from my misfortune and back up your work to the cloud.**

Students with Disabilities

If you anticipate needing accommodations in this course, please inform me. Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with the Tramble Centre for Accessible Learning, if they have not already done so. Students who suspect they may have disabilities should contact the Tramble Centre for advice and referrals. To access the Tramble Centre programs and supports, students must follow the Tramble Centre policy and procedures. Tramble Centre contact information: 108 Angus L. MacDonald Library, phone: (902) 867-5349, email: tramble@stfx.ca. The relevant website is here.

Student Success Centre

The Student Success Centre offers free help to all students wishing to improve their academic and writing skills. You can visit the Student Success Centre's website for more information or to schedule an appointment.

Other resources to support students

A list of other resources to support students has been compiled by the StFX Health and Counselling Centre: https://www.mystfx.ca/health-and-counselling/resources

StFX's Sexual Violence Prevention & Response Advocate, Heather Blackburn (hblackbu@stfx.ca) is available to anyone on campus impacted by sexual violence. She can hear confidential disclosures, provide information about reporting options, and help you connect to the right support services to meet your needs. For more information about the services and supports available for those impacted by sexualized violence, please visit:
https://www.mystfx.ca/visible-at-x/

Late Assignments and Extensions

Should a student submit work late without having requested an extension, there is a penalty of 5 percentage points per calendar day.

Extensions are available in a number of situations, including but not limited to:
1. Emergencies.
2. Requests made at least 24 hours in advance of the deadline.
3. Longer-term issues (e.g., if you are fully or partially away from your studies due to extended illness, unexpected caretaking responsibilities, etc.).

Inaccurately estimating the amount of time an assignment will take to complete is not grounds for a last-minute extension. In addition, data loss/computer problems are only grounds for an extension in extreme circumstances (see *Backing Up Your Work*).
To allow sufficient time for marking, December 13, 2021 is the last day late assignments can be submitted. Similarly, it is the latest possible deadline extension.

Example Email to Request an Extension
Subject: PSYC 394 extension for *assignment X*
Dear Erin:
I am not on track to complete *assignment X* due to *reason Y*. Would an extension until *date/time Z* be OK?
Sincerely,
Student name

CLASSROOM Laptop and Cell Phone Usage

All students are encouraged to bring their laptops to class. Please use it only for class-related activities while in class, and make sure the speakers are muted. It is preferred if you can turn off your cell phone when class starts, but if you must be available by phone at all times, please keep it on vibrate and exit the room before taking your call.

EMail

You are expected to maintain a working StFX email account; please check that account at least once per work day. Important notices are sent to these email addresses.

University Policy on Academic Integrity

StFX values academic integrity. Therefore, all students must understand the meaning and consequences of such academic offences as plagiarism, cheating, tampering, and falsification under Section 3.8 of the Academic Calendar. The complete university policy and procedures document is available for viewing or downloading here.

University Policy on Equitable Learning Environment

Everyone learns more effectively in a respectful, safe, and equitable learning environment, free from discrimination and harassment. I invite you to work with me to create a classroom space that fosters and promotes values of human dignity, equity, non-discrimination, and respect for diversity. Please feel free to talk with me about your questions or concerns about equity in our classroom or in the StFX community in general. If I cannot answer your questions or help you address your concerns, I encourage you to talk to the Chair of the Department or the Human Rights and Equity Advisor. The Human Rights and Equity Advisor is Megan Fogarty (mfogarty@stfx.ca, 902-867-5306).

Possible Contingencies

Given the dynamic nature of the COVID-19 pandemic, it is possible that major changes to this course may have to be implemented at any time, including moving the course online if required. Should any changes be needed, they will be communicated in class (if possible) and on Moodle. Any such changes will be made with a commitment to meeting learning objectives, maintaining education quality, and ensuring fair and equitable treatment of our PSYC 421 community. I greatly appreciate your flexibility and welcome your feedback regarding any changes we need to make.

Drop date

Students may drop a course, online in Banner, on or before the relevant deadline. See the calendar of events in the StFX Academic Calendar for the drop-date.

Acknowledgements

Thank you to Drs. Erin Austen, Lindsay Berrigan, Karen Blair, and Donna Trembinski for sharing their syllabi with me.

Course Materials License Information

With the exception of class recordings, **which are not intended to be distributed**, all PSYC 421 course materials created by me (Erin Mazerolle) are distributed in accordance with the Attribution-NonCommercial-ShareAlike Creative Commons license. Third-party copyrighted materials (such as book chapters, journal articles, music, videos, etc.) have either been licensed for use in this course or fall under an exception or limitation in Canadian Copyright law.

If you are struggling in the class for any reason or if you face a family or personal crisis and require accommodation, please contact me. I am always willing to find ways to support your successful completion of the class.