Faculty of Health
Department of Psychology
PSYC 4080 6.0 A: NEUROPSYCHOLOGY OF ABNORMAL BEHAVIOUR
Wednesday/8:30-11:20am/DB 0009
Fall & Winter 2022-2023

This course will be delivered in-person during the scheduled course hours. Please note, classes may be moved online on short notice if required due to emergent illness or public health restrictions.

Instructor Information
Instructor: Kristina Gicas, Ph.D., C.Psych.
Email: kgicas@yorku.ca
Office Hours: Available by appointment, upon request. Office hours can be used to clarify course-related questions, connect on ideas, ask questions about graduate school, find support for managing the course, and/or request links to other university resources.

Course Prerequisite(s): Course prerequisites are strictly enforced

- HH/PSYC 1010 6.00 (Introduction to Psychology), with a minimum grade of C.
- HH/PSYC 2021 3.00 (Statistical Methods I) or HH/PSYC 2020 6.00 (Statistical Methods I and II)
- HH/PSYC 2030 3.00 (Introduction to Research Methods) or substitutes
- HH/PSYC 2240 3.00 (Biological Basis of Behaviour)
- HH/PSYC 3140 3.00 (Abnormal Psychology)
- Students must be in an Honours program in Psychology and have completed at least 84 credits

Course Credit Exclusions
Please refer to York Courses Website for a listing of any course credit exclusions.

Course website: eClass
All course materials will be available on the course eClass site, unless otherwise indicated by the instructor. The site will be your central access point for course materials.

Course Description
This is a seminar-style course that provides an advanced introduction to the study of brain-behaviour relationships. The overarching objective of this course is to provide students with a survey of major clinical neuropsychological disorders that impact attention, memory, language, executive functions, processing speed, visual-spatial abilities, and motor functions. Students can expect to learn: i) how disrupted neuroanatomy and neurophysiology relate to specific patterns of cognitive, emotional, and other behavioural features; ii) basic approaches and issues related to evaluation of various neuropsychological disorders; iii) neuropsychological approaches to treatment of major disorders; iv) current issues and trends in the broader field of clinical neuropsychology; and v) multicultural and diversity-related considerations in clinical

neuropsychology. Readings for this course will be drawn from various sources and combine classical neuropsychological theories with cutting-edge research in clinical neuroscience.

Program Learning Outcomes
Upon completion of this course, students should be able to:

1. Demonstrate in-depth knowledge in the neuropsychology of abnormal behaviour.
2. Critically evaluate, synthesize and resolve conflicting results in neuropsychology of abnormal behaviour.
3. Articulate trends in neuropsychology of abnormal behaviour.
4. Locate research articles and show critical thinking about research findings in neuropsychology of abnormal behaviour.
5. Express knowledge of neuropsychology of abnormal behaviour in written form.
6. Engage in evidence-based dialogue with course director and peers.
7. Demonstrate an ability to work with others.

Specific Learning Objectives

1. Critically evaluate and discuss brain-behaviour issues from a diversity-centred approach.

Commitment to Intersectionality
The course instructor acknowledges that every individual represents multiple sociocultural identities, driven by systems of privilege and oppression, that intersect to uniquely shape one's world view. The instructor is committed to creating a safe, respectful, and inclusive learning environment that seeks to minimize systemic forces of oppression, including but not limited to classism, racism, ableism, and transphobia. All individuals participating in this course are invited to join in this commitment to help foster mutual respect within a diversity-oriented learning community.

Required Text
All assigned readings will be available online through the York University library or as PDFs posted in eClass. Assigned readings will be supplemented with videos, internet resources, podcasts and/or discussions as deemed relevant by the instructor. It is recommended that you download an electronic version of the following textbooks as there will be several chapters assigned from these books and it can be additionally used as supplementary resource (optional readings from this text are indicated on the *Course Schedule* below.

- *The Little Black Book of Neuropsychology: A Syndrome-Based Approach* (2011). M. R. Schoenberg & J. G. Scott.
- *Writing in Psychology.* (2014). S. A. Miller.

Course Requirements and Assessment

Assessment	Date of Evaluation (if known)	Weighting
Attendance & participation	September 14th – April 5th	15%
Neuroanatomy and methodology exam	October 5th	20%
Critical reflections	September 28th – February 8th	14%
Grant proposal topic confirmation	February 8th	1%
Grant proposal presentation	March 8th – 22nd	20%
Written grant proposal	April 5th	30%
Total		**100%**

Description of Assignments

Attendance and participation (15%). Due to the heavy discussion-based component of this course, attendance at all scheduled classes is mandatory. Absences will only be excused in the case of extenuating circumstances with appropriate documentation. Students are expected to compe to class prepared to pose thoughtful questions, and actively engage in discussions and in-class activities each week. The grade will be based on attendance in class AND the general quality of contributions. ***Purpose:*** To become co-creators of new knowledge through active participation in evidence-based dialogue with peers and the instructor.

Neuroanatomy and methodology exam (20%). Students will be tested on neuroanatomy and methods in neuropsychology based on course content covered in Weeks 2-4. Students should use content from slides, assigned readings, and class discussions to prepare for the exam. The exam will take place during scheduled class time and will be closed-book. The format will be multiple choice and short answer questions. ***Purpose:*** To demonstrate foundational knowledge in (1) structural neuroanatomy and (2) the clinical and research methods used to assess neuroanatomical structure and function.

Critical reflections (7 in total; 14%). Students will be required to critically appraise and reflect upon the assigned reading and respond to a given set of questions posted on eClass a week prior. Students must post their responses in the weekly discussion forum on eClass no later than 9pm on the Tuesday evening prior to class. Reflections will be evaluated on the basis of completeness, thoughtfulness, and degree of critical analysis (scored 0-2). Students are strongly encouraged to post their responses early and review the responses by their peers prior to coming to class. Students should use their critical reflections as a way to prepare to actively engage in class discussions and activities. There will be a total of 12 critical reflections assigned throughout the year (see Course Schedule below) and students must complete 7 of 12 critical reflections (worth 2% each) to fulfill requirements for this component of the course. Students may complete any 7 critical reflections of their choosing. If more than 7 reflections are completed, only the 7 most recent reflections will be graded. ***Purpose:*** To develop critical thinking skills as it applies to evaluating scientific literature and to stimulate class discussions.

Written grant proposal (30%). Students will work in pairs to conceptualize a research proposal that addresses a question about brain-behaviour relationships related to one of the neurocognitive disorders covered in class (or another related topic approved by the instructor). The research topic and question must be approved by the instructor in advance of drafting the proposal (no later than February 8th, worth 1% of overall grade). The research proposal will follow the format of a typical funding application that students would submit at the graduate level, including a background section to support the research question, a clear hypothesis, a methods section, and anticipated outcomes. Students will be provided with details on how to structure the proposal in early January. NOTE: students in each pair will receive the same grade for this assignment and therefore are expected to work collaboratively and contribute equally to the final assignment. ***Purpose:*** To develop basic research design knowledge in neuropsychology, including conceptual and methodological approaches; to demonstrate ability to effectively communicate neuropsychological knowledge in written form; and to gain experience working in a collaborative role with peers.

Grant proposal presentation (20%). Students paired up for the grant proposal will work together to create a powerpoint presentation that communicates their general proposal idea and study design. Student pairs will have 20 minutes total to co-present. An additional 10 minutes will be reserved for feedback and discussion from peers, and students are expected to use the feedback they receive from their peers to refine their proposal. Students will be marked on the clarity and organization of their presentation, as well as their ability to orally communicate their ideas in a concise yet engaging way that is accessible to general scientific audience. Students who are observing presentations are expected to be engaged and actively participate in providing peer feedback. In early January, students will sign up for presentation time slots scheduled in March. NOTE: students in each pair will receive the same grade for this assignment and therefore are expected to work collaboratively and contribute equally to the final assignment. ***Purpose:*** To demonstrate ability to effectively communicate neuropsychological concepts to a general scientific audience in oral form.

Grant proposal topic confirmation (1%). Each student pair must seek approval from the course instructor for the topic and research question(s) that they are pursuing for their grant proposal. Students must e-mail the course instructor with their topic and questions no later February 8th by the end of the day in order to receive the 1% credit. Students who do not meet this deadlines are still expected to seek approval for their topic before proceeding with their presentation. ***Purpose:*** To motivate students to develop their topic and research questions early so they have time to develop their study design; to ensure that there is no substantial overlap with the proposals of other students.

Class Format and Attendance Policy

Weekly attendance is mandatory. All students are expected to attend lectures and actively participate in course activities and group discussions during specified course hours (Wednesdays 8:30am-11:20am EST). Attendance will be documented at each class. Absences

will be excused based on extenuating circumstances with appropriate documentation. Classes will not be recorded, but powerpoint slides from the seminar will be posted after class.

Grading as per Senate Policy

The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests* will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 89, B+ = 75 to 79, etc.)

For a full description of York grading system see the York University Undergraduate Calendar –

Grading Scheme for 2022-23

Missed Tests/Midterm Exams/Late Assignment

For any missed quiz or late assignment, students MUST do the following two tasks within 48 hours of the original deadline or it will result in a grade of zero for the missed quiz or late assignment.

1. Complete the following online form which will be received and reviewed in the Psychology undergraduate office. At this time, due to COVID-19 an Attending Physician's Statement (APS) is not required, however, a reason for missing an evaluated component in the course must be provided. HH PSYC: Missed Tests/Exams Form
2. Promptly notify the course instructor of a missed quiz or late assignment and arrange for an alternative date to complete the work if they wish to receive marks for those course components. The date will be mutually agreed upon by the course instructor and student. Make-up quizzes will be in the same format as the original quiz with entirely alternate content. Late assignments without a legitimate reason for missing the deadline will be subject to a late penalty of 10% per day from the original deadline (or from an agreed upon alternative deadline, if applicable).

Examples of legitimate reasons for missing a quiz or assignment deadline may include physical or mental illness that emerged suddenly or unexpectedly and is severe enough to prevent a student from attending the seminar, or a family emergency that prevents attendance. This does not cover all possible legitimate scenarios. Reasons for missed quizzes or deadlines will be evaluated on a case-by-case basis.

Students are strongly encouraged to contact the instructor in advance if they forsee any barriers to, or have concerns about, completing the required course components.

Add/Drop Deadlines

For a list of all important dates please refer to: Fall/Winter 2022-23 Important Dates

	Fall (Term F)	Year (Term Y)	Winter (Term W)
Last date to add a course **without permission** of instructor (also see Financial Deadlines)	Sept. 20	Sept. 20	Jan. 22
Last date to add a course **with permission** of instructor (also see Financial Deadlines)	Oct. 4	Oct. 25	Feb. 6
Drop deadline: Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 11	Feb. 10	Mar. 17
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	Nov. 12 - Dec. 7	Feb. 11 - April 11	March 18 - April 11
Course Withdrawal Period (withdraw from a course and receive a grade of "W" on transcript – see note below)	Nov. 13 - Dec. 7	Feb. 12 - April 10	March 19 - April 10

Add and Drop Deadline Information

There are deadlines for adding and dropping courses, both academic and financial. Since, for the most part, the dates are **different**, be sure to read the information carefully so that you understand the differences between the sessional dates below and the Refund Tables.

You are strongly advised to pay close attention to the "Last date to enrol without permission of course instructor" deadlines. These deadlines represent the last date students have unrestricted access to the registration and enrolment system.

After that date, you must contact the professor/department offering the course to arrange permission.

You can drop courses using the registration and enrolment system up until the last date to drop a course without receiving a grade (drop deadline).

You may withdraw from a course using the registration and enrolment system after the drop deadline until the last day of class for the term associated with the course. When you withdraw from a course, the course remains on your transcript without a grade and is notated as 'W'. The withdrawal will not affect your grade point average or count towards the credits required for your degree.

Electronic Device Policy

Electronic devices (e.g., tablets, laptops) are permitted during class time for course-related purposes only. Electronic mobile devices of any kind are not allowed during a test or examination. Students are required to turn off and secure any electronic mobile device in their bag which is to be placed under the chair while a test/exam is in progress. Any student observed with an electronic device during a test/exam may be reported to the Undergraduate Office for a potential breach of Academic Honesty.

Academic Integrity for Students

York University takes academic integrity very seriously; please familiarize yourself with Information about the Senate Policy on Academic Honesty.

It is recommended that you review Academic Integrity by completing the Academic Integrity Tutorial and Academic Honesty Quiz

Test Banks

The offering for sale of, buying of, and attempting to sell or buy test banks (banks of test questions and/or answers), or any course specific test questions/answers is not permitted in the Faculty of Health. Any student found to be doing this may be considered to have breached the Senate Policy on Academic Honesty. In particular, buying and attempting to sell banks of test questions and/or answers may be considered as "Cheating in an attempt to gain an improper advantage in an academic evaluation" (article 2.1.1 from the Senate Policy) and/or "encouraging, enabling or causing others" (article 2.1.10 from the Senate Policy) to cheat.

Academic Accommodation for Students with Disabilities

While all individuals are expected to satisfy the requirements of their program of study and to aspire to do so at a level of excellence, the university recognizes that persons with disabilities may require reasonable accommodation to enable them to do so. The university encourages students with disabilities to register with Student Accessibility Services (SAS) to discuss their accommodation needs as early as possible in the term to establish the recommended academic accommodations that will be communicated to Course Directors as necessary. Please let me know as early as possible in the term if you anticipate requiring academic accommodation so that we can discuss how to consider your accommodation needs within the context of this course.

https://accessibility.students.yorku.ca/

Excerpt from Senate Policy on Academic Accommodation for Students with Disabilities

1. Pursuant to its commitment to sustaining an inclusive, equitable community in which all members are treated with respect and dignity, and consistent with applicable accessibility legislation, York University shall make reasonable and appropriate accommodations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs. This policy aims to eliminate systemic barriers to participation in academic activities by students with disabilities.

All students are expected to satisfy the essential learning outcomes of courses. Accommodations shall be consistent with, support and preserve the academic integrity of the curriculum and the academic standards of courses and programs. For further information please refer to: York University Academic Accommodation for Students with Disabilities Policy.

Course Materials Copyright Information

Course Schedule

This schedule is a tentative guideline and is subject to change by the instructor. Students are expected to complete assigned readings BEFORE the material is covered in class.

	Fall Semester	
Week/Date	**Topic(s)**	**Required Readings**
Week 1/ Sept 7th	• Course overview • Introduction to clinical neuropsychology	None.
Week 2/ Sept 14th	• Neuroanatomy Tutorial Part I • Neuroimaging	Bigler, E. (2015). Structural Image Analysis of the Brain in Neuropsychology Using Magnetic Resonance Imaging Techniques. *Neuropsychology Review,* 25, 224-249. OPTIONAL: Ch. 3 Little Black Book
Week 3/Sept 21st	• Neuroanatomy Tutorial Part II • Basic clinical assessment approaches	Casaletto, K. & Heaton, R. (2017). Neuropsychological Assessment: Past and Future. *JINS,* 23, 778-790.
Week 4/Sept 28th	***Critical reflection #1 due*** • Neuroanatomy review • Neurodevelopmental disorders and neurodiversity	Antshel, K. M. & Russo, N. (2019). Autism spectrum disorders and ADHD: Overlapping phenomenology, diagnostic issues, and treatment considerations. *Current Psychiatry Reports, 21*: 34. Sonuga-Barke, E. & Thapa, A. (2021). The neurodiversity concept: is it helpful for clinicians and scientists? *Lancet Psychiatry, 8,* 559-561.
Week 5/Oct 5th	***Neuroanatomy and methodology exam*** • Class activity	
Week 6/Oct 12th	****Reading Week – No Class****	
Week 7/Oct 19th	***Critical reflection #2 due*** • Epilepsy	Stafstrom, C. E. & Carmant, L. (2015). Seizures and epilepsy: an overview for neuroscientists. *Cold Spring Harbor Perspectives in Medicine, 5*, a022426. OPTIONAL: Ch. 20 Little Black Book

Week 8/Oct 26th	***Critical reflection #3 due*** • Psychotic disorders	Davis, J. et al. (2016). A review of vulnerability and risks for schizophrenia: beyond the two hit hypothesis. *Neuroscience and Biobehavioural Reviews, 65,* 185-194.
Week 9/Nov 2nd	***Critical reflection #4 due*** • Traumatic brain injury	Silverberg et al. (2011). Etiology of the post-concussion syndrome: physiogenesis and psychogensesis revisited. NeuroRehabilitation, 29, 317-329. OPTIONAL: Ch. 21-25 Little Black Book
Week 10/Nov 9th	***Critical reflection #5 due*** • Stroke and cerebrovascular disease	Telgte, A. ter et al. (2018). Cerebral small vessel disease: from a focal to a global perspective. *Nature Reviews Neurology, 14*(7), 387-398. OPTIONAL: Ch. 13 Little Black Book
Week 11/Nov 16th	***Critical reflection #6 due*** • Guest Lecture by Tracy Fabri, M.A.: Paediatric multiple sclerosis	Ch. 20 Little Black Book
Week 12/ Nov 23rd	***Critical reflection #7 due*** • Parkinson's disease and Lewy body disease	Aldridge, G. M. et al. (2018). Parkinson's disease dementia and dementia with lewy bodies have similar neuropsychological profiles. *Frontiers in Neurology, 9*: 123. OPTIONAL: Ch. 19 Little Black Book
Week 13/Nov 30th	***Critical reflection #8 due*** • Cognitive aging	Stern, Y. (2009). Cognitive reserve. *Neuropsychologia, 47*(10), 2015-2028.
	Winter 2023 Semester	
Week 1/Jan 11th	• Re-orientation to course • Developing a research question and proposal • Librarian presentation	Ch.7 APA Handbook. Developing testable and important research questions (chapter posted in eClass) Miller, S. A. Writing in Psychology. • Ch. 6: Deciding on a Research Topic (pgs. 71-78)
Week 2/Jan 18th	***Critical reflection #9 due*** • Dementia	Kapasi, A. et al. (2017). Impact of multiple pathologies on the threshold for clinically overt dementia. *Acta Neuropathologica, 134,* 171-186. OPTIONAL: Ch. 14 Little Black Book

Week 3/Jan 25th	***Critical reflection #10 due*** • Neuropsychology of everyday functioning • Select topic for co-created seminar	Morgan, E. & Heaton, R. (2009). Neuropsychology in Relation to Everyday Functioning. *In Neuropsychological Assessment of Neuropsychiatric and Neuromedical Disorders.* (chapter posted in eClass)
Week 4/Feb 1st	***Critical reflection #11 due*** • Special topic: The neuropsychology of homelessness	Gicas, K. et al. (2017). Structural brain markers as differentially associated with neurocognitive profiles in socially marginalized people with multimorbid illness. *Neuropsychology*, *31*(1), 28-43.
Week 5/Feb 8th	***Critical reflection #12 due*** ***Last day to confirm grant proposal topic/question*** • Interventions in neuropsychology • Select reading for co-created seminar	Kivipelto et al. (2018). Lifestyle interventions to prevent cognitive impairment, dementia, and Alzheimer disease. *Nature Reviews Neurology, 14*, 653-666.
Week 6/Feb 15th	• Co-created seminar: topic TBD	TBD
Week 7/Feb 22nd	****Reading Week – No Class****	
Week 8/Mar 1st	• Intro to grant writing • Discussion of sample grants	Miller, S. A. *Writing in Psychology*. • Ch 2: Some General Advice About How to Write (pgs. 7-25) • Ch 6: Writing the Proposal (pgs. 78-82)
Week 9/Mar 8th	***Presentations*** 1. 4. 2. 5. 3.	None.
Week 10/Mar 15th	***Presentations*** 1. 4. 2. 5. 3.	None.
Week 11/Mar 22nd	***Presentations*** 1. 4. 2. 5. 3.	None.
Week 12/Mar 29th	• Class time reserved for grant writing • Open question/discussion period	None.

Week 13/Apr 5th	***Grant proposal due*** • Course wrap-up • Current trends in neuropsychology	None.

Updated: August 23, 2022