

Faculty of Health
Department of Psychology
PSYC 4080 Section B (W 8 30 – 11 30) VC 119
NEUROPSYCHOLOGY OF ABNORMAL BEHAVIOUR
FW 2018-19

Instructor and T.A. Information

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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 (excluding (EDUC) education courses)

Course website: [Moodle https://moodle.yorku.ca/moodle/course/](https://moodle.yorku.ca/moodle/course/)

Course Description

This course is designed to develop an appreciation of research and clinical issues in human neuropsychology with special reference to psychiatric and neurological disorders. I have structured the course in such a way that I carry the primary responsibility for instruction during the first term. In the second term students will work more independently and with my guidance to develop and present a formal research proposal. This proposal will be based on the student's interests and chosen from a list and/or in consultation with the instructor. Most students find the experience rewarding and challenging.

During the first term I will provide a half-course on schizophrenia, my principal research interest. I will cover aspects of neuropsychology, psychophysiology, and neuroscience along with information that is specific to understanding schizophrenia. This disorder is the most severe form of mental illness and represents a major scientific and clinical challenge to psychology, psychiatry, and neuroscience. It is also a misunderstood illness, something that I hope the course will help to correct. In the winter term students are free to explore the wide range of clinical neuroscience in research proposals and are not restricted to the study of schizophrenia. Proposals will be written in the form of research grant funding applications designed to advance understanding, diagnosis and/or treatment of behavioural brain disorders. A glance at the topic list that follows will give an additional idea of the scope and potential content of these proposals.

Previous/Potential Research Proposals

Research proposals must include both behavioural and neurobiological content and measures. Here are some content areas and topics that students have chosen for their papers/proposals in the past:

aphasia, apraxia, agnosia, acalculia, alexia and remedial reading, dementia, dysexecutive syndrome, amnesia, neglect, anosagnosia, emotion, ADHD, synesthesia, neuroimaging, medication frontiers, effectiveness of music therapy for autism, alien hand syndrome, relative effectiveness of behaviour therapy and medication in bipolar disorder, violence and criminality, addictions, motor disorders, multiple sclerosis, Parkinsonism, cerebrovascular disorders, head injury, prevention of Alzheimer's disease, animal models of psychopathology, deep brain stimulation, testing issues, cognitive rehabilitation, speech therapy, cognitive reserve, prevention of concussion, effects of physical exercise on mental disorder, brain measures of empathy and social isolation and many more topics .

Program Learning Outcomes

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

1. Demonstrate knowledge of relations between brain and behaviour disorders.
2. Critically evaluate and synthesize research and clinical issues in brain and behaviour.
3. Articulate trends in neuropsychology and biological psychiatry.
4. Locate research articles and show critical thinking about research findings in the field of brain and abnormal behaviour.
5. Communicate knowledge of brain science and abnormal behaviour in oral and written form.
6. Engage in evidence-based dialogue with course director and peers.

Specific Learning Objectives

1. understand the current state of schizophrenia science, diagnosis and treatment
2. appreciate critically several neuroscience-related perspectives on serious mental illness and behavioural disorders
3. formulate a feasible research idea in terms of granting agency requirements
describe and communicate research ideas in oral and written formats
4. use and provide constructive feedback from and to peers

Notes on Required Text

- Readings indicated on Moodle website with links to library sources

Course Requirements and Assessment:

Assessment	Date of Evaluation (if known)	Weighting
Term test	November 27, 2019	20%
Proposal sketch	January 6, 2020	5%
Oral presentations	February-March, 2020	20%
Proposal write-up	April 6, 2020	40%
Participation	September-April	15%
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Total		100%

Description of Assignments

The term test is a 100 question multiple choice evaluation of the first term material. The proposal sketch is a brief description of a research idea along with short bibliography or literature search record. The oral presentation is a scheduled 30 minute talk to the class describing the proposed research project. The purpose of this presentation is to communicate and receive feedback from other students and instructor to assist the write-up. The formal write-up is the major assignment and follows guidelines provided by the instructor. Participation includes general attendance and feedback to peers during presentations as well as demonstrated engagement with the course material.

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 90, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - <http://calendars.students.yorku.ca/2018-2019/academic-and-financial-information/academic-services/grades-and-grading-schemes>)

Important New Information Regarding Missed Tests

For any missed tests or late assignments, students MUST complete the following online form which will be received and reviewed in the Psychology undergraduate office.

[HH PSYC: Missed Tests/Exams Form](#). Failure to complete the form within 48 hours of the original deadline will result in a grade of zero for the test/assignment.

Add/Drop Deadlines

For a list of all important dates please refer to: [Important Dates](#)

Important dates	Fall (F)	Year (Y)	Winter (W)
Last date to add a course without permission of instructor (also see Financial Deadlines)	Sept. 17	Sept. 17	Jan. 19
Last date to add a course with permission of instructor (also see Financial Deadlines)	Oct. 1	Oct. 22	Feb. 3
Last date to drop a course without receiving a grade (also see Financial Deadlines)	Nov. 8	Feb. 3	March 13
Course Withdrawal Period (withdraw from a course and receive a "W" on the transcript – see note below)	Nov. 9 - Dec. 3	Feb. 4 - Apr. 5	March 14 - Apr. 5

Information on Plagiarism Detection

Students are not required to submit written work to a text-matching software service, but may be required to prove authenticity through alternative methods including submission of multiple drafts, annotated bibliographies, copies of source documents, or by responding to oral or written questions directed at the originality of the submitted work.

Electronic Device Policy

Laptops open to the course Moodle website will be permitted.

Attendance Policy

Weekly attendance will be recorded and contribute to the participation component of the course grade. Attendance during student oral presentations in February-March will be given greater weighting than other class dates. Attending for part of a class will result in lower weighting for participation unless prior approval of course instructor obtained.

Academic Integrity for Students

York University takes academic integrity very seriously, please visit [an overview of Academic Integrity at York University](#) from the Office of the Vice-President Academic.

The following links will assist you in gaining a better understanding of academic integrity and point you to resources at York that can help you improve your writing and research skills:

- [Information about the Senate Policy on Academic Honesty](#)
- [Online Tutorial on Academic Integrity](#)
- [Information for Students on Text-Matching Software: Turnitin.com](#)
- [Beware! Says who? A pamphlet on how to avoid plagiarism](#)
- [Resources for students to help improve their writing and research skill](#)

Test Banks:

The use of test banks is not permitted in this course and may be considered a potential breach of academic honesty. This includes but is not limited to; buying or selling test banks.

Electronic Devices During a Test/Examination:

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 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 [York University Accessibility Hub](#) is your online stop for accessibility on campus. The [Accessibility Hub](#) provides tools, assistance and resources. Policy Statement

Policy: York University shall make reasonable and appropriate accommodations and adaptations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses.

Provided that students have given sufficient notice about their accommodation needs, instructors shall take reasonable steps to accommodate these needs in a manner consistent with the guidelines established hereunder.

For Further Information please refer to: [York university academic accommodation for students with disabilities policy](#)

Course Materials Copyright Information

These course materials are designed for use as part of the PSYC4080 6.0B course at York University and are the property of the instructor unless otherwise stated. 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.

Copying this material for distribution (e.g. uploading material to a commercial third-party website) may lead to a violation of Copyright law. [Intellectual Property Rights Statement.](#)

Course Schedule

September 4: **Orientation to course;** introduction to schizophrenia; clinical description; research issues. Reading: NIMH booklet on schizophrenia.

September 11: **Symptoms and cognition I.** Reading: Heinrichs, R. W. (2001). The Nature of Symptoms. Reading: Ch. 2 *In Search of Madness: Schizophrenia and Neuroscience*. New York: Oxford, pp. 21-53.

September 18: **Symptoms and cognition II.** Reading: Moritz, S. et al. (2014). Sowing the seeds of doubt: a narrative review on meta-cognitive training in schizophrenia. *Clinical Psychology Review*, 34, 358-366.

September 25: **Genetic and developmental perspectives.** Glatt, S. J. (2008). Chapter 6: Genetics. *Clinical Handbook of Schizophrenia*, K. T. Meuser & D. Jeste (eds.), pp. 55-64. New York: Guilford. McDonald, P. P. & Singh S. M. (2011). Chapter 9: Schizophrenia has high heritability, but where are the genes? *Handbook of schizophrenia spectrum disorders, Volume 1. Conceptual issues and neurobiological advances.* (M. S. Ritsner, ed.), Pp. 219-236. New York: Springer.

October 2: **Markers and endophenotypes.** Reading: Allen, A. J. et al. (2009). Endophenotypes in schizophrenia: a selective review. *Schizophrenia Research*, 109 24-37.

October 9: **Frontal system brain structure and function.** Reading: Ogden, J. (2005). *Fractured Minds: A case study approach to clinical neuropsychology*, 2nd edition. (Chapter 9: The impaired executive: a case of frontal lobe dysfunction). New York: Oxford. Jacobsen, S. & Marcus, E.M. (2011). *Neuroanatomy for the Neuroscientist* (Chapter 10: Cerebral cortex functional localization), New York: Springer.

October 16: **No class** (Fall Reading Week)

October 23: **Temporal lobe system structure and function.** Reading: Ogden, J. (2005). *Fractured Minds: A case study approach to clinical neuropsychology*, 2nd edition. (Chapters 3: Marooned in the Moment: H.M., A Case of Global Amnesia; and 5: The Breakdown of Language: Case Studies of Aphasia. New York: Oxford.

October 30: **Neurochemistry and medication.** Reading: Williamson, P. (2005). Chapter 4: Clues from drugs that affect dopamine, glutamate and other neurotransmitters. *Mind, brain and schizophrenia.* New York: Oxford.

November 6: **Theories.** Readings: Heinrichs, R. W. (2001) Chapter 8: Flights of theory. *In Search of Madness*, pp. 216-247. New York: Oxford.

November 13: **Synthesis.** Readings: Heinrichs, R. W. (2001) Chapter 9: The end of the beginning, *In Search of Madness*, pp. 248-276. New York: Oxford. Sullivan, P.F. (2012). Schizophrenia as a pathway disease. *Nature Medicine*, 18, 210-211. Tost, H. & Meyer-Lindenberg, A. (2012). Schizophrenia, social environment and the brain. *Nature Medicine*, 18, 211-213.

November 20: **Review and term/test preparation**

November 27: **Term test**

HOLIDAY BREAK

January 8: **Orientation to second term;** proposal sketch due; discussion of proposal

ideas. Schedule of student presentations

January 15: Return of proposals. Discussion of “**Background**” section of final research/paper proposal. Individual consultation.

January 22: Discussion of “**Hypotheses-Research Questions**” section of paper. Individual consultation.

January 29: Discussion of “**Methods**” section of research paper/proposal. Individual consultation.

February 5: Discussion of “**Originality**” section of research paper/proposal. Individual consultation.

February 12: **Student presentations.** First date to hand in paper drafts for feedback.

February 19: **(Reading Week, no class)**

February 26: **Student presentations.** Hand in paper drafts for feedback.

March 4: **Student presentations.** Hand in paper drafts for feedback.

March 11: **Student presentations.** Hand in paper drafts for feedback.

March 18: **Student presentations.** Hand in paper drafts for feedback.

March 25: **Student presentations.** Last day to hand in paper drafts for feedback.

April 1: **Student presentations,** last class (**April 6: Formal research proposal submission date**)