



UNIVERSITY OF
TORONTO
SCARBOROUGH

DEPARTMENT OF PSYCHOLOGY



Clinical Neuropsychology

PSYC32H3

Lecture: Thursdays 3-5 PM, AA 112

Lab: Thursday 5-6, **ROOM**

Professor Konstantine K. Zakzanis

Teaching Assistants:

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Brief Description of Clinical Neuropsychology

Neuropsychology is the research discipline that seeks to understand brain and behavior relationships through the study of both healthy and damaged central nervous systems. It seeks to identify the biological substrates of behaviors, from creative genius to mental illness, which account for intellectual processes as well as personality.

Clinical Neuropsychology is an *applied science* that is concerned with the behavioural expression of brain dysfunction (Lezak et al., 2004). The clinical neuropsychologist uses standardized tests to tie the biological and behavioral aspects together. Inferences are made on the basis of accumulated research. Overall, the clinical neuropsychologist interprets every aspect of the examination (both quantitative and qualitative components) to ascertain the relative cognitive strengths and weaknesses that a patient with suspected or known neuropathology. Findings from a neuropsychological examination can be used to make diagnoses, inform rehabilitation strategies, and direct various aspects of patient care.

In this course we will comprehensively explore the science and practice of clinical neuropsychology.

Important Notes

- A. All course related inquiries are to be directed to the Teaching Assistant course E-Mail addresses as provided on the first page.
- B. Every enrolled student must ensure that they have access to the course website via the UTSC Quercus. All course related content will be posted here (e.g., lecture slides, important announcements, and midterm grades).
- C. All students need to ensure that they have the necessary prerequisites for this course. If this course is taken without having completed the prerequisites, the registrar will not allow you credit for this course at the time of graduation. This can jeopardize the completion of your degree.
- D. The prerequisites are Psychological Research Methods (PSYB01H), Abnormal Psychology (now titled Introduction to Clinical Psychology; PSYB32H), Human Brain & Behaviour (PSYB65H), and any of the following statistics courses: PSYB07H, SOCB06H, STAB22H. The only exclusion for this course is PSYC32H, which is reserved for co-op students in the Co-op Behavioural Disorders Stream.
- E. If a lecture is cancelled because of an unforeseen circumstance (e.g., snow-storm cancellation, unexpected illness), students are still responsible for the material that was to be presented in the lecture that day. I will do what I can to cover the missed material the following week as time permits.
- F. If a student is absent from a midterm examination due to illness or other extenuating circumstance, they must follow the protocol outlined in the syllabus for missed term work (see last page).

- G. Make-up midterm examination details will be listed on Quercus.
- H. For all examinations, you must bring your UTSC student ID cards. You are also encouraged to bring a pencil and eraser to allow for making answer changes.
- I. Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services as soon as possible. AccessAbility Services staff (located in Rm SW302, Science Wing) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email ability@utsc.utoronto.ca. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.
- J. For reasons of privacy as well as protection of copyright, unauthorized video or audio recording in classrooms is prohibited. This is outlined in the Provost's guidelines on *Appropriate Use of Information and Communication Technology*. Note, however, that these guidelines include the provision that students may obtain consent to record lectures and, "in the case of private use by students with disabilities, the instructor's consent must not be unreasonably withheld."
- K. Grade Scales and Meaning of Grades

| NUMERICAL MARKS | LETTER GRADE | GRADE POINT VALUE |
|-----------------|--------------|-------------------|
| 90 - 100% | A+ | 4.0 |
| 85 - 89% | A | 4.0 |
| 80 - 84% | A- | 3.7 |
| 77 - 79% | B+ | 3.3 |
| 73 - 76% | B | 3.0 |
| 70 - 72% | B- | 2.7 |
| 67 - 69% | C+ | 2.3 |
| 63 - 66% | C | 2.0 |
| 60 - 62% | C- | 1.7 |
| 57 - 59% | D+ | 1.3 |
| 53 - 56% | D | 1.0 |
| 50 - 52% | D- | 0.7 |
| 0 - 49% | F | 0.0 |

L. Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's *Code of Behaviour on Academic Matters* (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

- Using or possessing unauthorized aids.
- Looking at someone else's answers during an exam or test.
- Misrepresenting your identity.

In academic work:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see <http://www.utoronto.ca/academicintegrity/>).

Lastly, you may see advertisements for services offering grammar help, essay editing and proof-reading. Be very careful. If these services take a draft of your work and significantly change the content and/or language, you may be committing an academic offence (unauthorized assistance) under the *Code of Behaviour on Academic Matters*. It is much better and safer to take your draft to the Writing Centre as early as you can. They will give you guidance you can trust. Students for whom English is not their first language should go to the English Language Development Centre. If you decide to use these services in spite of this caution, you must keep a draft of your work and any notes you made before you got help and be prepared to give it to your instructor on request.

Readings

Lezak, M.D., Howieson, D.B., & Bigler, E. D., & Tranel, D. (2012). *Neuropsychological Assessment* (5th Edition). New York: Oxford University Press.

Strauss, E., Sherman, E., & Spreen, O. (2006). *A compendium of neuropsychological tests: Administration, norms, and commentary* (3rd Edition). Oxford University Press.

Mitrushina, M., Boone, K.B., Razani, J., & D'Elia, L.F., (2005). *Handbook of Normative Data for Neuropsychological Assessment.*, 2nd edition. NY: Oxford University Press.

** Pertinent pages from Strauss et al. (2006) and Mitrushina et al., (2005) will be provided on QUERCUS.*

Grading Scheme

Your grade will be determined by three examinations, one paper assignment, and the laboratory component.

All written exams are multiple-choice in format.

1st Midterm

Administered in-class (February 7)
Will consist of 60 multiple-choice questions
Worth 20% of your final grade

2nd Midterm

Administered in-class (March 14)
Non-Cumulative
Will consist of 60 multiple-choice questions
Worth 20% of your final grade

Final Exam

UTSC final examination period
Non-Cumulative (but representative of entire course learning)
Will consist of 60 multiple-choice questions
Worth 20% of your final grade

Laboratory Component – Worth 30% of your final grade

Laboratory Take-home Test

Due on January 31, 2019
Will consist of short-answer and practical (scoring) questions from Strauss et al. and Mitrushina et al.
Worth 5% of your final grade

Attendance and Engagement

Attendance will make up 2% of your final grade. You will lose 1% for each tutorial missed without proper documentation.

Engagement during the tutorial will make up 3% of your final grade (e.g., arriving on time, using tutorial practice time efficiently).

Worth 5% of your final grade

Final In-vivo Examination (1 hour)

Date TBD (will occur in early April)

Will involve in-vivo testing (~30 min) and scoring/behavioural observation summaries (~30 min)

Worth 20% of your final grade

Paper Assignment

Worth 10% of your final grade

For this assignment, students will be presented with a Clinical Case demonstration that will unfold throughout the academic term in class. You will be provided with brief background information, referral documentation from the family physician, and neuropsychological test score data. In addition, you will be provided with weekly in-class demonstrations that will reflect the patient's disease/disorder. Your assignment will require you to write up your diagnostic impression and treatment recommendations for the fictitious patient. You will be expected to outline a clinical diagnosis and why you have made it. For example, you should speak to what symptoms were evident and how they fit into the clinical diagnosis you come up with (e.g., behavioral observations, test findings; behavioral relationship to brain and disorder) and moreover, what other clinical diagnoses you ruled out and why (i.e., state your differential diagnosis if there is one to make, and select your clinical diagnosis and state why). The maximum length of this assignment is ONE page, double spaced using 12-point font - anything longer and you will be given a grade of 0% on this assignment. All submissions will go through Quercus. Please note that all papers will be processed through turnitin.com.

This assignment will be worth 10% of your final grade in the course and is due April 4, 2019 @ 11:55 pm on Quercus. Late submissions will result in a deduction of 10% per day to a maximum of 3 days.

Important Dates: 2019 Winter Session

Please visit:

<https://utsc.utoronto.ca/registrar/sites/utsc.utoronto.ca.registrar/files/resource-files/Sessional%20Dates%202018-2019%20.pdf>

Lecture Dates and Readings

January 10

Lecture:

Welcome & Introduction
History, Theory and Practice of Neuropsychological Assessment
Chapter 1

Laboratory:

Topic: Neuropsychological Evaluation & History Taking (figure 3-1 from Strauss et al., 2006)

January 17

Lecture:

Basic Concepts
Chapter 2

Demonstration:

The Neuropsychological Examination: Procedures
Chapter 5

Laboratory:

Topic: Scoring Procedures

Assigned Lab Readings: Chapters 1-3 from Mitrushina; Chapters 1-5 from Strauss et al., 2006

- Readings will be posted on the intranet

January 24

Lecture:

The Behavioural Geography of the Brain
Chapter 3

Demonstration:

Orientation and Attention
Chapter 9

Laboratory:

Topic: Test Administration

Assigned Lab Readings: Chapters 1-3 from Mitrushina; Chapters 1-5 from Strauss et al., 2006

- Readings will be posted on the intranet

Take-home test handed out – covers assigned readings, lecture notes, and scoring procedures

January 31

Lecture:

The Rationale of Deficit Measurement
Chapter 4

Demonstration:

Perception
Chapter 10

Laboratory:

Topic: In-lab practice

Take-home test due today (must be submitted before 6pm)

February 7

First Mid-Term Examination

The examination will cover chapters 1, 2, 3, 4, 5, 9 & 10

Laboratory:

NO LAB THIS WEEK

February 14

Lecture:

The Neuropsychological Examination: Interpretation
Chapter 6

Demonstration:

Memory I: Tests
Chapter 11

Laboratory:

Topic: In-lab practice

February 21

No class (Reading week)

February 28

Lecture:

Neuropathology for Neuropsychologists
Chapter 7

Demonstration:

Verbal Functions and Language Skills
Chapter 13

Laboratory:

Topic: In-lab practice

March 7

Lecture:

Neuropathology for Neuropsychologists, Continued
Chapter 7

Demonstration:

Construction
Chapter 14

Laboratory:

Topic: In-lab practice

March 14

Second Mid-Term Examination

The examination will cover chapters 6, 7, 11, 13 & 14

The examination is non-cumulative

Laboratory:

NO LAB THIS WEEK

March 21

Lecture:

Neurobehavioral Variables and Diagnostic Issues
Chapter 8

Demonstration:

Concept Formation and Reasoning
Chapter 15

Laboratory:

Topic: In-lab practice

March 28

Lecture:

Neurobehavioral Variables and Diagnostic Issues Continued
Chapter 8

Demonstration:

Executive Functions and Motor Performance
Chapter 16
Testing for Response Bias and Incomplete Effort
Chapter 20

Laboratory:

Topic: In-lab practice

April 4

Lecture: Overall Review of the Neuropsychological Examination

Laboratory:

Topic: In-lab practice

End of the Term

The final examination will be scheduled by the registrar's office approximately midway through the term. Details will be provided in class and on the intranet once known. The final examination will cover Chapters 8, 15, 16, and 20 and is non cumulative although do note that the exam questions will be representative of entire course learning.

YOU WILL BE RESPONSIBLE FOR LEARNING THE FOLLOW TESTS

- WASI-II
 - Block Design
 - Matrix Reasoning
 - Vocabulary
 - Similarities
- WAIS-IV
 - Digit Span
 - Coding
- WMS-IV
 - Logical Memory I & II
 - Visual Reproduction I & II
 - Designs I & II
- California Verbal Learning Test
- Rey-O Complex Figure Test
- Tower of London Test
- Wisconsin Card Sorting Test
- Trail Making Test (Parts A and B)
- Benton Tests
 - Judgment of Line Orientation
 - Facial Discrimination
 - Visual Form Discrimination
- Boston Naming Test
- Controlled Oral Word Association Test/Animals
- NAB Designs
- Grooved Pegboard
- Finger Tapping Test
- NAART

Missed Term Work due to Medical Illness or Emergency:

All students citing a documented reason for missed term work must submit their request for accommodations **within three (3) business days** of the deadline for the missed work.

Students must submit **BOTH** of the following:

- (1.) A completed **Request for Missed Term Work Accommodations form** (<http://uoft.me/PSY-MTW>), and
- (2.) **Appropriate documentation** to verify your illness or emergency, as described below.

Appropriate documentation:

For missed **TERM TESTS** due to **ILLNESS**:

- Submit the Request for Missed Term Work Accommodations form (<http://uoft.me/PSY-MTW>), along with an **original** copy of the official UTSC Verification of Illness Form (uoft.me/UTSC-Verification-Of-Illness-Form) or an **original** copy of the record of visitation to a hospital emergency room. Forms are to be completed in full, clearly indicating the start date, anticipated end date, and severity of illness. The physician's registration number and business stamp are required.

For missed **ASSIGNMENTS** due to **ILLNESS**:

- Submit the Request for Missed Term Work Accommodations form (<http://uoft.me/PSY-MTW>), along with a **hardcopy** of the Self-Declaration of Student Illness Form (uoft.me/PSY-self-declare-form).

For missed term tests or assignments in **OTHER CIRCUMSTANCES**:

Submit the Request for Missed Term Work Accommodations form (<http://uoft.me/PSY-MTW>), along with:

- In the case of a **death of a family member or friend**, please provide a copy of a death certificate.
- In the case of a **disability-related concern**, if your desired accommodation is within the scope of your Accommodation Letter, please attach a copy of your letter. If your desired accommodation is outside the scope of your Accommodation Letter (ex. if your letter says "extensions of up to 7 days" but you need more time than that) you will need to meet with your consultant at AccessAbility Services and have them email Keely Hicks (keely.hicks@utoronto.ca) detailing the accommodations required.
- For U of T Varsity **athletic commitments**, an email from your coach or varsity administrator should be sent directly to Keely Hicks (keely.hicks@utoronto.ca) **well in advance** of the missed work, detailing the dates and nature of the commitment.
- For **religious accommodations**, please email (keely.hicks@utoronto.ca) **well in advance** of the missed work.

Documents covering the following situations are NOT acceptable: medical prescriptions, personal travel, weddings/personal/work commitments.

Procedure:

Submit your (1.) [request form](#) and (2.) [medical/self-declaration](#)/other documents in person **WITHIN 3 BUSINESS DAYS** of the missed term test or assignment.

Submit to: Keely Hicks, Room SW420B, Monday – Friday, 9 AM – 4 PM

Exceptions to the documentation deadline will only be made under exceptional circumstances. If you are unable to meet this deadline, you must email Keely Hicks (keely.hicks@utoronto.ca) **within the three business day window** to explain when you will be able to bring your documents in person. Attach scans of your documentation.

Within approximately one week, you will receive an email response from your instructor detailing the accommodations to be made (if any). **You are responsible for checking your official U of T email and Quercus course announcements daily, as accommodations may be time-critical.**

Completion of this form does NOT guarantee that accommodations will be made. The course instructor reserves the right to decide what accommodations (if any) will be made. Failure to adhere to any aspect of this policy may result in a denial of your request for accommodation.

Instructors cannot accept term work after April 12, 2019. Beyond this date, you would need to file a petition with the Registrar's Office to have your term work accepted (<https://www.utsc.utoronto.ca/registrar/term-work>).

Note that this policy applies only to missed assignments and term tests. Missed final exams are handled by the Registrar's Office (<http://www.utsc.utoronto.ca/registrar/missing-examination>).