Department of Psychology

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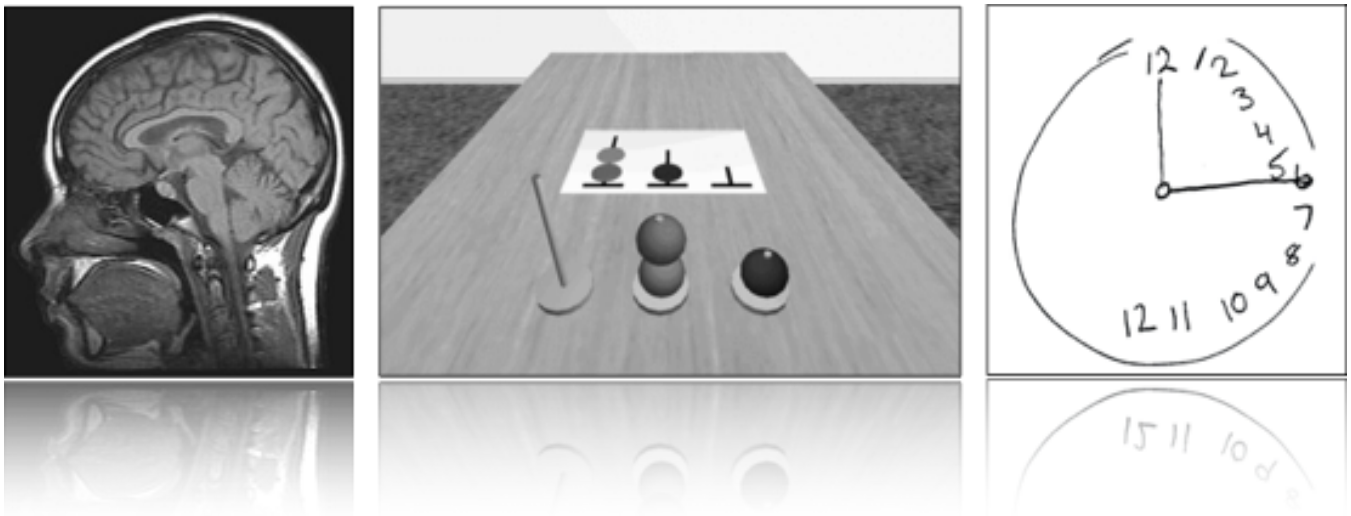

Clinical Neuropsychology Laboratory

Course Code: PSYC32H3
Lecture: Thursdays 5-7 PM, SW309
Practical: Thursdays 7-8 PM, ~~AC332~~ AA208
Course Content: Blackboard / UofT Portal

Instructor: Zachariah Campbell
Office Hour: Thursdays 3:30-4:30, SY142

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 based on 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 U of T Portal / Blackboard. 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 (PSYB32H), Human Brain & Behaviour (PSYB65H), and any of the following statistics courses: PSYB07H, SOCB06H, STAB22H. The only exclusion for this course is PSYC31H.

E. Students enrolled in PSYC32 also need to be enrolled in the Specialist (Co-op) Mental Health Studies Program in Psychology and its Applications.

F. 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.

G. If a student is absent from a midterm examination due to illness or emergency, they must follow the department-wide policy listed later in this document (i.e., "Missed Term Work Due to Medical Illness or Emergency").

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 Access*Ability* Services Office as soon as possible. We will work with you and Access*Ability* Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC Access*Ability* Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or **ability@utsc.utoronto.ca**.

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/).

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.

Grading Scheme

Your grade will be determined by three examinations and one paper assignment.
All exams are multiple-choice in format.

Laboratory Component – Worth 30% of your final grade

Laboratory Take-Home Test

Due on January 26, 2016
Will consist of short-answer and practical (scoring) questions from Strauss et al. and Mitrushina et al.
Worth 5% of your final grade

Presentation – Administration/scoring of neuropsychological tests

Dates to be determined in class and will be added to presentation schedule (please see last section of syllabus for schedule)
Worth 10% of your final grade

Final In-vivo Examination (1 hour)

Date to be determined in class (usually prior to UTSC final examination period)
Will involve in-vivo testing (~30 min) and scoring/behavioural observation summaries (~30 min)
Worth 15% of your final grade

Lecture Component – Worth 60% of your final grade

1st Midterm

Administered in-class (February 2) - see announcements if date has changed.
Will consist of 60 multiple-choice questions
Worth 20% of your final grade

2nd Midterm

Administered in-class (March 9) - see announcements if date has changed.
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

Paper Assignment

Worth 10% of your final grade

For the paper 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 with appropriate justification. 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, single-spaced using 12-point font. Anything longer and you will be given a grade of 0% on this assignment. All submissions will go through blackboard.

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely to detect instances of plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Here are some instructions for submitting your assignment:

http://portalinfo.utoronto.ca/content/submit-turnitin-assignment

The assignment is worth 10% of your final grade in the course and is due Friday, March 31, 2017 at 11:55 PM on Blackboard. Late submission will result in a deduction of 10% per day to a maximum of 3 days.

Missed Term Work Due to a Medical Illness or Emergency (Read carefully)

All students citing a documented reason for missed term work (this includes assignments and midterm exams) must bring their documentation to the Undergraduate Course Coordinator, Ainsley Lawson, **within three (3) business days** of the term test / assignment due date. All documentation must be accompanied by the departmental **Request for Missed Term Work form** (http:d//uoft.me/PSY-MTW).

In the case of missed term work due to illness, only an **original copy** of the **official UTSC Verification of Illness Form** (http://uoft.me/PSY-MED) will be accepted. 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.

In the case of other emergency, a record of visitation to a hospital emergency room or copy of a death certificate may be considered.

Forms should be dropped off in SW427C between 9 AM - 4 PM, Monday through Friday. Upon receipt of the documentation, you will receive an email response from the Course Instructor / Course Coordinator within three business days. The Course Instructor reserves the right to decide what accommodations (if any) will be made for the missed work.

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

Failure to adhere to any aspect of this policy may result in a denial of your request for accommodation.

Important Dates

Monday, January 2	Classes begin in S courses and resume in Y courses.
Sunday, January 15	Deadline to add or modify courses on ACORN for the semester.
Monday, February 20	Family Day holiday – University closed.
Tuesday, February 21 to Friday, February 24	Reading Week – No classes held.
Sunday, March 19	Deadline to drop courses without academic penalty and have it removed from your transcript. Deadline to request Credit/No Credit option on ACORN.

Monday, March 20 to Tuesday, April 4	Request a late withdrawal from a UTSC course on eService.
Friday, March 31	Last day of classes and last day for submission of term assignments in S and Y courses.
Saturday, April 1 to Tuesday, April 4	Study Break.
Wednesday, April 5 to Saturday, April 22	Final examination period.

Lecture Dates and Readings

January 5

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

January 12

Lecture:
Basic Concepts
Chapter 2
Demonstration:
The Neuropsychological Examination: Procedures
Chapter 5

January 19

Lecture:
The Behavioural Geography of the Brain
Chapter 3

Demonstration:
Chapter 9 - *Orientation and Attention*
Tests and *page numbers*:

- Digit span (forwards/backwards/ sequencing) *403-405, 409-410, 411*
- Trail Making Test *422-425*
- Symbol Digit Modalities Test *420-422*

January 26

Lecture:
The Rationale of Deficit Management
Chapter 4
Demonstration:

Chapter 10 - *Perception*
Tests and *page numbers*:

- Line Bi-section Test *429-431*
- Judgment of Line Orientation *442-444*
- Test of Facial Recognition (Benton) *444-446*

February 2

First Mid-Term Examination - see announcements if date has changed.
The examination will cover chapters 1, 2, 3, 4, 5, 9 & 10

February 9

Lecture:
The Neuropsychological Examination: Interpretation
Chapter 6
Demonstration:
Chapter 11 - *Memory I*
Tests and *page numbers*:

- California Verbal Learning Test (Second Edition) *478-481*
- Logical Memory *490-493*
- Complex Figure Test (Rey) *499-504*

February 16

Lecture:
Neuropathology for Neuropsychologists
Chapter 7
Demonstration:
Chapter 13 - *Verbal Functions and Language Skills*
Tests and *page numbers*:

- Confrontation Naming/Boston Naming Test *548-551*
- Vocabulary (Wechsler) *553-555*
- Word Reading subtest of the Wide Range Achievement Test 4 (WRAT4) *563*
- Information (Wechsler) *565-567*

February 23

No class (Reading week)

March 2

Lecture:
Neuropathology for Neuropsychologists, Continued
Chapter 7
Demonstration:

Chapter 14 - *Construction*
Tests and *page numbers*:

- Clock Face *590-594*
- Finger Tapping Test *610-612*
- Block Design (Wechsler) *594-600*
- Grooved Pegboard *614-615*

March 9

Second Mid-Term Examination - see announcements if date has changed.
The examination will cover chapters 6, 7, 11, 13 & 14
The examination is non-cumulative

March 16

Lecture:
Neurobehavioral Variables and Diagnostic Issues
Chapter 8
Demonstration:
Chapter 15 - *Concept Formation and Reasoning*
Tests and *page numbers*:

- Similarities (Wechsler) *621-623*
- Matrix Reasoning (Wechsler) *632-634*
- Sorting Test (D-KEFS) *643-644*

March 23

Lecture:
Neurobehavioral Variables and Diagnostic Issues Continued
Chapter 8
Demonstration:
Chapter 16 - *Executive Functions and Motor Performance*
Tests and *page numbers*:

- Tower Tests: Tower of London (2nd Edition) *675-678*
- Controlled Oral Word Association (COWA) (starting with Verbal Fluency on page 693) *693-695*
- Category Fluency (Animals) *695-696*

March 30

Demonstration:
Chapter 20 - *Testing for Response Bias and Incomplete Effort*
Tests and *page numbers*:

- Test of Memory Malingering *849-850*
- Rey Fifteen-Item Test (FIT) *855-856*
- Dot Counting *854-855*

Overall Review of the Neuropsychological Examination

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.

Laboratory Schedule

January 5
Laboratory 1
Topic: Neuropsychological Evaluation & History Taking (figure 3-1 from Strauss et al., 2006)

January 12
Laboratory 2
Topic: Scoring Procedures
Practice Questions
Assigned Lab Readings: Chapters 1-3 from Mitrushina – readings will be posted on the intranet
Chapters 1-5 from Strauss et al., 2006

January 19
Laboratory 3
Topic: Attention & Working Memory; Perception
Tests: WAIS-IV Digit Span, Judgment of Line Orientation, Visual Form Discrimination, Face Discrimination Test
Take-home test handed out – covers assigned readings, lecture notes, and scoring procedures

January 26
Laboratory 4
Topic: Verbal Memory
Tests: California Verbal Learning Test-II; WMS-IV Logical Memory I & II
Take-home test due today

February 2
Midterm #1 – No Lab Today – see announcements if date has changed.

February 9
Laboratory 5
Topic: Visual Memory
Tests: Rey-Osterreith Complex Figure Test, WMS-IV - Designs I & II, WMS-IV Visual Reproductions I & III

February 16
Laboratory 6
Topic: Language
Tests: Boston Naming Test, Controlled Oral Word Association Test

February 23

No Lab Today (Reading week).

March 2

Laboratory 7
Topic: Construction
Tests: NAB Designs; WASI-II Block Design

March 9

Midterm #2 – No Lab Today - see announcements if date has changed.

March 16

Laboratory 8
Topic: Executive Function
Tests: Wisconsin Card Sorting Test, Tower of London, WAIS-IV – Figure Weights, Trail Making Test

March 23

Laboratory 9
Topic: Motor Performance
Tests: Grooved Pegboard, Finger Tapping Test

March 30

Laboratory 10
Topic: Intelligence
Tests: NAART, Wechsler Abbreviated Scale of Intelligence (WASI-II)*

*Note: The Block Design subtest of the WASI-II will have already been covered during Lab #7 (Construction)

Final *In-Vivo* Exam: Date(s) and details to be announced in lab (usually a few days before or into reading week)

Presentation Schedule

Date	Tests	Presenter(s)
January 19	ATTENTION & WM; PERCEPTION	
	• WAIS-IV Digit Span	Courtney
	• Judgment of Line Orientation Test	Courtney
	• Visual Form Discrimination	Courtney
	• Face Discrimination	Courtney
January 26	VERBAL MEMORY	
	• California Verbal Learning Test-II	Brahm and Brooke
	• WMS-IV Logical Memory I & II	Kristen
February 9	VISUAL MEMORY	
	• Rey-O Complex Figure Test	Uyen and Saya
	• WMS-IV - Designs I & II	Songman and Xiaoqian
	• WMS-IV - Visual Reproductions I & II	Anneesa and Roshne
February 16	LANGUAGE	
	• Boston Naming Test	Shinwon and Angie
	• Controlled Oral Word Association Test	Deanna
March 2	CONSTRUCTION	
	• NAB Designs	Jasmine
	• Block Design (WASI-II)	Verena
March 16	EXECUTIVE FUNCTIONS	
	• Wisconsin Card Sorting Test	Angelie and Daebyeol
	• Tower of London	Mishel and Amna
	• Figure Weights (WAIS-IV)	Thurka
	• Trail Making Test	Tselot
March 23	MOTOR PERFORMANCE	
	• Grooved Pegboard	Katrina
	• Finger Tapping Test	Ella
March 30	INTELLIGENCE	
	- NAART	- Shantel
	Wechsler Abbreviated Scale of Intelligence - II	
	• Vocabulary	Shriya and Julia
	• Similarities	Gajathree and Meera
	• Matrix Reasoning	Thaneya