

Neuropsychological Rehabilitation (PSYC33H3 S)
University of Toronto Scarborough
Winter 2008

Course Director: Dr. Guy Proulx

Office Hours: 1 hour before class

Teaching Assistant: Kris Romero

Office Hours: By appointment

E-mail: kris.romero@utoronto.ca

Course Websites: <http://intranet.utoronto.ca>

<http://psyc33.ning.com>

Class Time and Location: Thursdays 9:00 am – 11:00 am, MW264

Objective: In this course, methods of neuropsychological rehabilitation used to treat cognitive deficits in a variety of domains (e.g., attention, memory, language, sensory-perception, and executive function) will be examined. The importance of using a combination of theory of brain behaviour relations with scientific methodology and clinical relevance in the rehabilitation process will be emphasized.

Recommended Text: Publication Manual of the American Psychological Association, 5th Ed.

Evaluation:

Evaluation	Due dates	Content	Course weight (%)
Midterm exam	Feb. 28	Lectures + required readings	30%
Reaction papers (5)	Jan 20, Feb 3, Feb 17, Mar 16, Mar 30	A 2 page max critical review of a topic covered in class	5 x 6% = 30% total
OR Research paper	Apr. 3	15 page (max) paper detailing the design and evaluation of an intervention to rehabilitate a neuropsychological deficit. This can be a case or group study from topics covered in class.	30%
Final exam	TBD	ALL lectures and readings	40%

Exam Format: Midterm and final examinations will include multiple choice, short answer, and essay questions. Information from lectures and readings will be tested equally on both midterm and final exams. The final exam is cumulative on ALL material covered in the course. However, emphasis will be placed on material covered since the midterm.

Missed Exam Policy: Students who miss the midterm exam will have their grade prorated over the research paper and final exam. The prorating option will NOT be granted unless the instructor(s) receives appropriate documentation, such as a signed medical certificate or college

registrar's note within one week of the missed exam. There will be no make-up exam for missed midterms.

Penalty for lateness: The research paper is due on April 3. Hand in the paper to the Psychology Department main office. The penalty for lateness is 5% per day.

Course Schedule

Date	Lecturer	Topic	Required Readings
Jan 10	Dr. G. Proulx	-Course overview: content, layout, marking scheme -What is neuropsychological rehabilitation?	- Taub, E., et al., (2002). Nature Reviews: Neuroscience, 3, 228-235. - Wilson, B.A. (2002). Neuropsych. Rehab. 12, 97-110
Jan 17	Dr. K. Murphy	Perceptual (Visual)	- Francis, D.R., et al., (2002). Neuropsychological Rehabilitation, 12, 1-26. - Barrett, M.A., et al., (2006). Journal of Cog Neurosci, 18:7, 1223-1236
Jan 24	Dr. L. Leach	Program Evaluation	- Cicerone, K.D. et al., (2005). Arch Phys Med Rehabil, 86, 1681-1692. - Cappa, S.F. et al., (2003). European Journal of Neurology 10, 11-23. -What is a systematic review? -Why we need systematic reviews
Jan 31	Dr. G. Proulx	Attention	- Cicerone, K.D. (2002). Brain Injury, 16, 185-195. - Park, N.W., et al., (1999). Neuropsychological Rehabilitation, 9, 135-154.
Feb 7	Dr. E. Svoboda	Memory-Amnesia	- O'Connor, et al., (1995) In Baddeley, Wilson & Watts (Eds.). Handbook of Memory Disorders. - Schacter, D. (2000). In Tulving & Craik (Eds.). The Oxford Handbook of Memory.

Feb 14	Dr. B. Richards	Memory-Link Program	- Kessels, R.P.C. & de Haan E.H.F. (2003) J Clin Exp Neuropsych, 25, 805-14
Feb 21	READING WEEK		
Feb 28	Dr. A. Troyer	Memory Intervention Programs for Older Adults	- Troyer, et al (2008). Neuropsych Rehab, 18(1), 65-88 - Thompson & Forth (2005). Educ Gerontology, 31, 603-636.
Mar 6	MIDTERM (30%)	All lectures and readings, excluding Feb 28.	
Mar 13	Dr. D. Rewilak	Executive Functions	- Turner, G.R. & Levine, B. (2004). In Ponsford, J (Ed) Cognitive and Behavioral Rehabilitation. (pp.224-268) - Park, N.M. (2003) Neurocase, 9:1, 51-62 -?
Mar 20	Dr. G. Proulx	Behavioural/cognitive Interventions	- Camp, C (2006). In (Ed) Geriatric Neuropsychology - Barrick, A.L (2006) In (Ed) Geriatric Neuropsychology
Mar 27	J. Cupit	Language	- Hillis, A.E. (1998) J Int. Neuropsych. Society, 4, 648-660. - Rapp, B. (2005). Aphasiology, 19(10/11), 994-1008
Apr 3	Dr. G. Proulx	EXAM REVIEW & PAPER DUE	

Reading List

*Readings will be provided online.

January 10

Taub, E., Uswatte, G. & Elbert T. (2002). New treatments in neurorehabilitation founded on basic research. Nature Reviews: Neuroscience, 3, 228-235

Wilson, B.A. (2002). Towards a comprehensive model of cognitive rehabilitation. Neuropsychological Rehabilitation, 12, 97-110.

January 17

Francis, D.R., Riddoch, M.M. & Humphreys, G.W. (2002). "Who's that girl?" Prosopagnosia, person-based semantic disorder, and the reacquisition of face identification ability. Neuropsychological Rehabilitation, 12, 1-26.

Barrett, A.B., Buxbaum, L.J., Coslett, B., Edwards, E., Heilman, K.M., Hillis, A.E., et al., (2006). Cognitive rehabilitation interventions for neglect and related disorders: Moving from bench to bedside in stroke patients. Journal of Cognitive Neuroscience, 18:7, 1223-1236.

January 24

Cicerone, K.D., Dahlberg, C., Malec, J.F., et al., (2005). Evidence-Based Cognitive Rehabilitation : Updated Review of the Literature From 1998 Through 2002. Archives of Physical and Medical Rehabilitation, 86, 1681-1692.

Cappa, S.F., et al. (2003). EFNS Guidelines on cognitive rehabilitation : report of an EFNS Task Force. European Journal of Neurology 10, 11-23.

-Why we need systematic reviews

-What is a systematic review?

January 31

Cicerone, K.D. (2002). Remediation of 'working attention' in mild traumatic brain injury. Brain Injury, 16, No. 3, 185-195.

Park, N.W., Proulx, G-B., & Towers, W.M. (1999). Evaluation of the attention process training programme. Neuropsychological Rehabilitation, 9, 135-154.

February 7

O'Connor, M., Verfaellie, M. & Cermak, L.S. (1995). Clinical Differentiation of Amnesic Subtypes. IN A.D. Baddeley, B.A. Wilson & F.N.Watts (Eds.) Handbook of Memory Disorders. (pp 53-80) Cambridge: John Wiley & Sons Ltd.

Schacter, D Wagner, Anthony D; Buckner, Randy L (2000). Memory systems of 1999. In Tulving, E. & Craik, F.I.M. (Eds) The Oxford handbook of memory. (pp. 627-643). New York, NY, US: Oxford University Press

February 14

Kessels R.P.C. & de Haan E.H.F. (2003). Implicit learning in memory rehabilitation: A meta-analysis on errorless learning and vanishing cues methods. Journal of Clinical and Experimental Neuropsychology, 25, 805-814.

March 6

Troyer, A. K., Murphy, K. J., Anderson, N. D., Moscovitch, M., & Craik, F. I. M. (2008). Changing everyday memory behaviour in amnesic mild cognitive impairment: A randomised controlled trial. Neuropsychological Rehabilitation, 18(1), 65-88.

Thompson, G., & Foth, D. (2005). Cognitive-training programs for older adults: What are they and can they enhance mental fitness? Educational Gerontology, 31, 603-626.

March 13

Park, N.W., Conrod, B., Hussain, Z., Murphy, K.J., Rewiak, D. & Black, S.E. (2003), A treatment program for individuals with deficient evaluative processing and consequent impaired social and risk judgement. Neurocase, 9, 51-62.

Turner, G.R. & Levine, B. (2004). Disorders of executive functioning and self-awareness. In Ponsford, J. (Ed) Cognitive and Behavioral Rehabilitation: From Neurobiology to Clinical Practice. (pp 224-268). New York, NY, US: Guilford Press

March 20

Camp, C.J. (2006). Spaced Retrieval: A model for dissemination of a cognitive intervention for persons with dementia. In Attix, D K. Welsh-Bohmer, K. A. (Eds). Geriatric Neuropsychology pp. 275-292, New York, NY, US: Guilford Publications

Barrick, A.L. (2006) Behavioral treatment of impaired functioning and behavioural symptoms. In Attix, D K. Welsh-Bohmer, K. A. (Eds). Geriatric Neuropsychology pp. 367-393, New York, NY, US: Guilford Publications

March 27

Hillis, A.E. (1998). Treatment of naming disorders: New issues regarding old therapies *Journal of the International Neuropsychological Society*, 4, 648-660.

Rapp, B. (2005). The relationship between treatment outcomes and the underlying cognitive deficit: evidence from the remediation of acquired dysgraphia. *Aphasiology*, 19(10/11), 994-1008.

Reaction papers

This course will give you 2 options for demonstrating your ability to comprehend, apply, and communicate the course content. One option is to write reaction papers for materials presented in class and in the readings. The other option is to do a research paper, due at the end of the class. At the beginning of the course, you are required to choose ONE of these options. Importantly, after you choose, you CANNOT change your mind.

In the reaction papers, you should synthesize the information presented in class, and write critically about one or more topics. This may include analyzing a certain theory presented in a paper or in class, comparing competing theories and the evidence for/against each, writing a brief research proposal for a study to answer a question in the literature, reviewing the impact of research findings on society, etc. The reaction papers should be concise, and coherent. The aim is to provide a very clear outline of your thoughts or questions about a certain topic, with clear evidence or arguments to substantiate your claims. Unlike the research paper, the reaction papers do not have to be in strict APA format: you are allowed to refer to yourself in the first person (i.e. "I believe that..."), and you can have a more conversational tone to your writing. However, you must still cite information if you bring it up. Think of the reaction papers as intellectual blog entries, which are informative and can be understood by other undergraduates who may know a bit about some topics, but are not experts in the field.

Each reaction paper should be a maximum of 2 pages, double-spaced, 12 pt font, and 1" margins. Be sure to include your name and student number.

The due dates are listed above. Note that they do not fall on class days. This is to allow you to integrate information from the most recent lecture into your reaction paper, if you wish. You must send the reaction papers by email to the TA's email account (kris.romero@utoronto.ca) by 11:59 pm of the due date.

In this course, select reaction papers may be posted on the course site. This is to allow students to see the various perspectives of their colleagues, and generate discussion on certain topics. All reaction papers will be de-identified (i.e. your name will be removed). If you do not wish to have your reaction paper posted, please indicate so ON THE REACTION PAPER ITSELF.

Each reaction paper is worth 6%, and will be given a percentage grade. An example of a 'B' grade reaction paper (i.e. 75%) will be posted on the course website, for your reference.

Research Paper

Alternately, you may choose to write a research paper instead of reaction papers.

Objectives

Writing a research paper will help you achieve three important objectives: (1) To expand your knowledge of neuropsychological invention by focusing on an area that is of particular interest to you, (2) To further develop your skills as a critical reader of psychological research, (3) To develop your scientific writing skills.

General Requirements

In the research paper you should review critically an area of neuropsychological rehabilitation with respect to behavioural interventions designed to treat a neuropsychological deficit covered in the course. Choose from the general topics of attention, memory, language, motor, executive, perceptual, etc. and decide on a deficit within one of these domains to address with a neuropsychological intervention. You will design an intervention to rehabilitate the neuropsychological deficit of interest, evaluate the efficacy of your intervention (in which you will generate mock data) and critically discuss your findings in the context of the current literature in the field. A list of research topics to choose from will be provided in the coming weeks.

Specific Requirements

- The research paper should be a maximum of 15 double-spaced pages in length (not including references, tables or figures generated)
- Use 12 point font.
- You must have a minimum of 10 primary sources (journal articles) in your reference section. The references should be mainly from the 1990s and 2000s.

Required Sections of the Research Paper

The research paper should be written as if it were a peer-reviewed journal article, in proper APA format.

Abstract. One paragraph, approximately 120 words in length, that briefly describes the area of investigation, type of participant(s), the presenting problem, the nature of the intervention and lastly the results and the significance of those results. Put the abstract on a separate page immediately following the title page.

Introduction. This section should describe the research area and findings from previous studies. The literature review should also discuss an issue or question that needs to be addressed in that area and provide a clear rationale for the proposed study.

Methods: This section should include a description of the participant(s) and their presenting problem, a description of any equipment and how it was used, as well as a description of how the intervention was applied and specific description of the independent and dependent variables measured.

Results (mock data you generate). This section should describe your findings. You will generate mock data based upon what you might reasonably expect to have happened. Provide a table or a graph to represent the data along with a verbal explanation of the results.

Discussion. Discuss and review your findings in the context of what is currently known in the field. Include an explanation of how well the results fit the specific hypotheses, limitations of the study, and perhaps other theoretical issues. Try to highlight the significance / contribution of your research to the field and suggest future investigations.

References. You must have at least 10 primary sources (journal articles). The references should be mainly from the 1990s and 2000s.

Use APA Format

You should use the guidelines for scientific writing that have been developed by the American Psychological Association (APA). It is recommended that you consult the Publication Manual, 5th edition of the APA to determine the appropriate methods for citing research in your research paper and for creating your list of references.