

**Neuropsychological Rehabilitation (PSYC33H3 S)**  
University of Toronto –Scarborough Campus  
Winter 2004

**Course Instructors:** Dr. Guy Proulx and Dr. Kelly Murphy Office Hours: 1 hour before class

**Teaching Assistant:** Diana Jovanovski Office Hours: By appointment  
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Course Website: <http://intranet.uts.utoronto.ca>  
(click on 'guest home', then go to 'courses', 'psychology', 'PSYC33H3')

**Class Time and Location:** Thursdays 10:00 a.m. – 12:00 p.m. in LEC 01 (Rm # = H-Wing, 408).

**Objective:** In this course, methods of neuropsychological rehabilitation used to treat cognitive deficits in a variety of domains (e.g., attention, memory, language, praxis, 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.

**Required Text:** Paul J. Eslinger (Ed.). (2002). Neuropsychological Interventions: Clinical Research and Practice. New York: The Guilford Press.

**Recommended Text:** Publication Manual of the American Psychological Association, 5<sup>th</sup> ed.

Evaluation	Date	Content	Weight
Midterm Exam	Feb. 26	Ch. 1 to 5; 7 Lectures	35 %
Research Paper	Apr. 1	6 page paper detailing the design and evaluation of an intervention to rehabilitate a neuropsychological deficit. This can be a case or group study from a choice of assigned topics.	30 %
Final Exam	TBA	Ch. 6; 8 to 13	35 %

**Exam Format:** Midterm and final examinations will include multiple choice, short answer, and essay questions.

**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.

**Penalty for lateness:** The research paper is due at the start of class on April 1. The penalty for lateness is 5% per day.

### Course Schedule

Date	Lecturer	Topic(s)	Assigned Book Chapters	Supplementary Reading
Jan 8	Dr. G. Proulx Dr. K. Murphy	Overview of the field of neuropsychological rehabilitation, course content, and marking scheme.	Ch. 1	Taub, E., Uswatte, G. & Elbert T. (2002). Nature Reviews: Neuroscience, 3, 228-235
Jan 15	Dr. L. Leach	Program evaluation	Ch. 2, 3, 4 & 5	Cicerone K. D. et al., (2000). Arch Phys Med Rehabil, 81, pp1596-1615.
Jan 22	Dr. K. Murphy Dr. G. Proulx	Attention	Ch. 6	Park, N.W., Proulx, G-B, & Towers, W.M. (1999). Neuropsychological Rehabilitation, 9, 135-154.
Jan 29	Dr. B. Richards	Memory – Amnesia	Ch. 7	Kessels R.P.C. & de Haan E.H.F. (2003) J Clin Exp Neuropsych, 25, pp 805-814.
Feb 5	Dr. B. Richards	Memory – Memory Link Program	Ch. 7	
Feb 12	Dr. K. Murphy	Memory Intervention Programs; Review & structure of midterm		Troyer A. (2001) Aging, Neuropsychology & Cognition, 8, 256-268.
Feb 19		<b>READING</b>		<b>WEEK</b>
Feb 26	Dr. K. Murphy	<b>MIDTERM</b>		
Mar 4	Dr. K. Murphy R. Jokel (SP)	Language	Ch. 9	Avent, J.R. & Austermann, S. (2003). Aphasiology, 17, 397-404.
Mar 11	Dr. K. Murphy Dr. G. Proulx	Motor Praxis	Ch. 10	Donkervoort, M., Dekker, J., Stehmann-Saris, F.C., & Deelman, B.G. (2001). Neuropsychological Rehabilitation, 11, 549-566.
Mar 18	Dr. D. Rewilak	Executive dysfunction	Ch. 11, 12, 13	Park, N.W., Conrod, B., Hussain, Z., Murphy, K.J., Rewilak, D. & Black, S.E. (2003) social and risk judgement. Neurocase, 9, 51-62.
Mar 25	Dr. K. Murphy	Sensory - Perceptual	Ch. 8	Francis, D.R., Riddoch, M.M. & Humphreys, G.W. (2002). Neuropsychological Rehabilitation, 12, 1-26.
Apr 1	Dr. G. Proulx Dr. K. Murphy	<b>PAPER IS DUE</b> Review & structure of final exam		

### Supplementary Reading List

#### January 8

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

#### January 15

Cicerone, K.D., Dahlberg, C.D., Kalmar, K., et al., (2000). Evidence-based cognitive rehabilitation: Recommendations for clinical practice. Archives of Physical and Medical Rehabilitation, 81, 1596-1615.

#### January 22

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

#### January 29 and February 5

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.

#### February 12

Troyer A.K. (2001). Improving memory knowledge, satisfaction, and functioning via an education and intervention program for older adults. Aging, Neuropsychology, and Cognition, 8, 256-268.

Spector, A, Thorgrimsen, L., Woods, B., Royan, L., Davies, S., Butterworth, M. & Orrell, M. (2003). Efficacy of an evidence-based cognitive stimulation therapy programme for people with dementia. British Journal of Psychiatry, 183, 248-254.

#### March 4

Avent, J.R. & Austermann, S. (2003). Reciprocal scaffolding: A context for communication treatment in aphasia. Aphasiology, 17, 397-404.

#### March 11

Donkervoort, M., Dekker, J., Stehmann-Saris, F.C., & Deelman, B.G. (2001). Efficacy of strategy training in the left hemisphere stroke patients with apraxia: A randomised clinical trial. Neuropsychological Rehabilitation, 11, 549-566.

#### March 18

Park, N.W., Conrod, B., Hussain, Z., Murphy, K.J., Rewilak, 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.

#### March 25

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.

## Research Paper

### Objectives

Writing a research paper will help you achieve three important objects: (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 critically review 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 6 double-spaced pages in length (not including abstract, references, and any tables or figures generated). Page lengths for each section are suggested below.
- Use 12 point font.
- You must have a minimum of 3 primary sources (journal articles) in your reference section. The references should be mainly from the 1990s and 2000s.
- Write your paper in either the first (e.g., "I predicted") or third person (e.g., "It was predicted").
- Use the past tense for your paper, because you are writing about a study that you have completed.

### Required Sections of the Research Paper

The research paper must contain the following sections. Use the section labels below to organize your paper.

Abstract. One paragraph, approximately 150 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 rationale for the research conducted. (Suggested length: 1 1/2 to 2 double spaced pages).

Method. This section should include a brief 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. (Suggested length 2 double spaced pages).

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. (Suggested length 1 double spaced page).

Discussion. Discuss and review your findings in the context of what is currently known in the field. Try to highlight the significance / contribution of your research to the field and suggest future investigations. (Suggested length 1 1/2 to 2 double spaced pages).

References. You must have at least 3 primary sources (journal articles). The references should be mainly from the 1990s and 2000s. You must format your references using the guidelines developed by the American Psychological Association's (APA) Publication Manual (5<sup>th</sup> edition).

NOTE: for the title page, please use APA format (i.e., a title and a running head).

### **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, 5<sup>th</sup> edition of the APA to determine the appropriate methods for citing research in your research paper and for creating your list of references.