Neuropsychological Rehabilitation (PSYC33H3 S)
University of Toronto Scarborough
Winter 2013

Course Director: Kris Romero
Email: kris.romero@utoronto.ca
Office Hours: After class or by appointment

Teaching Assistant: Courtney Rady-Smith
E-mail: courtneyrady.smith@mail.utoronto.ca
Office Hours: By appointment (in person or online)

Course Websites: https://portal.utoronto.ca

Class Time and Location: Thursdays 9:00 am – 11:00 am; BV 361

Objective: In this course, methods of neuropsychological rehabilitation that are used to treat deficits in a variety of domains (e.g., behavioural, attention, memory, sensory-perception, & executive function) will be examined. The relevance of combining theory/research with clinical/functional outcome will be emphasized


Evaluation:

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Due dates</th>
<th>Content</th>
<th>Course weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm exam</td>
<td>Feb 14</td>
<td>Lectures + required readings</td>
<td>25%</td>
</tr>
<tr>
<td>Reaction paper</td>
<td>Mar 7</td>
<td>Assigned article(s)</td>
<td>10%</td>
</tr>
<tr>
<td>Research paper</td>
<td>April 4</td>
<td>20 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.</td>
<td>25%</td>
</tr>
<tr>
<td>Final exam</td>
<td>TBD</td>
<td>ALL lectures and readings</td>
<td>40%</td>
</tr>
</tbody>
</table>

Exam Format: Midterm and final examinations will include multiple choice & short answer 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, for the final exam heavy 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. Make sure to contact the instructor ASAP if you miss the midterm to discuss possible arrangements. There will be no make-up exam for missed midterms.
**Penalty for lateness:** The research paper is due on April 4. Email the paper to the TA (Courtney) by 5 PM on the due date. The penalty for lateness is 5% per day (weekends included).

**Course Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Required Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 24</td>
<td>Visuospatial function</td>
<td>Singh-Curry &amp; Husain (2010). Rehabilitation of neglect&lt;br&gt;Powell et al., 2008. Enhancement of face recognition in ABI using 3 treatment methods</td>
</tr>
<tr>
<td>Feb 14</td>
<td>MIDTERM EXAM</td>
<td>All lectures and readings to date</td>
</tr>
<tr>
<td>Feb 21</td>
<td>READING WEEK</td>
<td>Reaction paper: Owen et al (2010). Putting brain training to the test</td>
</tr>
</tbody>
</table>
Apr 4 | EXAM REVIEW & PAPER DUE | Review of class materials and/or discussion about applying to graduate school, psychology, rehabilitation, careers in general ...

*Readings will be posted online.

**Reading List**

**January 10**


**January 17**


**January 24**


**January 31**


**February 7**


**February 14**


**February 28**


**March 7**


**March 14**


**March 21**


**March 28**


**Research Papers**

**Objectives**

Writing a research paper will help you achieve three important objectives: (1) To expand your knowledge of neuropsychological intervention 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.

**Research Paper 1: Design a neuropsychological intervention**

**General Requirements**

In the research paper you should review critically an area of neuropsychological rehabilitation with respect to interventions designed to treat a neuropsychological deficit covered in the course. Choose from the general topics of attention, memory, behavioural, 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 chosen by prior students is provided.
Specific Requirements
- The research paper should be a maximum of 20 double-spaced pages in length (not including references, tables or figures generated)
- Use 12 point font, Times New Roman.
- 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. It should also include generally the theory behind the rehabilitative approach that is used in the 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 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, 6th edition of the APA to determine the appropriate methods for citing research in your research paper and for creating your list of references.

Neuropsychological Rehabilitation
Some suggestions of research topics chosen by previous students

Multiple Sclerosis and Attention: A Computer Training Program for Sustained Attention Deficits in Multiple Sclerosis Patients

Improving memory in old age by positive self stereotyping
The Effect of Constraint-induced Movement Therapy and Limb Activation Training on Adolescent Patients with Motor Neglect

Treatment of Attention Deficit Hyperactivity Disorder through Cognitive Rehabilitation

Hemineglect: Experimental Alert Study Design

Motor Error Awareness Therapy and Goal Management Training in Early-stage Huntington’s Disease Patients: A Novel Approach to Motor Disturbances

The Efficacy of Limb Activation Training for the Treatment of Upper-Body Hemiplegia Associated with Unilateral Visual Hemineglect

Antioxidants and Focused Memory Training: An Attempt to Impede the Progression from MCI to Alzheimer’s Disease

Visual Restitution Training with Attentional Cueing Causes Restoration of Vision in Patients with Visual Defects

Increasing the Autonomy of Amnesic Individuals: An Errorless Learning/Vanishing Cues Rehabilitation Program

Memory and Lifestyle Intervention in MS Patients

A multifaceted approach to rehabilitation for MCI patients

Employing Video Games to Maximize Spontaneous Recovery of Cognitive Functions in Traumatically Brain Injured Individuals

The effects of education, concentration and motivation in the cognitive rehabilitation of elderly with late-life depression

Parkinson’s Disease and Freezing of Gait Phenomenon

Effect of stress on cognitive functions and stress management in patients with cognitive disorders

Naturalistic neuropsychological rehabilitation of the Traumatically Brain-Injured Individuals