

## POTH 401 RESEARCH METHODS

**Credits:** 3

**Prerequisites:** Successful completion of previous year courses.

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Guest lecturers (see course schedule)

**Course Objective:** The purpose of this course is to expand knowledge and skills related to rehabilitation research, in order to critically appraise scientific evidence and to actively participate in clinical research projects.

**Course Structure:** Two (2) 1.5 sessions per week for 13 weeks. Lectures or self-directed sessions as appropriate.

**Student Learning Objectives:** Upon completion of this course the student will be able to:

1. Understand the role of rehabilitation research in evidence-based practice.
2. Identify the components and formulate clinical and research questions related to rehabilitation.
3. Understand questionnaire and survey design.
4. Describe the key features, strengths, weaknesses, and sources of bias of various experimental and observational study designs.
  - a. Cross-sectional
  - b. Case-control
  - c. Cohort
  - d. Randomized controlled trial
  - e. Single-subject, cross-over and quasi-experimental
5. Understand common approaches and methods of qualitative research.
6. Calculate and interpret diagnostic parameters of sensitivity, specificity, positive predictive value and negative predictive value.

7. Use appropriate terminology for describing and classifying study variables and outcome measures.
8. Understand and interpret the metric properties and practical considerations in the use of measures, in both clinical and research contexts.
9. Apply principles of knowledge translation to clinical examples, and identify common barriers to knowledge translation.
10. Understand and implement the key elements and processes in research ethics.
11. Describe the major types of economic and cost-effectiveness analyses, and calculate indices that reflect the benefits of health interventions.
12. Identify the steps and methods of a systematic review and interpret the basic findings of a systematic review.
13. Carry out critical appraisal of research articles, and formulate a summary of appraisal findings.

**Course Content:** See class schedule

**Course Materials:**

**Suggested text:** *Rehabilitation Research*. 4<sup>th</sup> ed. Carter, R.E., Lubinsky J., Domholdt E. Elsevier Saunders; St. Louis, Missouri, 2011.

**Additional readings:** Additional readings will be assigned during the course.

**Student Assignment and Evaluation:**

Assignment/Evaluation	Marks
Assignment 1	10
Assignment 2	15
Midterm exam	35
Final Paper	35
Participation	10

**The content and/or evaluation scheme in this course is subject to change.**

**Special Requirements for Course Completion and Program Continuation:**

In order to pass the course, a grade of at least C+ (60%) must be obtained as a total course mark. Please refer to the appropriate section in the Health Sciences Calendar on University regulations regarding final and supplemental examinations. The student's mark will be affected by late submission of the assignment.

This course falls under the regulations concerning individual and group evaluation. Please refer to the section on marks in the Rules and Regulations for Student Evaluation and Promotion of the Occupational and Physical Therapy Course Guides.

**Plagiarism/Academic Integrity:** "McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see [www.mcgill.ca/students/srr/honest/](http://www.mcgill.ca/students/srr/honest/) for more information.)

"L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le site [www.mcgill.ca/students/srr/honest/](http://www.mcgill.ca/students/srr/honest/))."

**Right to submit in English or French written work that is to be graded:** In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded.

*"Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue)."*

**Consequences of Not Completing Assignments as Requested:** An individual who does not complete a required assignment and does not have a university recognized reason for deferral would receive a 0 in that portion of the evaluation.

**Disability:** If you have a disability please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 398-6009 before you do this.