

COURSE GUIDE

Graduate Studies in Rehabilitation Science

2015-2016

Students preparing to register should consult the MINERVA Class Schedule for the most up-to-date list of courses available; courses may have been added, rescheduled or cancelled. Class Schedule lists courses by term and includes days, times, locations, and names of instructors.

To access MINERVA please log on to www.mcgill.ca, click on Current Students at the top of the page and then scroll down to the right hand side of the page and click on MINERVA. Login and then choose Class Schedule and proceed to look up the courses that you wish to take.

All research involving human subjects, including student projects conducted for thesis or course requirements, requires ethics review and approval before the research can begin.

Please consult the GPS web-page for guidelines and useful links at: www.mcgill.ca/secretariat/policies, then click on Research in the middle of the page.

If you have a **disability**, please contact the instructor to arrange a time to discuss your situation. It is helpful if you contact the Office for Students with Disabilities at 514-398-6009 before meeting with the instructor.

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)

POTH-508: Plasticity in Rehabilitation

Number of credits: 3

Course Coordinator: ***

Semester Offered: *Winter*

Not offered in 2015-16

Course Description: The course will examine neural processes that allow the functions of the nervous system to change. The professor will review experimental evidence for mechanisms that change neural connections thereby allowing the nervous system and the individual to which it belongs to adapt to new environmental conditions. The compensatory role of these mechanisms will be examined in several different disease processes. The course will consist of lectures and readings on the neural mechanisms and processes used by both the young and mature nervous system to adapt to novel situations and environments. The student will be asked to select a specific recognized rehabilitation intervention and to seek objective data that the intervention can bring about behavioural change through its influence on identified neuronal processes.

Specific Objectives

By the end of this course, the student will be able to:

1. Discuss the neural mechanisms available in young and mature nervous systems for functional compensation following injury.
2. Form an opinion about the validity of currently held theories in light of experimental data.
3. Evaluate several rehabilitation techniques in the context of recent research findings.

Required and/or Recommended Readings

1. Reference for background knowledge: Principles of Neural Science, Kandel et al, 2001 Elsevier
2. Selected readings to be determined by the students according to their chosen topic.

Method of Evaluation

Two oral presentations and a term paper (10%, 30%, 60%)

After several introductory lectures, students will select a clinically relevant topic to evaluate in the context of the material being presented. In the first oral presentation, students will explain their choice of topic. In the second oral presentation students will present their analysis of the problem in light of the literature found. The basis for the analysis will form the final, written report.

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)



POTH-603: Directed Practicum

Number of credits: 3

Semester Offered: *Fall/Winter*

Course Coordinator: Graduate Faculty

Course Description: A tutorial with directed practical experience in a clinical setting related to the student's clinical specialization, including curriculum development, and emphasizing current thought in rehabilitation.

Objectives:

1. Acquire extensive knowledge in the topic of interest.
2. Critically appraise the literature and discuss the evidence underlying current practice in their chosen area of specialization.
3. Demonstrate appropriate verbal and written communication skills in order to interact with patients, care-givers and other health care professionals.
4. Synthesize the information for oral and written presentation.

Required materials to be submitted to Graduate Program Director for pre-approval at least one week prior to last day to add classes.

Method of Evaluation: Varies according to practicum.

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)



POTH-604: Current Topics in Paediatrics

Number of credits: 3

Semester Offered: *Winter*

Course Coordinator: Dr. Marie Brossard-Racine

marie.brossardracine@mcgill.ca

Course Description: This course will provide an overview of current research in paediatrics.

Objectives:

1. Students will be exposed to the recent evidence emerging in a variety of issues in paediatric rehabilitation.
2. Students will participate in discussions aimed at exploring how new knowledge is translated into the clinical practice arena in the context of each topic.
3. Students will be presented with the challenges of promoting the uptake of new knowledge by clinicians in the health care system.

Readings: Copies of articles to read before a given session will be provided by the faculty member responsible for the session. These readings will either be e-mailed to students or will be available, at least one week prior to class, in the Secretarial Offices in Hosmer and in Davis House. Students are expected to have read the assigned readings prior to class and be prepared to discuss them and ask questions during class.

Method of Evaluation:

TBA

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)

POTH-610: Research Methodology

Number of credits: 4

Semester Offered: *Fall*

Course Coordinator: Dr. Nancy Mayo

nancy.mayo@mcgill.ca

Course Description: An advanced lecture and seminar course. The philosophy of scientific inquiry, principles of research design, and application of statistical techniques are discussed with special consideration given to research studies in healthcare and rehabilitation.

Objectives:

1. Formulate a research question
2. Identify the main sources of bias and evaluate their impact
3. Identify the research strategies to answer research questions without bias
4. Link statistical tests to the type of data collected
5. Present research material orally, succinctly and appropriately
6. Identify strengths and weaknesses in published research reports.

Required and/or Recommended Readings

Designing Clinical Research by SB Hulley, SR Cummings, WS Browner, and DG Grady (2006)
Physical Rehabilitation Outcome Measures II , E Finch, D Brooks, P Stratford, N Mayo (2002)

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)



POTH-614: Selected Topics in Rehabilitation Science

Number of credits: 2

Semester Offered: Fall

Course Coordinator: Dr. Eva Kehayia

eva.kehayia@mcgill.ca

Course Description: This is a weekly lecture and seminar course taught primarily by the faculty in the School of Physical and Occupational Therapy. It is designed to provide an overview of current research areas and issues in rehabilitation.

Objectives:

1. to expose students to the range of research areas included within the field of rehabilitation science in North America.
2. to alert students to the research opportunities available within the School of Physical and Occupational Therapy at McGill as well as in other institutions including the McGill affiliated hospitals or rehabilitation institutions.
3. to discuss current research issues and debate the methods used to deal with specific problems.
4. to describe the structure of the ICF and, using the core set, to link the ICF to clinical assessment and to map an existing health assessment to the ICF.
5. to search, identify, read, critically appraise, present and discuss the findings of scientific articles.

Course Design: The course is structured as a weekly two-hour session. The format of each session will be designed by the organizing faculty member(s), will be multi-modal and may be made up of a presentation, demonstration, discussion, participation in experiments or other group activities.

Readings: Copies of the articles that the student is to read before a given session will be provided by the faculty member responsible for the session. These readings will either be e-mailed to the students or will be available, at least one week prior to class, in the Secretarial Offices in Hosmer and in Davis House. Students are expected to have read the assigned readings prior to class and be prepared to discuss them and ask questions during class.

Evaluation: This course will be evaluated through three assignments. These assignments will consist of such activities as critical appraisals, class presentations, ethics reviews or literature summaries. Additional information can be found on the schedule.

Written assignments are to be double-spaced and created using a word processing program.

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)



POTH- 616/617/619: Seminars in Rehabilitation Science/Rehabilitation Seminars 1
An introduction to qualitative rehabilitation research

Number of credits: 1

Semester Offered: Fall

Course Coordinator:

Dr. Matthew Hunt

matthew.hunt@mcgill.ca

Eligible Graduate Students

Students in M.Sc. (Thesis) in Rehabilitation Science are required to register for POTH-616 and POTH-617 over two semesters. Students in the M.Sc. (Non-Thesis) Program in Rehabilitation Science are required to register for POTH-617 and POTH-619 over two semesters.

Course Description/Topic Description

This is a 1 credit, 6-week course that provides an introduction to qualitative inquiry in rehabilitation. Students will gain an understanding of prominent research paradigms, qualitative research methodologies, and qualitative research methods. Upon completion of the course, students will have an appreciation for, and broad understanding of, the application of qualitative inquiry in rehabilitation research.

Specific Objectives

By the end of this course, the student will be able to:

1. Articulate and actively interrogate different research paradigms
2. Describe and analyze differences between three major qualitative research methodologies (grounded theory, phenomenology, ethnography)
3. Outline research questions and identify relevant methods associated with three primary qualitative traditions (grounded theory, phenomenology, ethnography) in relation to their own domain of inquiry
4. Comprehend the paradigmatic and design elements that need to be considered in mixing research approaches and data sources

Course structure: 2-hour sessions, once per week, for 6 weeks (beginning the first week of October). Students will be required to conduct bridging activities between each class to engage with ideas and methods related to qualitative research. The final class will consist of student presentations.

Required and/or Recommended Readings

Assigned and recommended readings for each class will be made available to the students at least one week in advance.

Method of Evaluation

Evaluation will consist of a presentation given during the final class (30%), a 3-4 page written assignment due 2 weeks after the final class (60%), and participation (10%)

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)



POTH-618: Topics in Rehabilitation

Number of credits: 3

Semester Offered: *Fall /Winter*

Course Coordinator: Graduate Faculty

Course Description: This is a directed reading course on a topic in rehabilitation science. The student will acquire extensive knowledge in the topic of interest and understand the strengths and limitations of the current body of work in the area. Please note that students must aim at working on a topic with wider scope than that of their thesis or research project.

Pre-Approval: Student must submit written request to Graduate Program Director in order to register. The instructor for this course must be a faculty member other than the student's supervisor. The course instructor must submit 1) course objectives, 2) outline of content to be reviewed, 3) reading list (required readings) and 4) method of evaluation to the Graduate Program Director for approval. Materials must be submitted at least one week before last day to add classes for the term.

Objectives:

1. Acquire extensive knowledge in the topic of interest and understand the strengths and limitations of the current body of work in the area.
2. Gain expertise in organizing and communicating information orally and in succinctly synthesized written reviews.

Method of Evaluation: Critical appraisals presented orally (50%), 1-2 written structured review(s) (may include a systematic review) of the topic area (50%).

Note: Students are encouraged to plan this course with the instructor at least one semester before intended enrolment.

Right to write in (English or in) French: 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.

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/academicrights/integrity for more information)



POTH-620: Measurement in Rehabilitation 1

Number of credits: 3

Semester offered: Winter

Course Coordinator:

Dr. Richard Preuss

richard.preuss@mcgill.ca

Course Description/Topic Description

The course will provide a theoretical basis for quantitative measurement techniques commonly used for assessment, diagnosis, treatment and research in rehabilitation. The course will introduce approaches and instrumentation used to measure and to evaluate biomechanical and physiological variables for quantitative analysis of human performance. Techniques for recording, processing and analysing digital signals will be introduced in the context of electrophysiological signals, kinetics and kinematics of human movement as well as in the context of the imaging techniques that allow rapid visualization of body structures and functions.

Specific Objectives

By the end of the course, the student should be able to:

1. Explain the basic principles that allow the collection of quantitative data using modern electronic equipment frequently found in a clinical setting.
2. Demonstrate why the acquisition, conditioning, processing, analysis and graphical presentation of electrical signals from sensors and transducers are useful and necessary.
3. Analyze the assumptions and simplifications that exist in laboratory and clinical research due to the inherent limitations of the instrumentation and measurement techniques.
4. Describe the use of sensors and transducers for biomedical measurements in laboratory and Clinical settings.
5. Design the theoretical and practical implementation of quantitative assessment procedures and analytical methods in a research project in clinical rehabilitation.

Course Structure

The course is comprised of 3-hour weekly sessions in the winter semester (14 sessions, from January to April). It will be divided into lectures, seminars and laboratory demonstrations presented by guest lecturers, and presentations by students.

Required and/or Recommended Readings

Occasionally a set of the assigned readings will be made available to the students at least one week prior to each lecture. Lecture notes will also be made available, when possible.

Method of Evaluation

The students will be expected to:

1) Prepare a summary of the individual lectures:

- Specifying three important features of the lecture.
- Specifying its usefulness in rehabilitation.
- Limit: less than 2 pages for each lecture, Value: 40% of the final grade.

2) Give a 30-minute oral explanation of how a commonly used measuring device works in terms of the physical principles underlying its function and how it is used to obtain data to test hypotheses. The professor will offer some examples of appropriate topics. The topic chosen by the student must be approved by the professor. Value: 30% of the final grade.

3) Write a report on the same measurement device, explaining its principle of operation and how it is used to obtain quantitative measures.

- The purpose of the written report is to explain how a particular measuring system works (physical principles that underlie its functions), how the desired data can be obtained to test a specific hypothesis and why it is useful in rehabilitation with references to justify and document the validity of the explanation.
- Size: not more than 12, typed, double-spaced pages (Arial 10pt or Times New Roman 12pt).
- Value: 30% of the final grade.



POTH- 628: An introductory course in regression analysis

Number of credits: 3

Semester Offered: Winter

Course Coordinators: TBA

Course Description: The two most commonly used regression modeling approaches in the health sciences, linear and logistic regression models are presented. These models can be used for estimating the association between an outcome variable (which is either continuous or dichotomous) and one or more covariates.

Objectives:

The student will learn:

- General concepts behind statistical model building: Why do we need statistical models?
- How to determine the kind of model needed based on: i) the biological/theoretical model, ii) the structure of the data
- How to carry out preparatory descriptive analyses prior to regression modeling
- How to fit, interpret and evaluate some linear and logistic regression models
- Relationship between regression models and concepts learned earlier (descriptive statistics, confounding, effect modification)

Prerequisite: Biostatistics for Health Professionals (EPIB-507) or equivalent.

Recommended Reading:

- Applied Biostatistics for the Health Sciences: Richard J. Rossi (Montana Tech, The Univ. of Montana) <http://ca.wiley.com/WileyCDA/WileyTitle/productCd-0470147644.html>
- Regression Methods in Biostatistics: Linear, Logistic, Survival and Repeated Measures Models Vittinghoff, Shiboski, Glidden, McCulloch (University of California at San Francisco) <http://www.epibiostat.ucsf.edu/biostat/vgsm/>

Method of Evaluation:

5 assignments (80%) + 1 project (20%)



POTH- 630: Measurement in Rehabilitation II

Number of credits: 3

Semester Offered: Winter

Course Coordinators:

Dr. Sara Ahmed

sara.ahmed@mcgill.ca

Course Description: Theoretical and practical basis for measurement in rehabilitation research. Introduction to measurement theory, scale development and related statistics, approaches and instruments used to access outcomes in patients with musculoskeletal, neurological, cardiovascular, respiratory, psychiatric or psychological conditions.

Objectives:

1. Design a health-related questionnaire.
2. Describe the theory of measurement.
3. Select and apply statistical tests employed in the assessment of psychometric properties of measurement instruments.
4. Design a protocol for the development and validation of a clinical tool.
5. Describe the foundations and applications of health economics in rehabilitation research.
6. Describe examples of and critically evaluate existing measures of clinical and performance status. (i.e. pain, activities of daily living, health, quality of life, mood, cognition, fatigue, development, mobility, impairment, activity, participation, reintegration, satisfaction, adherence, etc.)
7. Critically appraise published articles reporting the development and validation of an instrument.
8. Interact professionally with small groups of other students to complete assignments.

Prerequisite: Biostatistics for Health Professionals (EPIB-507) or equivalent.

Required and/or Recommended Reading: Required reading will be compiled in a Course Pack along with copies of the transparencies used by the instructors. The Course Pack may be purchased by the students. The textbook to be used is Health Measurement Scales: A Practical Guide to their Development and Use.

Method of Evaluation: Questionnaire development (15%), Research protocol (40%), Peer protocol critiques (10%), Examination - a two-hour open book exam (35%).



POTH-631: Research Proposal

****NOT OFFERED IN 2015-2016

Number of credits: 3

Semester Offered: Winter

Course Coordinators:

Dr. Nancy Mayo
Dr. Robyn Tamblyn

nancy.mayo@mcgill.ca
robyn.tamblyn@mcgill.ca

Course Description: The course covers issues involved in the development of a research protocol. The presentation of a written thesis proposal is required by the end of the course. This document will serve as the basis for an oral presentation to the student's supervisory committee which will also review the written proposal.

Prerequisites

1. Research Methods (POTH-610)
2. Statistics (EPIB-507 or equivalent)

Note: Multivariate statistics can be taken concurrently

Objectives: By the end of this course, the student will be able to write a research proposal that will serve as a basis for the student's written and oral presentation of the thesis project.

Method of Evaluation: An equal weight of peer review and written protocol.



POTH 639: Motor Control

Number of credits: 3

Semester Offered: *Fall*

Course Coordinator: Dr. Mindy Levin

mindy.levin@mcgill.ca

Course Structure: One to two 3 hour lectures/labs per week

Course Description: Theoretical course with practical demonstrations and applications providing an overview of basic anatomy of the motor system, current knowledge of how movement is controlled by the nervous system and how motor skills are learned. Models of motor control will be introduced and discussed including the action-perception theory, force control theory, internal models and the equilibrium point theory. Motor learning theories related to muscular and neurological plasticity as it applies to orthopaedic and neurology clinical practice will be introduced and discussed.

General Learning Outcomes: The student will:

1. Understand and apply current theories of the production and organization of movement;
2. Understand and apply current theories of motor learning and use of extrinsic information;
3. Apply elements of motor control used to assess movement quality and motor learning in the evaluation and treatment of simulated cases in orthopaedics and neurology.

Specific Learning Outcomes: On completion of this course the student will be able to:

1. Critically discuss the main aspects of current models of motor control;
2. Critically discuss the main aspects of theories of motor learning;
3. Appraise the evidence for the effectiveness of different types and delivery schedules of feedback for motor learning in different patient populations;
4. Integrate motor control and motor learning theories in the design of treatment approaches to optimize motor function in different patient populations.



Course Content:

1. Introduction: Course content and requirements
Review of basic anatomy and physiology of the sensorimotor system
2. Motor Control Theories 1: historical perspective, philosophy of motor control, early motor control theories starting from Sherrington (e.g., motor programming, schema theory).
3. Motor Control Theories 2: dynamical approaches/modeling/equilibrium-point theory
4. Motor Control Theories 3 – equilibrium point theory, Controversies in motor control
5. Motor Learning 1 - historical overview and current theories
6. Motor Learning 2 – used of enhanced information – feedback
7. Neural plasticity, compensation and recovery
8. Approaches to clinical evaluation and measurement

*** Note:** Some lectures/labs will be given in different buildings across the campus, and sometimes off campus.

Instructional Methods: The course combines lectures, labs and small group presentations

Required and/or Recommended Reading:

Required Textbook: Mark L. Latash. Fundamentals of Motor Control, 1st Edition. 2012 Imprint: Academic Press ISBN: 9780124159563

Suggested Readings:

Kandel and Schwartz – Principles of Neural Science. Ch.19,35 (Ghez),37,38,40-42

Boyd LA, Winstein CJ. Explicit information interferes with implicit motor learning of both continuous and discrete movement tasks after stroke. *Journal of Neurologic Physical Therapy*. 30:46-57, 2006

Calota A., Feldman A.G., Levin M.F. Spasticity measurement based on tonic stretch reflex threshold in stroke using a portable device. *Clinical Neurophysiology*, 119:2329-2337, 2008

Calota A., Levin M.F. Tonic stretch reflex threshold as a measure of spasticity: implications for clinical practice. *Topics in Stroke Rehabilitation*, 16(3):177-188, 2009

Greeno J.G. Gibson's affordances. *Psychological Review* 101:336-342, 1994

Gibson JJ. Reasons for Realism. Chapter 4.9. Erlbaum: New Jersey 1982

Levin MF, Panturin E. Sensorimotor integration for functional recovery and the Bobath approach. *Motor Control* 15(2): 285-301, 2011

Turvey MT, Fitch HL, Tuller B. The Bernstein Perspective. I. The Problem of degrees of freedom and context-conditioned variability. P. 239-262.

Winstein CJ, Meriens A.S., Sullivan K.J. Motor learning after unilateral brain damage. *Neuropsychologia*, 37:975-987, 1999. ,

Method of Evaluation:

*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. **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/academicrights/integrity for more information).*

Assignment/evaluation	Description	%
Class participation	Attendance in class and participation in small group discussions	10%
Reading assignments worth 20% each - individual	Students will be assigned research papers to read for which they will prepare a 5 page (1.5 spacing, 12 Times New Roman font) assignment that includes a) a summary of the papers and b) an application of the ideas presented in the paper to physical therapy or sport.	40%
Lab Reports	There will be 2 lab reports worth 10% each. Students will be working in assigned groups.	20%
In class presentation	Students in small groups will present applications of course material (motor control theory and motor learning) to specific patient-based cases.	30%

Special Requirements for Course Completion and Program Continuation: In order to pass the course, a grade of at least B- (70%) must be obtained as a total course mark. Please refer to Section 3.6 Examinations, of the 2011-2012 [McGill University Health Sciences Calendar](#) for information on University regulations regarding final examinations and supplementals.

This course falls under the regulations concerning theoretical and practical evaluation as well as individual and group evaluation. Please refer to the section on Marks in the Rules and Regulations.

Attendance: Students who have missed more than 10% of small group sessions without prior approval will lose 10% of their total course mark.

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.



POTH-661/662: Research Project

Number of credits: 15

Semester Offered: N/A

Course Coordinator: Graduate Faculty

Two courses totalling 15 credits

POTH-661: 7 credits

POTH-662: 8 credits

Restriction: M.Sc. NT students only

Note: Registration for POTH-662 requires pre-approval by Graduate Program Director based on email from Supervisor to Graduate Program Director indicating satisfactory progress in POTH 661.

Course Description: Allows students to apply principles learned in the Graduate Program to a particular area of clinical interest to the Graduate Student. It is recommended (although not required) that the project be an extension of the Directed Practicum experience, with the aim of promoting or enhancing evidence-based practice in that field of interest. The research project does not require an original protocol or original data collection. An exhaustive review of work in the particular field of study or original scholarship would be beyond the scope of a non-thesis project.

Objectives: The student must demonstrate 10 of the 28 learning objectives listed on the next page. No specific criteria is “compulsory” thus allowing for a broad range of projects to meet the criteria; however, each project must meet at least 1 criterion in each division. These are broadly divided into 1) Introduction and background; 2) methodology and data collection; 3) results and analysis; and 4) Presentation of results and conclusions. See table below.

Method of Evaluation: Pass / Fail

POTH 661-2 Objectives

Introduction and background Formulating a research question Critically reviewing the literature (the breadth and depth should be appropriate to the degree being pursued) Developing background information supporting the research question Presenting a theoretical model of the relationships under study Systematic literature review	MET
Methodology and data collection Choosing measures to answer the question Developing a measure Developing or refining a questionnaire Testing the measurement properties of a measure or questionnaire Writing a consent form Recruiting subjects into a research study Collecting data from subjects through interviews or physical tests Management and study co-ordination Choosing a design to answer the question Creating a computerized method of managing the data (database design) Entering data into a computerized data base Verifying accuracy and completeness of data	
Results and analysis Manipulating data to create new variables Calculating descriptive statistics Performing basic inferential statistics such as - linear regression or logistic regression, analysis of variance, t-tests, Chi-square tests, etc. Using complex statistical models such as - Hierarchical linear models, Poisson models, ordinal regression, categorical regression, survival analysis, Cox proportional models, Markov models etc. Meta-analysis Performing basic qualitative analyses such as - categorizing and contextualizing, reflexivity, transparency, constant comparison, etc. Performing complex qualitative analyses such as	
Presentation of results and conclusions Performing complex modeling strategies incorporating aspects of the theoretical model Interpreting results from statistical or qualitative analyses Casting tables to present results	

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. **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/academicrights/integrity for more information).



POTH-664: Neuroscience and Behavioural Perspectives of Chronic Pain

Number of credits: 3

Course Coordinator: Lesley Norris Singer

Semester Offered: *Online Fall*

lesley.norris@mcgill.ca

Course Description: The course is designed to review the basic neuroscience of pain and the interrelationship between psychological, physiological and environmental processes in pain perception. Neuro-anatomical, physiological, pharmacological, and biochemical mechanisms involved in nociception are presented. Neural changes that accompany chronicity are examined. The contributions of psychological factors such as mood and cognition, as well as environmental factors are examined as contributors to the pain experience.

Conceptual paradigms are introduced that allow integration of the biomedical and psychosocial factors to understand the pain experience. These lead to an understanding of how psychological and environmental factors can modify or maintain pain perception and behavior and how these might be modified to manage the pain experience.

Specific Objectives:

- 1) To develop an understanding of the basic neuroscience of pain, with an emphasis on mechanisms of chronic pain.
- 2) To explore the interrelationship between psychological, physiological and environmental processes in pain perception and
- 3) To consider how this new knowledge provides clinical options for modifying and improving the pain experience for the patient.

By the end of the course the student is expected to:

- 1) Appreciate the major contributors to chronic pain within the biopsychosocial model,
- 2) Discuss essential concepts and details of mechanisms based on the latest available research evidence,
- 3) Understand why and how to integrate a biopsychosocial approach to assessment and management of pain problems.

Structure:

The course content is divided into 13 sessions. Three of those sessions are exercises created by the students that serve as evaluation modules. The other ten sessions consist of lectures, related reading assignments, an online discussions. For some activities, the students will be divided in groups and will be required to participate in various exercises such as preparing a case history, evaluation of a patient or a treatment plan for a several chronic disorders.

*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. **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/academicrights/integrity for more information).*

Method of Evaluation:

Item	Weighting
Participation - Online discussion activity	15%
Designing a treatment plan (Unit 12)	35%
Case presentation and discussion (Unit 5)	25%
Therapeutic intervention (Unit 11)	25%



POTH-663: Pain Assessment in Clinical Practice

Number of credits: 3

Course Coordinator: Mark Ware,
Céline Gélinas

Semester Offered: *Online Winter*

mark.ware@mcgill.ca

celine.gelinas@mcgill.ca

Course Description: This course will assist learners to develop approaches to the global assessment of the patient with pain (acute and chronic) to guide diagnosis, care and treatment and the identification of complex cases. This will include conventional health assessment techniques (interview and physical examination), pain assessment tools, psychosocial assessment, specific techniques (e.g. examination of lumbar spine, functionality assessments), and the role and value of diagnostic studies. The course will be offered through various strategies including online Power Point presentations, weekly readings, case studies, using examples from participant's own practices; interdisciplinary, through working with tutors from a variety of backgrounds; and interactive, through the use of online forums and chatrooms.

Specific Objectives:

[Assessment here refers to patient evaluation at first visit and follow-up with respect to aspects of pain syndrome and outcomes]

1. To review definitions and types of pain (i.e., acute, chronic, nociceptive, neuropathic) and appreciate how assessment techniques differentiate between pain syndromes
2. To be able to conduct a health history, including medical, physical and psychosocial factors and comorbidities that could contribute to the perception and management of chronic pain
3. To be able to complete physical examination adapted to the patient's condition and pain problem, and recognize normal and abnormal findings
4. To understand the psychometric properties (i.e. reliability, and validity) related to the use of pain assessment tools for their appropriate selection and optimal use in clinical practice with different populations from infancy to old age
5. To identify psychosocial factors relevant to pain assessment
6. To appreciate the role of objective functional assessments (e.g. six minute walk; sit-to-stand test)
7. To appreciate use of screening tools for common issues such as addiction risk and problematic drug use
8. To understand when to request and how to interpret common diagnostic tests
9. To use assessment findings for the establishment of the patient's care plan and treatment for pain management
10. To be able to conduct assessment of effectiveness of therapy
11. To identify and address communication issues in patient assessment
12. To be aware of the importance of documentation of assessment findings

*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. **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/academicrights/integrity for more information).*



Structure:

The course content is divided into 13 sessions plus a case presentation session. These consist of recorded lectures, reading assignments, online discussions, and an online presentation by students. During the course, students will be expected to provide a case history, conduct a health assessment, request and consider diagnostic tests, and begin to develop the components of a treatment plan. They will also be expected to identify what health-related outcomes they will monitor to assess response to treatment, and to document and communicate their findings.

The objectives will be met using common pain conditions and syndromes in a case-based format, relevant to students' practice and experience.

Method of Evaluation:

Participation (15%)

Case presentation (45%)

Written assignment (20%)

Practicum (20%)



POTH-665: Interdisciplinary Management of Chronic Pain

Number of credits: 3

Semester Offered: *Online Fall*

Course Coordinator: Daniel Ziemianski
Lesley Norris Singer,

daniel.ziemianski@mcgill.ca
lesley.norris@mcgill.ca

Course Description: This course has been designed for the online chronic pain management certificate. The content has been provided by clinical experts from multiple disciplines, emphasizing both discipline-specific and interdisciplinary approaches to managing and treating chronic pain. Pharmacologic and non-pharmacologic intervention strategies will be elaborated upon to help patients decrease their pain and develop coping strategies. Topics will also include complementary and alternative medicine approaches. The course is intended to update your knowledge and skills in the effective management of chronic pain.

Specific Objectives:

This course provides:

- 1) An opportunity to learn about current interdisciplinary modalities used in the management of chronic pain;
- 2) Discussion on the relationships between pharmacologic, psychological, educational and physical treatment approaches;
- 3) Exposure to various clinical options that should be considered for modifying and alleviating pain for the client.

By the end of the course the student is expected to:

- 1) appreciate the various treatment options and guidelines for chronic pain,
- 2) be able to design a treatment plan for a patient experiencing chronic pain,
- 3) discuss the evidence available for the treatment options
- 4) understand and explain the mechanisms by which a treatment works, if known,
- 5) consider how this new knowledge should influence clinical decision making, to alleviate pain
- 6) be able to use appropriate outcome measures to monitor progress
- 7) be able to provide patients with the tools they need for self-management and confronting periods of exacerbation.

*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. **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/academicrights/integrity for more information).*

**Structure:**

The course content is divided into 14 sessions, including assignments and presentations. These consist of videotaped lectures and a related reading assignment, online discussions, online presentations by student (alone and in groups), videos and case vignettes. During the course, students will be divided into groups and will be required to develop a treatment plan for an individual with a specific disorder involving chronic pain. As well they will participate in a clinical exercise related to the development of a treatment plan for a patient with a specific pain condition.

Method of Evaluation:

Participation (15%)

Assignment 1 (45%)

Assignment 2 (20%)

Presentation (20%)



POTH-666: Common Clinical Pain Syndromes

Number of credits: 3

Semester Offered: *Online Winter*

Course Coordinator: Kimberley Smalridge

kimberley.smalridge@mcgill.ca

Course Description: The course is designed to review the common clinical pain syndromes that health care professionals will encounter in practice. This will give students the opportunity to build upon their previous learning skills and integrate the pain science, evaluation and treatment approaches they have learned.

Course Objectives:

- 1) Apply newly integrated knowledge of pain science and interdisciplinary practices in common /complex chronic pain syndrome through the development of assessment and treatment plans.
- 2) Identify the definition, classification, epidemiology, and mechanisms of the most common pain syndromes, and the present scientific evidence related to specific assessment and intervention (management), prognosis and or expected outcome.
- 3) Demonstrate the ability to recognize and decide which patients may require further professional opinion.

Method of Evaluation:

Participation (15%)

Online Quizzes (45%)

Final assignment (40%)

*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. **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/academicrights/integrity for more information).*



POTH-673: Screening for At-Risk Drivers

Number of credits: 3

Semester Offered: *Online Fall*

Course Coordinator:

Dana Benoit

dana.benoit@mcgill.ca

Course Description: Principles for screening at-risk disabled drivers. Students must be comfortable in basic computer use. Familiarity with the internet and word processing skills are essential for successful orientation through the course.

Objectives:

1. Identify the component skills required to drive a motorized vehicle and analyze the potential impact of various functional deficits on the driving task;
2. Invoke different theoretical models of driving behaviour in order to focus the clinical screening of at-risk drivers;
3. Identify the regulations and legal aspects of driving and licensure;
4. Explain the screening principles and apply correct screening procedures in order to identify at-risk drivers within the continuum of the health care system;
5. Identify clients in need of referral to centers offering specialized driving evaluation services.

Method of evaluation: 4 exercises (18% total), 3 assignments (42% total), and final written exam (proctored) (40% total).



POTH-674: Assessing Driving Ability

Number of credits: 3

Semester Offered: *Online Winter*

Course Coordinator: Alyssa Merilees

Alyssa.Merilees.CLETHB@ssss.gouv.qc.ca

Course Description: Principles of assessment of driving performance in several at-risk populations.

*Students must be comfortable in basic computer use. Familiarity with the internet and word processing skills are essential for successful orientation through the course.

Pre-requisites: Successful completion of POTH-673 Screening for At-Risk Drivers.

Objectives:

1. Distinguish between various off-road evaluations, their strengths and weaknesses for the assessment of the prerequisite skills required for driving;
2. Competently analyze newly developed assessment tools as they become available. Being able to determine the quality of tools will better enable the clinician to make decisions regarding the value of using specific tools for specific clientele;
3. Create a driving assessment procedure relevant to the assessment of an individual client;
4. Map out a driving route and conduct an on-road driving assessment that captures the key components required to evaluate on-road driving ability;
5. Prescribe basic controls and technical driving aids;
6. Prepare summary reports required by licensing bodies;
7. Describe the debriefing process in informing the client and the key stakeholders about the driving assessment outcomes;
8. Describe the legal implications and professional responsibilities of a driving evaluator.

Method of Evaluation: 10 exercises (30%), 2 assignments (25%), and final written exam (proctored) (45%).

*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. **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/academicrights/integrity for more information).*



POTH 675- Driving Assessment Practicum

Number of credits: 3

Semester Offered: Online Summer

Course Coordinator:

Dana Benoit

dana_benoit@ssss.gouv.qc.ca

Course Description: This tutorial with directed practical experience in a clinical setting related to driving evaluation is a sequel to the course *Assessing the ability to drive a motor vehicle*. It seeks to integrate acquired knowledge into clinical practice and emphasizes the use of evidence-based practice.

*Students must be comfortable in basic computer use. Familiarity with the internet and word processing skills are essential for successful orientation through the course.

Pre-requisite courses: Screening for At-Risk Drivers (POTH-673) and Assessing Driving Ability (POTH-674)

Objectives:

1. Have mastered the necessary skills to assess driving ability in disabled populations;
2. Have mastered the necessary skills to recommend basic adaptive equipment for driving;
3. Be able to incorporate evidence-based knowledge into their clinical practice related to driving evaluation;
4. Demonstrate appropriate verbal and written communication skills in order to interact with clients, caregivers and other health care professionals.

Method of Evaluation: Pre-workshop Assignment: 2 case studies (30%), 1 case study (25%), Final Exam (Practical exam: 30% and Proctored Written exam: 15%).

*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. **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/academicrights/integrity for more information).*



POTH-676: Adaptive Equipment and Driving

Number of credits: 3

Semester Offered: Online Fall

Course Coordinator:

Dana Benoit

dana_benoit@ssss.gouv.qc.ca

Pre-requisite courses: Screening for At-Risk Drivers (POTH-673), Assessing Driving Ability (POTH-674) and Driving Assessment Practicum (POTH-675).

Course Description: Prescription of complex adaptive equipment for driving and procedures of full van modifications. Safety considerations, vehicle choice and importance of driving retraining (specifically with adaptive equipment) are addressed.

*Students must be comfortable in basic computer use. Familiarity with the internet and word processing skills are essential for successful orientation through the course.

Objectives:

1. Determine the most appropriate adaptive driving aids to meet the complex client's needs through a systematic clinical assessment process;
2. Select the adaptive automotive technology that will most appropriately meet the client's needs, based on findings gained during both the clinical assessment and the equipment verification process;
3. Describe the part a detailed recommendation plays when obtaining a quote, applying for financial aid and undertaking the final fitting process;
4. Apply the theoretical concepts assimilated during the online component of the course to the assessment of clients in a real clinical setting;
5. Independently assess the vehicle modification and adaptive equipment needs of a complex client.

Method of Evaluation: Three written assignments (45%), final proctored written exam (30%) and workshop performance evaluation (25%).

*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. **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/academicrights/integrity for more information).*



POTH-677: Retraining Driving Skills

Number of credits: 3

Semester Offered: Online Winter

Course Coordinator: Dr. Isabelle Gélinas

isabelle.gelinas@mcgill.ca

Course Description: Principles of retraining driving skills in various clienteles through the use of different modalities. Several retraining methods will be analyzed, including driving simulators, visual training, on-road training, and compensatory techniques.

Pre-requisite courses: Screening for At-Risk Drivers (POTH-673), Assessing Driving Ability (POTH-674), and Driving Assessment Practicum (POTH-675).

Objectives:

1. Understand the different areas of intervention in driving rehabilitation and the roles of the main players involved;
2. Explain the principles of teaching and learning applied to driver rehabilitation;
3. Appreciate the nature of the work of the occupational therapist with the driving instructor when training disabled drivers;
4. Select different modalities that can be used to train driving skills;
5. Apply the knowledge to specific populations;
6. Understand the importance of prevention to promote safe driving;
7. Recognize the importance of providing support to client when driving cessation is necessary.

Method of Evaluation: 7 assignments (45%), workshop exercise & participation (15%), and final written examination (proctored) (40%).

*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. **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/academicrights/integrity for more information).*



POTH 680- Knowledge Translation in Rehabilitation

Number of credits: 3

Semester Offered: Fall

Course Coordinator: Anita Menon

anita.menon@mcgill.ca

Course Description

This course focuses on the theory/application of knowledge translation (KT) in rehabilitation science with the goal of promoting evidence-based practice and research utilization. Various client groups and clinical settings will be examined from the perspective of how research evidence can be implemented into daily practice using effective KT interventions.

Objectives

On completion of this course, the student will be able to:

1. define and distinguish between terms commonly used in the knowledge translation (KT) literature;
2. identify gaps in best practices versus actual practices published in the research literature for a particular client group or clinical setting;
3. apply methods for critically appraising and synthesizing the research evidence (e.g. research questions in PICO format, use of practice guidelines and systematic reviews, levels of evidence versus the role of clinical reasoning and experience, etc.), as well as identify how this evidence can be “re-packaged” for a particular client group or clinical setting;
4. list barriers and facilitators to KT and uptake of best practices and identify how they may act for a particular client group or clinical setting;
5. define and apply steps of the Knowledge-to-Action Model to specific clinical situations in order to propose KT interventions that close the knowledge gap and promote evidence-based practice;
6. list clinician and organizational characteristics that support the integration of evidence into practice and identify how they may act for a particular clinical program;
7. apply the current evidence regarding effective and non-effective KT interventions for developing an KT intervention plan for a real or hypothetical clinical setting;

Course Content

The focus of the course will be on the theory and application of KT in rehabilitation science with the goal of promoting evidence-based practice and research utilization. Various client groups and clinical settings will be examined from the perspective of how research evidence can be implemented into daily practice through the use of effective KT interventions. The content of the course will be grounded in the Knowledge to Action Model (Graham et al, 2006), however other KT models will be discussed.

*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. **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/academicrights/integrity for more information).*



Instructional Methods

The course will use brief lectures, readings, in-class assignments, interactive group discussions, case studies and web-based learning, in order to help students master the theoretical concepts and practical application of KT principles. The instructors will not be explicitly lecturing on the knowledge or practice gaps that are specific to each student's area of interest. Students are expected to find this literature in a self-directed manner in order to complement their understanding of the practice gaps, if deemed necessary. The main portion of each class will be devoted to the theory and application of knowledge translation in rehabilitation science with the goal of promoting evidence-based practice. Presentation slides will be made available following the end of each session.

Method of Evaluation

- Outline of KT grant proposal 10%
- KT grant proposal (8 pages): written (40%) and oral (20%) 60%
- Assignments (3 X 10% per assignments) 30%

The main assignment is the KT grant proposal. All formative/summative assignments throughout the term will serve to inform the design and completion of this project.

Required and/or Recommended Reading:

Each class will have a designated list of online readings and class notes, all of which will be posted on myCourses. It is the responsibility of the student to read all assigned course materials prior to the lectures.

Required Book (available as e-book from library)

Straus S, Tetroe J, Graham ID. *Knowledge translation in health care: moving from evidence to practice*. Wiley-Blackwell, BMJI Books, 2009.

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change

Attendance

Students are expected to attend classes. It is the responsibility of each student to attend classes prepared and be actively involved. Although attendance will not be taken, the materials covered in class will be subject to evaluation. It is common professional courtesy to attend classes scheduled in health care institutions.

Consequences of not completing assignments as requested

Assignments not completed on time will be penalized accordingly. In the event that an assignment cannot be submitted on its due date, students are encouraged to inform the instructor as soon as possible.

Professional Conduct

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. **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/academicrights/integrity for more information).



Professionalism and accountability are expected throughout the course of the semester. This includes the on-going respectful nature of teacher-student as well as student-student interactions.

Statement regarding mobile computing and communications (MC2) devices

No audio or video recording of any kind is allowed in class without the explicit permission of the instructor. MC2 devices (cellular phones, blackberries, iPods, etc.) are not to be used for voice communication without the explicit permission of the instructor. Students must ask for permission from the instructor if any one of these devices needs to be on for the duration of class. Lap tops are permitted in class under the following condition(s): as negotiated by the class on the first day of term and only for note taking and consulting online resources. Non compliance with these guidelines will result in the student being asked to leave class. In the event of a second offence, the student will be asked to meet with the program director.

Dress Code:

Professionalism with respect to dressing is encouraged throughout the course of the semester especially while on site visits.

*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. **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/academicrights/integrity for more information).*



POTH 682 PROMOTING HEALTHY ACTIVITY

Number of credits: 2

Semester Offered: Winter

Course Coordinators: Deborah Da Costa
Sarah Marshall

deborah.dacosta@mcgill.ca
sarah.marshall@mcgill.ca

Course Description: This course will critically evaluate theory and empirical research related to healthy behaviour patterns. Determinants of health behaviours will be examined across the lifespan and in clinical populations. Application of behaviour change theories for the implementation and evaluation of health behaviour interventions will be discussed.

Course Structure: Two 2 hour classes per week for six weeks followed by student presentations in the week prior to the final exam. Classes will consist of lectures and group discussions.

Overall Objectives and Learning Objectives:

1. Describe relationships between health, wellness, illness and health promotion and the leadership role of physical therapists in promoting wellness.
 2. Demonstrate an understanding regarding the determinants of health and illness with emphasis on the link between health-enhancing/compromising behaviours and health.
 3. Explain and critique the various health behaviour theories.
 4. Identify determinants that influence health behaviours in specific chronic conditions and through the lifecycle (i.e. children/adolescents, adults, elderly)
 5. Apply behavioural theories to design evidence-informed interventions to promote health within the context of rehabilitation and inter-professional settings
 6. Understand a variety of systematic methods for obtaining and interpreting various forms of data needed to develop an individualized evidence-informed behavior change intervention for specific age groups and clinical populations.
 7. Critically interpret randomized and nonrandomized studies in the health behaviour change area.
- McGill University Master of Science Applied (Physical Therapy) Course Guide 2013-2014 2 .
8. Implement and critically evaluate interventions to promote health behaviour change and maintenance throughout the lifecycle and with clinical populations.

*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. **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/academicrights/integrity for more information).*

9. Identify and apply methods for evaluating effectiveness and adherence to behaviour change interventions and applying evidence-based strategies to modify interventions and goals to meet individual needs and preferences.
10. Critically evaluate the influence of psychosocial and personal variables on individual response to behaviour change interventions.
11. Be sensitive to ethical issues related to health behaviour change.

Instructional Method: During this course the following instructional approaches will be used: lectures, case-based discussions, group discussion and student presentations. Following the introductory lectures, students will select a presentation topic relevant to the course objectives and critically present an overview of the topic.

Course Material: On-line course pack and selected readings. Students will be expected to read the assigned reading before each class and be prepared for critical discussion during the class.

Copyright of course material: Instructor generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.

Method of Evaluation:	%
Assignments/Evaluations	
Thought Questions based on assigned readings	20%
Group Oral Presentation/Poster Handout (25% for the oral part and 15% for a poster presentation summary which the group will distribute to the rest of the class in a poster handout format).	40%
Final Examination (written)	35% (multiple choice)

*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. **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/academicrights/integrity for more information).*



POTH-684: Advanced Practice in Stroke Rehabilitation

Number of credits: 3

Semester Offered: Winter

Course Coordinator: Anita Menon

anita.menon@mcgill.ca

Course Description/Topic Description

This course will focus on current knowledge of best practices in the area of stroke rehabilitation. Throughout the course students will have the opportunity of learning the “how to” of diagnosis, assessment, and intervention using simulated patients as well as real patients. In addition, the content has been created to provide students with critical appraisal skills specific to stroke methodology that will further the acquisition of best practice information and principles in stroke rehabilitation.

The course is taught in a modular format. The first four introductory modules are required for all students. Nine optional modules are available out of which the student is to pick 6 as per their interest and professional background. Each of the 6 modules will focus on specific post-stroke sequelae and their management (problem identification and differential diagnosis; screening and assessment; intervention and referral practices).

Specific Objectives

On completion of this course the student will be able to:

1. describe the key interventions and best practices in stroke rehabilitation according to the Canadian best practice stroke rehabilitation guidelines as well as key differences in the guidelines in various high-income countries (USA, UK, Australia);
2. situate stroke rehabilitation assessment and intervention within the larger context of stroke management –including stroke risk factor reduction; stroke awareness by the public; Emergency management; prevalent medical issues and complications; and secondary stroke prevention;
3. critically appraise research findings (both assessment and intervention studies) specific to stroke rehabilitation presented in amongst others - computer databases, journal publications, and, systematic reviews. Being able to determine the quality of the research will better enable the clinicians to make decisions regarding the value of using specific stroke assessments and interventions with their clients;
4. identify new and emerging evidence regarding the effectiveness of stroke rehabilitation and the theory and research underpinning these interventions;
5. identify issues related to optimal timing, intensity and matching of stroke treatments based on individual patient traits, impairments and preferences;
6. create client-centered goals and a treatment plan for a patient with stroke within the context of an interdisciplinary team-based plan;

*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. **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/academicrights/integrity for more information).*

7. apply learning related to assessment and intervention choices through the practice of administering assessments and interventions in a “real life” patient and using trained actors and virtual scenarios;
8. describe characteristics of the work setting /environment (stroke units/structures/processes), and the clinician (habits, traits, self-efficacy) that enhance collaborative evidence-based practice to enhance patient outcomes in stroke rehabilitation.

Course content:

Module 1 – Stroke – An Overview

Module 2 – Acute Stroke Rehabilitation

Module 3 - Stroke Rehabilitation Inpatient and Longterm Management

Module 4 - Knowledge Acquisition

*Students are to pick 6 from the following 9 modules that each focus on one aspect of stroke rehabilitation.

Module 5 – Dysphagia - detection and treatment

Module 6 – Cognition and executive function post-stroke - detection and treatment

Module 7- Visual-perception – detection and treatment

Module 8 - Gait and balance assessment and training; aerobic exercise; falls prevention

Module 9 – Maximizing family functioning post-stroke – the evidence that attention on family matters

Module 10 - The upper limb – positioning, spasticity management, assessment and treatment

Module 11 – Sensory impairments - detection and treatment

Module 12 - Activities of daily living and community participation - assessment and treatment; aids and adaptations;

Module 13 – Driving safety post-stroke - assessment and intervention

Method of Evaluation: (please put all one one line)

- **Online self-administered quizzes (4 quizzes)** **50%**

These quizzes are designed to provide the student with an opportunity to test their knowledge and attain immediate feedback regarding their learning specific to key issues in stroke rehabilitation and specific to patient management – including identification of patient problems, making a differential diagnosis; as well as determining optimal assessment and intervention practices. The student will make use of the best practice guidelines and the evidence of intervention effectiveness to answer the quiz content.

- **Group assignment** **25%**

Students will work collaboratively on case studies that offer practical opportunities to apply assessment and treatment principles and discuss differential diagnosis; patient-specific characteristics and how these influence treatment choices. By working on this assessment in a group context, students are encouraged to practice applying the best practice knowledge to the

*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. **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/academicrights/integrity for more information).*



specific patient context using a “team approach”. The group assignments will be done online and in-person.

- **Participation in review of intervention evidence**

25%

Students will work in pairs to evaluate the current evidence specific to an intervention of interest; will critique the quality of the evidence and prepare recommendations specific to the use of the intervention according to patient-specific characteristics and time since stroke onset. This assignment should help the student operationalize the process by which they seek and evaluate new stroke evidence as it emerges. This assignment will be done online.

NOTE: "In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change."

*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. **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/academicrights/integrity for more information).*



POTH-685: Perception and Action

Number of credits: 3

Semester Offered: Fall

Course Coordinator:

Anouk Lamontagne, PhD, PT

anouk.lamontagne@mcgill.ca

Course Description/Topic Description

This is a weekly lecture/seminar/laboratory course. It is designed to expose students to new research concepts related to perception and action, with a special emphasis on the understanding of motor behaviour and the exploration of potential applications in rehabilitation.

Specific Objectives

By the end of the course, the student will be able to:

1. Understand the fundamentals of visual, auditory and vestibular function.
2. Explain the interactions between sensory perception and motor action in the control of voluntary movement, posture and locomotion.
3. Explain the role of executive cognitive function in motor performance.
4. Discuss and critique the theoretical and practical implementation of augmented sensory feedback and/or virtual reality therapies to improve motor performance and behaviour.
5. Participate, as a co-experimenter, in a practical demonstration/laboratory on a topic related to perception and action *.

Course content:

- I. Introduction: Sensory perception, movement and behaviour
- II. Visual perception (& movement)
- III. Auditory perception (& movement)
- IV. Vestibular function (& movement) V.
- Motor learning
- VI. Executive cognitive function and motor performance
- VII. Spatial memory and human navigation
- VIII. Sensorimotor integration in human posture
- IX. Sensorimotor integration in locomotion
- X. Rehabilitation Series: pain and movement
- XI. Rehabilitation Series: virtual reality and mobility
- XII. Rehabilitation Series: clinical cyberpsychology, CBT
- XIII. Practical/ Integration session

*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. **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/academicrights/integrity for more information).*



* Note: Each 3-hour session comprises of 2 hours of theory and 1 hour of practical laboratory demonstration in which students will be actively engaged. In order to have access to the different research facilities, some lectures/labs will be given in different buildings across the campus, and sometimes off campus.

Required and/or Recommended Readings

The reading list will be provided by the course coordinator in collaboration with the faculty member or guest speaker responsible for the session. Most journal articles are accessible online through McGill Library and can be saved and printed directly from the web. When not accessible online through McGill Library, a paper copy of the readings will be provided at least one week prior to the class. Students are expected to have read the assigned readings prior to the class and be prepared to discuss them and ask questions during the class.

Evaluation:

Mid-term exam (50%): An 'open book' written examination covering the material presented during session I to session VII.

Written Assignment (30%): A 5-page written assignment (double-spaced) on one of the topics presented in class. The questions will be provided by the researcher who presented the course material and marked by this same person.

Practical (20%): Attendance (5%) and active participation (15%) to practical demonstrations and laboratories will be marked by the course coordinator and, when applicable, by the guest speaker or researcher responsible for the session.



POTH-701: Ph.D. Comprehensive Examination

Number of credits: 0

Semester Offered: All

Course Coordinator:

Dr. Isabelle Gélinas
Dr. Laurie Snider

isabelle.gelinas@mcgill.ca
aurie.snider@mcgill.ca

Pre-requisite courses: All required coursework as determined by the Supervisory Committee of the student.

Please see separate pdf file for a complete description of the Ph.D. Comprehensive Examination on the Graduate Program website.

*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. **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/academicrights/integrity for more information).*



EDPH-689: Teaching and Learning in Higher Education

Number of credits: 3

Semester Offered: Fall /Winter

Course Coordinator:

Dianne Bateman (01)

Dianne.bateman@mcgill.ca

Course Description: Students will develop an understanding of teaching and learning as a process in which instruction is based on the learning to be accomplished. Students will design, develop, and evaluate a university course of their choice, and will develop facility and confidence in using teaching methods appropriate to their domains.

This course is being offered by the Faculty of Education please see their website for more information

*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. **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/academicrights/integrity for more information).*