POTH 639 MOTOR CONTROL

Credits:	3
Prerequisites:	none
Instructors:	Mindy Levin, PT, PhD (Co-ordinator) Office: Hosmer Room 433 514-398-3994 mindy.levin@mcgill.ca

Date and time of lectures: Mondays, 10:30-13:30, Thursdays 13:30-16:30 (2 lectures)

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

Calendar 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.

Online Course Evaluations: Students are strongly encouraged to complete the online course evaluations at the end of the term. Data obtained from these evaluations are used to provide instructors with feedback as well as for identifying situations where a course or instructor needs assistance. The feedback and suggestions contained in the responses are highly valued and helpful in ensuring that instructors make appropriate changes to courses as needed in order to facilitate student learning.

General Learning Outcomes:

With attendance and active participation in class and in laboratory activities, the student will be actively engaged in developing the following core competencies as they related to the roles for physiotherapists in the context of the practice of physiotherapy.

- 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

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