McGill

PHTH 606 INTRODUCTION TO PEDIATRIC PHYSICAL THERAPY

Credits: 2

Prerequisites: Successful completion of all Qualifying Year /U3 courses.

Course Coordinator and Instructors:

Coordinator and Main Instructor:
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Course Instructor :
TBD

Course Description: This two-credit course introduces the principles of pediatric habilitation and rehabilitation pertinent to the practice of physical therapy. The course is designed to expand students' previously acquired knowledge in anatomy, musculoskeletal, neurology and cardiorespiratory rehabilitation to the field of pediatric physical therapy, and to construct new clinical knowledge and skills specific to this population. The ICF is used as a framework for clinical reasoning, as well as to focus the assessment and the intervention planning. Through a philosophical approach that includes client/family-centred care, awareness of equity/diversity/inclusion, psychosocial dimensions of disability, and accountability/evidence-based practice as well as by emphasizing clinical reasoning, this practical and problem-based course, applies the frameworks of neurological, musculoskeletal and cardiorespiratory rehabilitation to the assessment and treatment of various paediatric conditions.

Course Structure and Instructional Method: ***This course is delivered in a "flipped classroom" model***. Theoretical content will be presented in the form of pre-recorded material and readings to be reviewed by students prior to class time, while student engagement will be prioritized throughout the semester in weekly smaller group in-person case-based discussions and practical skills teaching (2 hours per week during class time). Students are expected to be available during scheduled class time (Friday from 8h30 to 11h30), all in-person activities will take place during that time. All class materials will be posted on myCourses 5-7 days prior to scheduled class time for the week.

Student Learning Outcomes:

This course will cover essential competencies and milestones related to the domains of Physiotherapy expertise, communication, collaboration, and professionalism. Upon completion of this course, the student will be able to:

Learning outcomes	Related entry-to practice milestones
Describe age-appropriate milestones for infants and preschool children in the following domains: gross motor, fine motor, communication, cognitive, and personal-social.	n/a
Analyze the typical sequence of early motor development, as well as gait development, and identify important components of movement acquisition. This also includes being able to discuss potential factors influencing the acquisition of basic and functional motor abilities in infancy and early childhood.	n/a
Explain the essential pathophysiology and consequences of common musculoskeletal, neurological and cardiorespiratory paediatric disorders.	n/a
Use a family-centered approach when approaching the child and their parents to obtain information about their expectations, health, associated history, previous health interventions, and associated outcomes to determine indications and contra-indications to physiotherapy intervention in children	1.1.1; 1.1.2; 1.1.3; 1.1.5; 1.1.6; 1.3.1; 1.3.2; 1.3.4; 1.3.5; 5.1.3
Collect assessment data relevant to the child's and family's needs and pediatric physiotherapy practice. This includes *selecting* appropriate measurement tools for discrimination, prediction, and evaluation of components of the International Classification of Functioning, Disability and Health as well as *apply* them in the context of case-discussions or labs	1.3.7
Analyze and interpret assessment findings as well as explain them in terms that families and children/adolescents can understand.	1.4.1; 1.4.2; 2.3.1; 2.3.2; 2.3.3
Establish a physiotherapy diagnosis for children presenting with common musculoskeletal, neurological and cardiorespiratory paediatric and adolescent disorders as well as relate diagnosis to prognosis for the particular child.	1.4.2; 1.4.3; 1.4.4

Learning outcomes	Related entry-to practice milestones
Develop and recommend an intervention strategy that is developmentally appropriate for children of varying ages. This will include integrating basic cardiorespiratory, neuroscience, musculo-skeletal concepts and kinesiology principles to construct and organize developmentally appropriate physical rehabilitation activities for children of varying ages.	1.4.5; 1.4.6; 1.5.1; 1.5.2
Demonstrate how to implement interventions with children of varying ages, including teaching home exercises to be done by children and/or their parents.	1.5.2; 1.5.3
Develop problem-solving skills to prepare for a successful clinical placement in paediatric rehabilitation.	1.5.5; 1.5.6; 1.5.7; 1.7.1;
Demonstrate effective and appropriate verbal, nonverbal, and written communications to be applied when interacting with children and families, with other health care professionals and peers when appropriate.	2.1.1; 2.1.2; 2.1.3; 2.1.4; 2.2.1; 2.2.2; 2.2.3; 2.3.1; 2.3.2; 2.3.5; 2.4.3;
Establish and maintain respectful and effective interprofessional relationships during group assignments and presentations	3.1.1; 3.2.1; 3.2.3; 3.2.4; 3.2.5;
Understand the role of interprofessional practice in pediatrics (during group assignments and presentations)	3.2.1; 3.2.3; 3.2.5; 3.3.1; 3.3.2; 3.3.3; 3.3.4; 3.4.1; 3.4.2
Begin to identify the health needs and concerns of individual children and families, of populations, and communities, as well as understand professional responsibility in responding to those needs.	5.1.2; 5.1.3; 7.4.1; 7.4.2
Use appropriate research methods to further advance his/her knowledge in paediatric physiotherapy (appraise evidence; consult evidence-based websites and resources; etc.)	6.4.1; 6.4.2;

Learning outcomes	Related entry-to practice milestones
Identify available research evidence or sound theoretical background supporting the selected interventions or propose a method to determine effectiveness of an intervention for an individual child	1.3.7; 1.5.2; 6.2.3; 6.2.4; 6.4.1; 6.4.2;
Demonstrate a professional and respectful attitude when interacting with children, families, as well as their peers, and other professionals involved in the course	7.4.1; 7.4.2;
Recognize and be guided by the scope of practice of paediatric physiotherapy.	7.4.3; 7.4.4

Expectations for Student participation: For this course, students will be expected to attend and actively participate in all in-person sessions. The main mode of communication throughout the course will be email sent through the myCourses platform, as well as announcements on the same platform. Students are expected to check both email and myCourses at least 2x per week for this course.

Recording of sessions:

No recording will be made of weekly smaller group in person discussions.

Course Materials:

- **Required text:** No required textbook for this course.
- **Readings:** All readings will be provided on MyCourses weekly. Readings will be contextualized as to their relation to materials presented in the course.

Copyright of course materials: ALL instructor generated course materials (e.g., handouts, notes, summaries, exam questions, videos, 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.

Course Content: The course will be organized in 5 modules: 1. Child development, 2. Pediatric PT Assessment, 3. Assessment and treatment of common musculoskeletal conditions, 4. Assessment and treatment of common neurological conditions and 5. Assessment and treatment of common Cardiorespiratory conditions (detailed weekly schedule will be provided during the introductory lecture):

Module 1: Child Development (weeks 1-2)

1. Introduction to developmental theories
2. Developmental trajectories in typically and atypically developing infants and children.

Module 2: Pediatric PT Assessment and Treatment Approaches (weeks 3-4)

1. Paediatric evaluation and use of specific standardized assessments in infancy, childhood, and adolescence
2. Goal setting for paediatric rehabilitation.
3. Creating developmentally appropriate treatment activities
4. Using the ICF to frame evaluation, goal setting and treatment planning

Module 3: Assessment and treatment of common musculoskeletal conditions (weeks 5-7)

1. Introduction to etiology, pathology, diagnosis and prognosis of common musculoskeletal conditions (see list included in appendix)
2. PT Assessment and treatment approaches with children with common musculoskeletal conditions

Module 4: Assessment and treatment of common neurological conditions (weeks 8-11)

1. Introduction to etiology, pathology, diagnosis and prognosis of common neurological conditions (see list included in appendix)
2. PT Assessment and treatment approaches with children with common neurological conditions

Module 5: Assessment and treatment of common Cardiorespiratory conditions (week 12)

1. Introduction to etiology, pathology, diagnosis and prognosis of common cardiorespiratory conditions (see list included in appendix)
2. PT Assessment and treatment approaches with children with common cardiorespiratory conditions

Student Assignment and Evaluation:

Assignment/Evaluation	Value	Due Date	Milestones Assessed
Participation and preparation for in person activities	5%	Every week	n/a
Module 1 Evaluation: Child Development			
Module 1 Quiz (Individual online quiz in class – multiple choice and short answers)	15%	September 15 2023	n/a

Module 2-3 Evaluation: Assessment Strategies in Pediatric PT & Assessment and Treatment of Common Musculoskeletal Conditions			
Module 2 and 3 Quiz (Individual online quiz done in class – multiple choice and short answers)	15%	October 27 2023	2.2.1; 2.2.2; 6.1.1
Intervention Planning			
Intervention Planning Assignment 1 MSK or Neuro *ICF-based clinical reasoning for a given case* (pair assignment – hand in written portion and video)	15%	November 17 2023	1.4.1; 1.4.2; 1.4.3; 1.4.4; 1.5.1; 1.5.2; 2.2.1; 2.2.2; 3.3.1; 3.3.4; 6.1.1; 6.1.2; 6.1.3; 6.1.4; 6.2.2; 6.2.3; 6.2.4; 6.4.1;
Intervention Planning Assignment 2 MSK or Neuro *ICF-based clinical reasoning for a given case* (pair assignment – hand in written portion and video)	15%	November 30 2023	1.4.1; 1.4.2; 1.4.3; 1.4.4; 1.5.1; 1.5.2; 2.2.1; 2.2.2; 3.3.1; 3.3.4; 6.1.1; 6.1.2; 6.1.3; 6.1.4; 6.2.2; 6.2.3; 6.2.4; 6.4.1;
Summative Assessment			
Final exam *a) Written (short answers in person)-20%* *b) 20-minute individual oral case-based practical exam with course instructor integrating multiple competencies-15%*	35%	TBD Exam period	1.1.1; 1.1.2; 1.1.3; 1.2.1; 1.2.2; 1.3.1; 1.3.2; 1.3.5; 1.3.6; 1.3.7; 1.4.1; 5.3.1; 6.1.2; 6.1.3;

Special Requirements for Course Completion and Program Continuation: In order to pass the course, a grade of at least B- (65%) must be obtained as a total course mark. Please refer to the McGill University Health Sciences Calendar for information on University regulations regarding final examinations and supplementals.

Attendance: Students who have missed more than 10% of class time without a university-sanctioned reason for their absence, will see their final course mark reduced by 10%. Please refer to section on attendance in course guide.

Plagiarism/Academic Integrity: McGill University and the Faculty of Medicine and Health Sciences value academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the McGill University Code of Student Conduct and Disciplinary Procedures and the Faculty of Medicine and Health Sciences Code of Conduct

L'université McGill et Faculte de Medecine et des Sciences de la Sante attachent une haute importance à l'honnêteté académique. Ils incombent 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 Université de McGill Code de conduite de l'étudiant et des procédures disciplinaires *et* Faculté de médecine et des sciences de la santé*.*

McGill University is situated on the traditional territory of the Kanien'kehà:ka, a place which has long served as a site of meeting and exchange amongst nations. We recognize and respect the Kanien'kehà:ka as the traditional custodian of the lands and waters on which we meet today.

Language of submission: 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. Assignments submitted late will receive a penalty of 2% per day late, including weekends.

Inclusive learning environment: As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the Student Accessibility and Achievement office, 514-398-6009.

Professional Conduct: 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.

Respect: The University is committed to maintaining teaching and learning spaces that are respectful and inclusive for all. To this end, offensive, violent, or harmful language arising in course contexts may be cause for disciplinary action.

Preferred pronouns: Please contact me if you would like me to refer to you by a different name than the name indicated in your student record or to inform me of your preferred pronouns.

Technology in Class: Your respectful attentive presence is expected, therefore while you are permitted to use your laptop in class, it is understood that you will not be using your laptop or cell-phone for social purposes during class time (e.g. email, messages, etc.). Your cell phone should be on silence during class time and phone calls should only take place during the break or after class. Mobile computing and communications devices are therefore permitted in class insofar as their use does not disrupt the teaching and learning process.

Course evaluations: End-of-course evaluations are one of the ways that McGill works towards maintaining and improving the quality of courses and the student's learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.

Additional policies governing academic issues which affect students can be found in the Academic Rights and Responsibilities

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

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Appendix : List of paediatric conditions and syndromes to be covered in this course (in formal activities or through self-directed learning)

It is assumed that for each of the listed conditions in bold, students should be able to[1-2]:

1. Describe etiology, epidemiology, underlying pathology
2. Explain clinical signs and symptoms, clinical progression and prognosis
3. Identify and interpret the diagnostic medical procedures
4. Explain current medical, pharmacological, surgical and rehabilitative management and their impact on development

For conditions not bolded in the following list, students will be able to[2]:

1. Be aware of these conditions
2. Understand the condition type/category and general clinical presentation

Musculo-skeletal conditions:

- Congenital foot deformities
- **Congenital and developmental hip dysplasia**
- **Scoliosis**
- **Juvenile idiopathic arthritis and other rheumatoid diseases**
- **Torticollis**
- **Growth related injuries (e.g. OSD, epiphyseal fractures and disorders)**
- **Sports and overuse injuries**
- **Congenital amputations** (will be covered in more detail in POTH 636)
- Differential diagnosis of limping
- Osteogenesis Imperfecta (will be covered in more detail in POTH 636)
- Plagiocephaly

Neurological conditions:

- **Myelodysplasia / Hydrocephalus**
- **Cerebral palsy**
- **Obstetrical Brachial Plexus injuries**
- **Muscular dystrophy and other neuromuscular conditions**
- **Traumatic brain injury and concussion**

[1] Adapted from the APTA Pediatric Curriculum Content in Professional Physical Therapist Education : A Cross-Reference for Content, Behavioral Objectives and Professional Sources.

[2] Adapted from the CCPUP: National Physiotherapy Entry-to-Practice Curriculum Guidelines 2019

- **Developmental coordination disorder**
- Sensori-motor impairments
- **Cognitive impairment and Autism Spectrum Disorder**
- **Spinal Cord Injury**

Cardiorespiratory diagnoses:

- **Asthma**
- **Cystic fibrosis**
- Cardiomyopathies
- BPD (chronic lung disease)
- Atrial/ventricular septal defects
- Acute bronchiolitis