

## PHTH550 PHYSICAL THERAPY ORTHOPEDIC MANAGEMENT

**Credits:** 7

**Prerequisites:** Successful completion of all U2 courses or admitted to the qualifying year of PT program

**Instructors:** Mylene Boudreau B.Sc.PT, M.Cl.Sc manip, FCAMPT, PPAS  
mylene.boudreau2@mcgill.ca

Heidi Clavet B.Sc.PT, MA(ed)  
heidi.clavet@mcgill.ca

Additional clinicians and teaching assistants as lab instructors

Virtual office hours will be available on a weekly basis via Zoom (more information will be posted on MyCourses) with one (1) course instructor, or by appointment request. Appointment requests are made via email.

**Course Description:** This is the first in a series of three (3) courses where an integrated approach is used to provide the students with the necessary competencies in order to be familiarized with common musculoskeletal conditions and with Physical Therapy skills for evaluation and treatment.

**Course Structure:** In general, on a weekly basis (subject to change), the course comprises of:

One (1) 2.5- to 3-hour of in-person lecture

Two (2) 3- to 4-hour of in-person clinical skills labs

One (1) 1- to 3.5-hours of in-person and fixed clinical reasoning workshops (CRW)

Note that the number of hours will vary from one week to another and at times could be more or could be less than what is listed above. Course schedule details will be posted at the beginning of the term on MyCourses.

**Student Learning Objectives:** This course will cover essential competencies and milestones related to the domains of physiotherapy expertise, communication, collaboration, management, leadership, scholarship, and professionalism. Upon completion of this course, the student will be able to evaluate and treat clients with previously diagnosed conditions (medical diagnosis) and simple unknown conditions affecting the musculoskeletal system, using an evidence-informed approach.

Detailed learning objectives are found in the table below:

Learning objectives	Milestones
<b>1. Demonstrate evidence of theoretical knowledge and practical skills in the following areas relevant to musculoskeletal rehabilitation:</b>	
a. Anatomy and biomechanics of the musculoskeletal and peripheral nervous systems, including surface anatomy and palpation	6.1.1
b. Psychometric properties of assessment tools	6.1.1
c. Principles and stages of wound healing	6.1.1
d. Principles of musculoskeletal conditions and selective tissue tension testing	6.1.1
e. Introduction to pain concepts	6.1.1
f. Patient interviewing & charting (H-SOAPIER format)	2.1.1 to 2.1.4, 2.2.1 to 2.2.3, 2.3.1 to 2.3.3, 2.3.5, 4.6.1, 4.6.2, 7.4.6
g. Principles of exercise testing and prescription	1.5.2, 1.5.3, 1.5.5, 1.5.7, 6.1.1
i. Aerobic / Cardio-respiratory	
ii. Resistance (strength, power, local muscle endurance)	
iii. Range of motion	
iv. Flexibility	
v. Balance & Proprioceptive	
h. Gait assessment and training*	1.3.7, 1.5.2, 1.5.3, 6.1.1
i. Mobility aids	
i. Patient transfers and mobilization <sup>‡</sup>	1.2.1, 1.2.2 1.3.7, 1.5.3, 6.1.1
i. Following lower limb arthroplasty	
ii. Precautions and contraindications	
j. Postural assessment*	1.3.7, 6.1.1
i. Positional / postural control	
ii. Alignment of body segments	
k. Swelling assessment	1.3.7, 6.1.1
l. Principles of joint assessment	1.3.7, 6.1.1
i. Range of motion (including goniometry)	
ii. Strength (including manual muscle testing)	
m. Aetiology, epidemiology, pathophysiology & management of:	6.1.1
i. Fractures	
ii. Arthroplasties	
iii. Limb Amputations	
iv. Osteoarthritis <sup>†</sup>	
v. Rheumatoid Arthritis and other Rheumatic Diseases	
vi. Burns	
vii. Cutaneous Wounds	
n. Pharmacological management of the conditions above:	6.1.1
i. Classes of medication	
ii. Principal and side effects of medication	
iii. Relevance to physiotherapeutic management	
o. Promoting patient self-efficacy	1.1.3, 1.1.4, 3.1.2, 5.1.2, 5.1.3, 6.1.1
p. Principles of massage and soft tissue mobilisations	1.5.3, 6.1.1
i. Basics massage principles and techniques (for Qualifying Year students and Equivalency students only)	

Learning objectives	Milestones
<ul style="list-style-type: none"> <li>ii. Deep transverse frictions</li> </ul>	
<ul style="list-style-type: none"> <li>q. Biophysical agents*               <ul style="list-style-type: none"> <li>i. Therapeutic Ultrasound</li> <li>ii. Thermal modalities</li> <li>iii. Biophysical agents and wound healing</li> </ul> </li> </ul>	1.5.3, 6.1.1
<p><b>2. Integrate the theoretical knowledge and practical skills described above to perform a physiotherapy assessment of clients with known and simple unknown musculoskeletal conditions affecting the extremities.</b></p>	
<ul style="list-style-type: none"> <li>a. Develop and demonstrate verbal and written communication skills to:               <ul style="list-style-type: none"> <li>i. Interact with clients, caregivers and other health care professionals in a manner which promotes:                   <ul style="list-style-type: none"> <li>a. the clients' and/or caregivers' dignity and autonomy</li> <li>b. respectful, ethical, and professional relationships</li> </ul> </li> <li>ii. Conduct an appropriate and thorough client interview, including                   <ul style="list-style-type: none"> <li>1. relevant past medical history</li> <li>2. relevant subjective information</li> <li>3. individual and environmental factors which may affect management</li> </ul> </li> <li>iii. Document a client assessment and intervention using the H-SOAPIER format</li> <li>iv. Document the findings of standardized outcome measures</li> </ul> </li> </ul>	1.1.1 to 1.1.6, 1.3.1 to 1.3.7, 2.1.1 to 2.1.4, 2.2.1 to 2.2.3, 2.3.1 to 2.3.3, 2.3.5, 7.4.1., 7.4.5
<ul style="list-style-type: none"> <li>b. Identify subjective and objective findings to:               <ul style="list-style-type: none"> <li>i. Develop a physical therapy diagnosis</li> <li>ii. Assess the nature, severity, and irritability of the condition</li> <li>iii. Develop a problem list based on the WHO International Classification of Functioning, Disability and Health Model</li> <li>iv. Determine a realistic prognosis</li> </ul> </li> </ul>	1.4.1. to 1.4.4, 3.1.1, 7.2.1 to 7.2.3
<ul style="list-style-type: none"> <li>c. Ensure a safe environment for the client and therapist at all times:               <ul style="list-style-type: none"> <li>i. Identify contraindications in the management of specific conditions</li> <li>ii. Ensure appropriate use of transfer and mobility aids</li> </ul> </li> </ul>	1.2.1 to 1.2.3
<p><b>3. Develop and apply an evidence-informed intervention plan for clients with known and simple unknown musculoskeletal conditions affecting the extremities.</b></p>	
<ul style="list-style-type: none"> <li>a. Make use of treatment protocols and clinical practice guidelines</li> </ul>	1.5.2, 1.5.3, 6.1.1 to 6.1.5
<ul style="list-style-type: none"> <li>b. Make use of technologies and evidence-informed online resources</li> </ul>	6.1.1 to 6.1.5
<ul style="list-style-type: none"> <li>c. Identify short and long-term client-centered goals</li> </ul>	1.1.1, 1.1.3, 1.5.1, 3.1.2
<ul style="list-style-type: none"> <li>d. List appropriate outcome measures that will be used to reassess client status and needs</li> </ul>	1.5.6
<ul style="list-style-type: none"> <li>e. Educate client regarding his/her condition and its management               <ul style="list-style-type: none"> <li>i. Promote active self-management</li> </ul> </li> </ul>	1.5.4
<ul style="list-style-type: none"> <li>f. Monitor client status and adapt the interventions based on the client's response and progress</li> </ul>	1.5.5, 1.5.7
<ul style="list-style-type: none"> <li>g. Recognize the need for referral to other services</li> </ul>	1.4.6, 3.1.1, 3.2.1
<ul style="list-style-type: none"> <li>h. Estimate when client discharge is appropriate and develop a discharge or transition of care plan</li> </ul>	1.5.2, 1.6.2

\*Topic will overlap with PHTH-551

†Topic will be introduced, with additional information presented in PHTH-560 and PHTH-623.

‡Topic will overlap with POTH 563

**Instructional Method:** Lectures will be taught in-person. Lecture content will be posted on MyCourses. Clinical skills labs will be practiced during in-person labs at the School of Physical and Occupational Therapy. Videos of the clinical skills labs will be posted on SharePoint (SPOT MSK). Students will be expected to watch all the videos **prior** to their respective labs. Class activities related to the lectures will be delivered in-person. All class materials will be posted either on MyCourses or on Microsoft Stream. Note that instructional methods are subject to change based on public health protocols.

**Slido:** Slido may be used at times during this course. It will be used to enhance the students' engagement and increase interaction in the class.

- Questions can be answered from a personal device (smartphone, tablet, or laptop).
- Students should come to class with their devices charged and connected to the Internet.
- To participate in Slido sessions, you **MUST** first log in with your McGill username and password. Follow the prompts to agree to the terms of use and create your account.
- For any technical problems, please contact the IT Service Desk:  
<http://www.mcgill.ca/it/get-started-it/need-help>.
- If you do not have a phone, tablet, or laptop to use to respond to polling questions, please contact the instructor immediately for appropriate arrangements to be made.
- To maintain a safe and respectful classroom environment, please ensure that any polling responses you submit are appropriate and relevant to the question asked. Please note that unless the poll is labelled as anonymous, your responses are identifiable to the instructor. Please see the Code of Student Conduct and Disciplinary Procedures.

### **Expectations for Student Participation:**

#### Student participation – Lectures and class activities

All students are expected to watch pre-recorded lectures and videos on their own time while following the weekly course schedule. Students are also expected to attend all the weekly lectures. In class activities, all students are expected to participate during the small group discussion. All students are expected to adhere to the instructors' class conduct/instructions. Attendance will be taken for all lectures.

#### Student participation – Labs

Students are expected to watch pre-recorded lab videos **prior** to their respective in-person labs. All students are also expected to attend all in-person labs unless they receive prior approval from the coordinators of the course or have a university accepted reason for not participating (refer to Attendance policy below). Attendance will be taken for all in-person practical sessions.

\*Appropriate attire must be worn during practical sessions (i.e., shorts and tank tops that allow for easy assessment of limbs being examined). Refer to the dress code section below for additional information.

\*Please adopt appropriate "hand hygiene" (regularly washing hands, clean and short fingernails) during massage/palpation labs and hands-on techniques.

**Course Content:** Topics include, but are not limited to: phases of healing of musculoskeletal tissues in relation to rehabilitation goals, patient interview & charting, orthopedic assessment (observation, posture, swelling, ROM, strength, flexibility, gait, transfers, balance, palpation), treatment approaches (education, exercise prescription, gait, transfers, massage, biophysical agents) for specific conditions (fracture, arthroplasty, rheumatic conditions, amputees, burn survivors, cutaneous wound healing), pharmacology relevant to these conditions, and patient self-efficacy.

**Course Schedule:** Will be posted on MyCourses

**Course Materials:**

To participate in this course, you will need to ensure that you have: (i) an adequate access to the internet, (ii) adequate access to IT devices to be able to download/upload content on MyCourses, (iii) the ability to stream recorded lectures and videos (MyCourses, SharePoint), (iv) the ability to participate in polling and (v) the ability do the online assessments for this course.

- **Required course material:**

1. Biel A. (2019) *Trail guide to the body* (6<sup>th</sup> Edition), Books of Discovery, Boulder, CO  
(Note: Older versions are also accepted)

- **Optional course material (available free through the library):**

1. Kisner C. and Colby L. (2018), *Therapeutic exercise: Foundations and techniques* (8<sup>th</sup> Edition), F.A. Davis, Philadelphia, PA. Available online at the McGill Library.

- **Reference textbooks (available free through the library):**

1. Magee, D. J., & Manske, R. C. (2021). *Orthopedic physical assessment* (Seventh, Ser. Musculoskeletal rehabilitation series), Saunders (Elsevier), St. Louis, MO. Available online at the McGill Library.
2. Van Ost L. (2010) *Cram session in goniometry: A handbook for students & clinicians*, Slack Inc., Thorofare, NJ.
3. Brotzman S. and Wilk K. (2007), *Handbook of orthopaedic rehabilitation* (2nd Edition), Mosby (Elsevier), Philadelphia, PA. Available online at the McGill Library.
4. Kendall F., McCreary E., Provance P., Rodgers M. and Romani W. (2005), *Muscles: Testing and function with posture and pain* (6th Edition), Lippincott Williams and Wilkins, Philadelphia, PA

**Copyright of course materials:** Instructor generated course materials (e.g., handouts, notes, summaries, exam questions, lecture recordings, 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.

**Lecture Recordings:** You will be notified if part of a class is being recorded. By remaining in classes that are recorded, you agree to the recording, and you understand that your voice and name may be disclosed to classmates. You also understand that recordings will be made available in myCourses to students registered in the course. Please consult me if you have concerns about privacy and we can discuss possible measures that can be taken.

**Copyright of online course materials:**

In the events where we need to pursue the class virtually, we ask for everyone's collaboration and cooperation in ensuring that the videos and associated material are not reproduced or placed in the public domain. This means that each of you can use the videos for your own personal purposes, but you cannot allow others to use it, by putting it up on the internet or by giving it or selling it to others who will copy it and make it available.

**Student Assignment and Evaluation:**

Assignment/Evaluation	Value	Due Date	Milestones Assessed
Five (5) formative exercise programs	5%	Refer to course schedule	1.1.1, 1.5.2, 2.4.3, 6.1.1, 6.1.2
Final group exercise program assignment	5%	Refer to course schedule	1.1.1, 1.5.2, 2.4.3, 6.1.1, 6.1.2
In-person Midterm written exam: MCQ, short answers/essays, case study	25%	Refer to course schedule	1.2.1, 1.4.1 to 1.4.4, 1.5.2, 2.2.1, 2.2.3, 6.1.1, 6.1.2, 6.1.4
Mid-term Objective Structured Clinical Examination (OSCE)	15%	Refer to course schedule	1.1.1, 1.1.5, 1.2.1 to 1.2.4, 1.3.7, 1.5.2 to 1.5.5, 1.5.7, 2.1.1 to 2.1.4, 2.3.1 to 2.3.5, 4.2.3, 4.2.4, 4.3.4, 6.1.1 to 6.1.4, 7.4.5, 7.4.6
In-person Final Written: MCQ, short answers/essays, case study	30%	Refer to course schedule	1.1.1, 1.2.1, 1.4.1 to 1.4.4, 1.5.2, 2.2.1, 2.2.3, 6.1.1, 6.1.2
Final Objective Structured Clinical Examination (OSCE)	20%	Refer to course schedule	1.1.1, 1.1.5, 1.2.1 to 1.2.4, 1.3.7, 1.5.2 to 1.5.5, 1.5.7, 2.1.1 to 2.1.4, 2.3.1 to 2.3.5, 4.2.3, 4.2.4, 4.3.4, 6.1.1 to 6.1.4, 7.4.5, 7.4.6

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

**Review of marks:** Students who are dissatisfied with a mark must first discuss the matter with the course instructor within one calendar week of being informed of the mark. Following discussion of the student's concerns, the instructor may leave the mark unchanged or may change the mark (please refer to the 2023-2024 SPOT Rule & Regulations document for further details).

**Special Requirements for Course Completion and Program Continuation:** For U3 and Equivalency Students (EQ), a grade of at least C+ (60%) must be obtained for BOTH the theoretical AND practical component of the course (not combined). For QY students, a grade of at least B- (65%) must be obtained for BOTH the theoretical AND practical component of the course (not combined). Please refer to the appropriate sections in both undergraduate and graduate calendars on university regulations regarding final and supplemental examinations.

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 for Student Evaluation and Promotion of the Physical Therapy Course Guides.

**Attendance:** Students who have missed more than 15% of laboratory or small group sessions, or who miss any required professional workshop or seminar, without prior approval, will receive 0/10 for participation in the course. If a course does not have a participation mark, then the final course mark will be deducted by 10%. This rule applies to labs and to all required workshops, seminars, or professional activities.

**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 Santé 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](#).*

**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 as requested and does not have a university recognized reason for deferral would receive a 0 in that portion of the evaluation.



**Dress Code:** Students are expected to demonstrate professional behaviour and always wear appropriate attire, in accordance with clinical sites specific regulations. It is each student's responsibility to have appropriate attire during all class assignments and learning activities. When working with clients or simulated patients, student must be dressed professionally.

**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., texting, emailing, chats, messaging, scrolling through social media, online shopping, etc). Your cell phone should be on silent during class time and phone calls should only take place during the break or after class.

**Student Accessibility:** We endeavor to provide an inclusive learning environment. If you require an adapted learning environment (for in class and during exams), please contact the Student Accessibility and Achievement Office as soon as possible so arrangements can be made. You may also contact your instructor(s) if you wish, but are not obliged to do so.

**Mental Health:** Many students may face mental health challenges that can impact not only their academic success but also their ability to thrive in our campus community. Please reach out for support at the McGill Student Wellness Hub.

**Course evaluations:** End-of-course evaluations are one of the ways that McGill works towards maintaining and improving the quality of courses and the students' learning experience. You will be notified by e-mail when the evaluations are available via Mercury.

**Land Acknowledgement:** McGill University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinabeg nations. We acknowledge and thank the diverse Indigenous peoples whose presence marks this territory on which peoples of the world now gather.

**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.

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.***