PURPOSE of the Advanced Integrated Musculoskeletal (AIM) Physiotherapy Program

Definition as per IFOMPT SD 2016

"Orthopaedic Manual therapy is a specialised area of physiotherapy/Physical Therapy for the management of neuromusculoskeletal conditions, based on clinical management of neuromusculoskeletal conditions, using highly specific treatment approaches including manual techniques and therapeutic exercises."

"Orthopaedic Manual /Musculoskeletal Physical Therapy also encompasses, and is driven by, the available scientific and clinical evidence and informed by the biopsychosocial framework of each individual patient."

Advanced clinical reasoning skills are essential to advanced musculoskeletal practice and lead to a patient-centred care approach involving decisions informed by both the practitioner and the patient. Clinical decisions being formulated consider the three pillars of evidence informed practice – the patient's preferences, the clinician's expertise, and the research evidence. According to Higgs and Jones (2000), patient centred clinical reasoning involves using a model that considers the patient's role within the clinical decision-making as central to good practice.

The Advanced Integrated Musculoskeletal (AIM) Physiotherapy Education Program offers:

- ✓ a route to membership with CAMPT and IFOMPT
- ✓ a flexible schedule which can be arranged around other work/family commitments
- ✓ the opportunity to gain advanced level competencies (skills, knowledge, and attributes) in musculoskeleletal/manipulative physiotherapy
- ✓ the opportunity to study in a community-based program internationally recognized by IFOMPT and to be exposed to a diverse teaching faculty
- ✓ the support of clinical mentorship
- ✓ the opportunities to enhance critical thinking, reflective practice, lifelong learning, and evidence informed practice
- ✓ the opportunities to improve patient outcomes
- ✓ the opportunities to be involved in research initiatives

Level 3 Lower Quadrant

Online – maximum (asynchronous minimum 10, synchronous – minimum of 30)
In Person – minimum 28-35 hours
Total number of Hours –75 hours
Total number of Hours (MCQ / Case Examination) – 2-hour MCQ / 3-hour Case Examination

This course will relate theoretical knowledge and clinical skills taught in the Level 2 Lower quadrant course to consolidate the assessment and management of complex neuromusculoskeletal (NMS) dysfunctions of the lower quadrant (lumbar spine, pelvic girdle, and lower extremity peripheral joints). Students will apply advanced clinical reasoning skills to establish a physiotherapy diagnosis, integrate various approaches to clinical practice and critically evaluate the existing literature and their own clinical experiences to enable effective management of complex clinical presentations in the lower quadrant. Evidence informed intervention strategies, including education, exercise, prognosis generation, precision of manual/musculoskeletal practical skills, managing goals and expectations and selection and utilization of appropriate outcome measures will be designed and implemented. Behavioural science and the integration of patient centred care will be further explored. There will be an emphasis on the understanding of the Regional Interdependence Model and the interrelationships between proximal and distal regions. Exploring the patient's narrative and establishment of the therapeutic alliance will be integrated into clinical reasoning processes.

This course will be a combination of asynchronous on-line lectures, synchronous interactive on-line clinical reasoning, and in-person practical lab sessions. Experiential case-based vignettes and reflective analysis will be used to explore the theoretical knowledge basis of musculoskeletal physiotherapy and its application to the development of advanced clinical reasoning processes. In-class group work and discussions will be used to facilitate the assimilation of the knowledge-based content.

COURSE LEARNING OUTCOMES

	IFOMPT Dimension	Learning Outcomes	Learning Strategies	Assessment of the Learning Outcomes
1	2.1	To expand theoretical knowledge on complex neuromusculoskeletal conditions affecting the peripheral and spinal regions of the lower quadrant including the thoracolumbar junction considering the concept of regional interdependence.	Self-directed learning activities – asynchronous audio PowerPoints, videos, Interactive case history sessions	Online quizzes, summative online clinical reasoning, case history assignments, MCQ examination
2	2.2 3.1	To expand understanding of pain mechanisms – nociceptive, peripheral neuropathic and central nociplastic and the contributing factors to the clinical pain pattern underlying neuromusculoskeletal conditions affecting the peripheral and spinal joints of the lower quadrant.	Asynchronous online resources, lectures, clinical case vignettes, student seminar presentations	Group assignments, multiple choice questions, summative online clinical reasoning, case history assignments
3	5.3 6.1 6.3 7.1	To demonstrate advanced clinical history taking, intervention planning and goal setting in a thorough and timely manner as it relates primarily to the evaluation of the neuromusculoskeletal condition and to interpret these findings using a clinical reasoning approach reflective of current best practice and evidence.	Assessment and treatment lectures, labs Clinical case vignettes	Case history examinations Online interactive sessions Learning team assignments Clinical Skills assessment
4	7.1 7.2 7.3 7.4	To demonstrate an advanced level of communication skills enabling effective assessment and management of lower quadrant neuromuscular conditions. To include for example active listening skills, motivational interviewing, questioning skills, establishing a therapeutic alliance, informed consent.	Online video presentations, subjective case histories with guiding questions, asynchronous audio PowerPoint presentation – Communication and Therapeutic Alliance, role playing, motivational interviewing skills	Summative online clinical reasoning, discussion forums, case history assignments, mentored clinical practice, informed consent on practical skill examinations, analysis of video of a patient interview
5	2.3	To integrate and demonstrate advanced knowledge of the physical examination of peripheral and spinal joints as it relates to the presentation of acute and persistent/recurrent conditions of the lower quadrant in a timely manner. This could include for example exploring additional ancillary tests and the clinometric properties, functional movement evaluation, passive mobility testing in combined movements, neural tissue	In person practical assessment skills labs Online videos Interactive clinical reasoning sessions	Practical assessment skills evaluation, summative online clinical reasoning, case history assignments, online quizzes Final Intermediate Practical Exam

		integrity / individual nerve biasing with consideration of interfaces.		
6	6.2	To integrate and demonstrate an understanding of the skills and application of advanced clinical reasoning and therapeutic best practice within a biopsychosocial framework expanding on the psychological and social constructs. An example - Pain and Disability Drivers Model (PDDM)	Interactive clinical reasoning sessions, clinical case vignettes, discussion forums, asynchronous presentations	Case History Examination, mentored clinical practice, summative online clinical reasoning scenarios
7	6.3	To critically apply hypothetico-deductive, diagnostic reasoning, pattern recognition, collaborative and interactive reasoning in effective assessment and management of complex neuromusculoskeletal clinical presentations of the lower quadrant.	Interactive clinical reasoning sessions, case history analysis, online discussion forums with clinical cases, group assignments and presentations, lectures, video presentations of clinical cases	Reflective journal assignment, case history reflective analysis, mentored clinical practice – clinical examination of a patient
8	6.3 5.2	To demonstrate an advanced ability to critically evaluate and effectively prioritise clinical data collection to ensure reliability and validity of data and quality of clinical reasoning processes.	Interactive clinical reasoning sessions, case history analysis, online discussion forums with clinical cases, group assignments and presentations, lectures	Reflective journal assignment, case history reflective analysis, mentored clinical practice – clinical examination of a patient
9	6.1	To demonstrate an advanced level of clinical reasoning skills, integrating current research evidence, best practice and the data from the clinical history and physical examination with consideration of the biopsychosocial framework (ICF model).	Searching various databases, critical appraisal of evidence, application to clinical cases, online discussion forums, student seminar presentations	Reflective case analysis, mentored clinical practice – clinical examination of a patient with formative feedback
10	5.2 4.4 1.2 8.1	To demonstrate an advanced ability to select appropriate measurement tools (self-report or physical impairment measures) to evaluate physical impairments, activity limitations and participation restrictions specific to the patient's needs and demonstrate the ability to interpret the results.	Assessment and treatment lectures/labs Online interactive clinical reasoning sessions Case history reflective analysis	Summative online clinical reasoning, critical analysis of a case study, reflective case analysis, case history examination
11	5.4 8.2 8.3	To acquire and demonstrate an advanced understanding of the principles of the prescription and application of passive physiological and articular and soft tissue techniques for the management of mobility dysfunction secondary to complex neuromusculoskeletal conditions of the lower quadrant ensuring precision for safe and effective practice.	Clinical skill labs Mentored clinical practice Clinical reasoning sessions Videos of practical techniques Video analysis of performance of techniques	Practical skills evaluation, clinical examination, and treatment of a client with reflective analysis

12	2.5 5.3 5.4	To demonstrate safe and effective performance of high velocity low amplitude manipulation techniques to specific lower quadrant peripheral and spinal (lumbar and sacroiliac) joints. To include identification of indications, contraindications, clinical decision-making tools and effects and efficacy.	Clinical case analysis Discussion forums and debates Clinical skills labs Mentored clinical practice Video analysis of performance of techniques	Practical skills evaluation, clinical examination, and treatment of a client with reflective analysis, Intermediate Practical Exam (IPE)
13	5.4	To acquire theoretical knowledge base and skill for analyzing and correcting gait and running.	Observational gait and running analysis, online lectures, video analysis of clinical cases	Online quizzes, mentored clinical practice
14	5.4 8.2 7.4	To expand on understanding of the principles of the prescription and application of exercise within a biopsychosocial framework on the management of complex neuromusculoskeletal conditions of the lower quadrant from acute stages towards achievement of patient directed goals. To include for example consideration of other classification systems – Movement Impairment System (MSI), Cognitive Behavioural Therapy	Interactive clinical reasoning sessions, exercise skills lab, case history scenarios, mentored clinical practice, student seminar presentations, reflective case analysis	Case History Examination, online quizzes, MCQ examination, critical analysis of a case history, mentored clinical practice, Intermediate Practical Examination (IPE)
15	1.1	To demonstrate the ability to critically appraise and integrate the evidence into clinical practice, recognizing the limitations of incorporating the evidence.	Searching various data bases, Clinical Practice Guidelines, student group assignments and presentations, online presentations (synchronous and asynchronous), discussion forums	Critical application of evidence to a clinical case incorporating the evidence, written assignment evaluating evidence informed management
16	3.3	To demonstrate the ability to obtain informed consent and to effectively communicate risks versus benefits of musculoskeletal therapeutic interventions.	Reading assignments, discussion forums, role playing, review of consent forms	Mentored clinical practice Reflective case scenarios Practical Examinations