

## Rehabilitation Science Graduate Program

### Master of Science Specialization Field Orthopaedic Musculoskeletal-Manipulative Physiotherapy (OMPT)

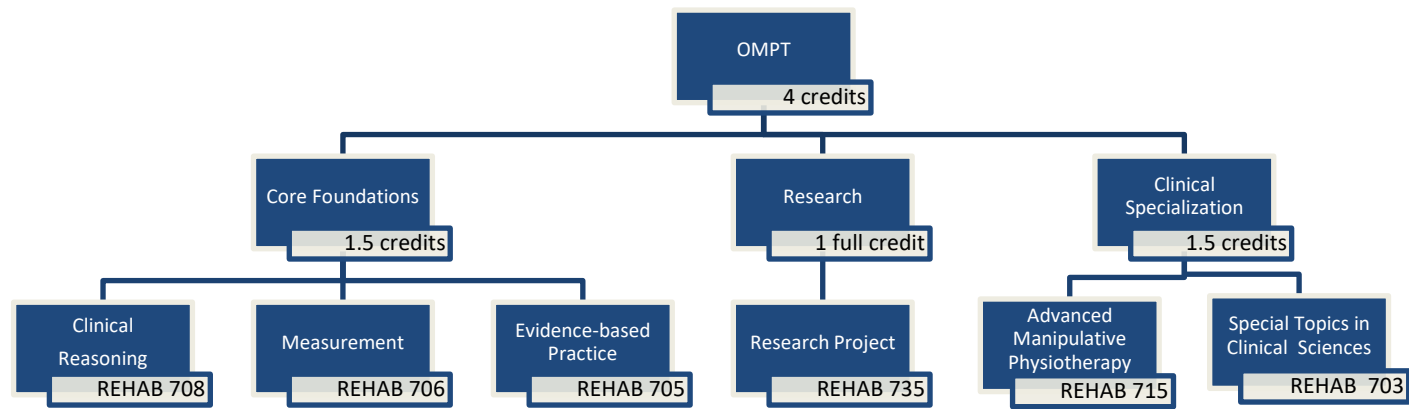


Figure 1. The OMPT field of study was introduced by McMaster University in Sept 2013 as a MSc course-based program.

This field in orthopaedic musculoskeletal/manipulative physiotherapy (OMPT) develops a specialization standard in orthopaedic musculoskeletal/manipulative physiotherapy clinical practice through three (3) required foundation courses (1/2 credit each), two (2) Clinical Specialty courses (1.5 total credits) and one (1) Research Project (1 full credit) over a two (2) to three (3) year timeline. The three (3) required foundation courses are *Evidence-based Practice*, *Clinical Reasoning*, and *Clinical Measurement*. The two (2) Clinical Specialty Credits include the *Advanced Orthopaedic Musculoskeletal/Manipulative Physiotherapy* course and the *Select Topics in Rehabilitation Science* course. The Research Project is independent research project worth one (1) credit. The objective is to advance scientific knowledge, clinical reasoning application, clinical and research skills development with a broad appreciation of the concepts of clinical measurement, and integrated evidence-based practice in OMPT practice.

#### MSc (RS) COURSE-BASED OPTION REQUIREMENTS

Link: <https://healthsci.mcmaster.ca/srs-rehabsci/education/future-students/program-information>

**Table 1. The OMPT field of study was modelled with key golden threads**

## Golden threads

- Clinical reasoning
- EBP integration
- Biological rationale
- Clinical & functional Assessment
- Diagnostics/Prognosis
- Risk/Causation Assessment
- Advanced MSK treatment including manual therapy and exercise techniques
- Complex system integration

### Evidence-based OMPT

#### Advanced Orthopaedics

#### Upper & Lower Quadrant - online learning

- Interview and hypothesis generation
- Orthopaedic Examination: Active, passive (PIVM, PAVM, other soft tissue length), resisted movement, muscle length/strength, stability, function tests
  - upper quadrant: cervical, cervico-thoracic, crano-vertebral, craniofacial, temporomandibular
  - lower quadrant: lumbar, lumbosacral, pelvic, thoracic, costovertebral, thoraco-lumbar
- Screening Examinations – medical screen, neurological scan, neural tension testing, cranial nerve scan, vascular screen, minor head injury screen (sport & whiplash), stability screen, special tests, vestibular screen, neuropathic pain screen, psychological screen – minor, major
- Diagnosis
- Prognosis
- Causation / risk / harm assessment
- Treatment –advanced therapeutic exercise & manual therapy (articular, neuromuscular, fascia), basic manipulation, advance manipulation with exercise prescription

### Clinical Case Development

#### Clinical Specialization

#### Case Reports - online group

- clinical specialist criteria (CPA) must be met
- develop two cases for submission course credit that meet CPA specialist requirements for each (upper quadrant, lower quadrant)
- one for each upper and lower quadrant
- two from either crano-cervical, thoraco-lumbar, spinal-peripheral or lumbo-sacral
- multimedia approach

### Mentorship

#### Clinical OMPT

#### Face to face labs & mentorship

- 40 hours clinical lab per semester - Orthopaedic Division Level 3 review, level 4 and 5; CPA low end pay \$800 per day
  - 1 day Level 3 review upper quadrant, 1 day level 3 lower quadrant, 4 days level 4, 4 days level 5
- 75 hours mandatory mentorship per semester (150 hours per 2 semesters) – price born by student
  - 40 hours local clinic during 2 weeks face to face at McMaster for Level 3, 4 and 5
  - 90 hours independent mentorship
  - \$1500 honorarium for mentors
  - Must meet OMPT certification requirements

### IFOMPT-CAMPT External Audit Report Summary:

Pierre Langevin (current) and Jill Richardson (past), the external assessor for IFOMPT-CAMPT conducted two reviews of the program and mapped the program to IFOMPT education dimensions and competencies to meet IFOMPT standards. “In September 2013, McMaster University introduced a Master of Science Degree in Advanced Orthopaedic Musculoskeletal-Manipulative Physiotherapy (OMPT) Specialization. Seven (7) students have graduated to this date and three (3) are enrolled. I, Jill Robertson, am acting as an external assessor on behalf of CAMPT, MO of IFOMPT. My purpose was to determine if the McMaster program’s standards are comparable to the educational standards of IFOMPT. This review covers the time frame from July 2016 – Dec 2019.

It is my opinion that McMaster University has provided evidence that its program addresses the IFOMPT dimensions and competencies. It addresses the IFOMPT required components relating to curriculum, examination, clinical mentorship, and research. The McMaster program insists upon quality management and administration while providing its students with the opportunity to study online from a distance. The line up of instructors, both academically and clinically, are world-renowned. The learning objectives are reasonable and are being met by the students. The standard of manual and manipulative therapy education is at or above the level set nationally and internationally. *Quality assurance processes* are in place and used consistently. Student feedback has been consistently favourable towards the instructors and the course content. Others should observe the delivery of this innovative program, as it is world-class.”

### COURSE TOPIC AND TIMELINES OFFERED

The **LINK** to each course can be found at: <https://healthsci.mcmaster.ca/srs-rehabsci/education/future-students/program-information>

<b>COURSE</b>	<b>TOPIC</b>	<b>CREDIT</b>	<b>TIMELINE OFFERING</b>
REHAB705*	Evaluating Sources of Evidence	0.5	Sept 2022
REHAB706*	Measurement in Rehabilitation	0.5	Jan 2023
REHAB708*	Clinical Reasoning and Decision-Making	0.5	April 2023
REHAB715	Advanced Orthopaedic Musculoskeletal/ Manipulative Physiotherapy Specialization and Clinical Mentorship	1	Sept 2023 (2 terms)
REHAB703*	Select Topics in Rehabilitation Science	0.5	April 2024
REHAB735	Rehabilitation Research Project	1	Sept 2024 (3 terms)
* Asterisk represents half (or 3 unit) courses Thus a <b>3 unit</b> course will require 9 hours of work per week; 1 lecture hour or 2 seminar hours per week; 27 unit represents 270 contact hours		Total 4 credits	To be completed in two (2) to three (3) years

### COURSE DESCRIPTION

#### REHAB 705\* / Evaluating Sources of Evidence

3 units

This course explores the value of evidence to rehabilitation practice, and how to assess and use evidence to make practice decisions that lead to best client outcomes.

### **REHAB 706\* / Measurement in Practice**

3 units

This course examines the theory of measurement, and the critical review, selection, interpretation and integration of outcome measures and assessment instruments in rehabilitation practice.

### **REHAB 708\* / Clinical Reasoning and Decision-Making**

3 units

Reasoning is the process by which rehabilitation practitioners consider alternatives and make decisions on a day-to-day basis. Guided by relevant conceptual frameworks, participants will practice strategies such as critical reflection, narratives, and assessment of the literature and other evidence to improve their reasoning and decision-making skills.

### **REHAB 715 / Advanced Orthopaedic Musculoskeletal/Manipulative Physiotherapy Specialization**

6 units

This course is designed for graduate physiotherapists who want to obtain advanced clinical skills in orthopedic musculoskeletal/manipulative physiotherapy (OMPT) and is designed to comply with requirement of both the Canadian Physiotherapy Association's Clinical Specialty Program and international standards for accreditation. Students apply basic science and clinical evidence to advanced evidence-based clinical reasoning. Students will acquire advanced clinical skills in manipulative physiotherapy, therapeutic exercise and patient education using self-management techniques to provide comprehensive rehabilitation. This course will integrate advanced orthopedic assessment, vestibular screening, pain assessment, psycho-behavioral screening, neuro-modular screening, diagnostics/prognosis, risk/causation assessment, and neuro-musculoskeletal treatment. To establish internationally established competencies, 150 total hours of both clinical residency (90 hours) and teaching mentorship (60 hours) are required. Prerequisite: Level III Orthopaedic Division Canadian Physiotherapy Association Credentialing or equivalence; Two years clinical experience in specialty area; Co-requisites exist.

### **REHAB 703\* / Selected Topics in Rehabilitation Science**

3 units

This select topics course is designed to allow the development of courses that cover the leading edge of thinking about specific topics/issues in Rehabilitation Science. The specific topics will be developed in response to needs identified by faculty or students.

*(Note: an example of a special topic might be to provide an increased understanding of evidenced based practice in orthopaedic rehabilitation with focus on two areas: methodological content and orthopaedic content. Methodological content will include measurement (reliability, validity, responsiveness); diagnostic accuracy; and therapeutic effectiveness. Students' knowledge will be advanced in select clinical topics of basic, behavioural & medical sciences relevant to neuro musculoskeletal (MSK) disorders and apply knowledge to case management. Select topics may include 1. Clinical Residency for OMPT (90 hours, FCAMPT exempt), 2. Pain Sciences (advanced physiology course – muscular & training physiology, respiratory physiology), 3. essentials in Psychology screening for MSK rehabilitation, 4. essentials in Medical Screening/Conditions for MSK rehabilitation, 5. essentials in MSK Imaging, 6. essentials in Pharmacology for MSK rehabilitation; 7. MSK Spinal Conditions; and 8. Medicolegal issues in rehabilitation. The study of fields of neurophysiological and behavioural aspects of pain will be advanced. The medical and pharmaceutical management of MSK disorders will be explored. Emphasis will be placed on differential diagnosis at an advanced level for spinal disorders.*

### **REHAB 735 / Rehabilitation Research Project**

6 units

The Research Project in Rehabilitation provides experiential learning in the conduct of rehabilitation research. It will typically be initiated by students who have completed (or are concurrently completing) the measurement course, and ideally after taking a research methods course. Learners will develop

research knowledge, skills and methodology through participation in research. Learners may identify a mentor who is willing to supervise a research project of the learner's choice or choose from a menu of projects provided by faculty. External mentors must have a supervisory graduate appointment within The School of Rehabilitation Science or work with a co-mentor from the Rehabilitation Science faculty. Mentors may continue to work with learners to complete the submission process and follow-up, although this is not mandated and is a noncredit activity. This full course is specifically designed to allow the learner to conduct a small supervised research project in their area of interest. The expected outcome of this course is submission of a research paper that is ready for submission for publication.

### **FINANCIAL INFORMATION**

Link: <https://registrar.mcmaster.ca>; <https://registrar.mcmaster.ca/tuition-fees>

The courses costs are based on standard registrar fees for graduate programs - masters. For example (2022): \$1,541.19 per half course per 1/2 course (1 term) and an annual part-time mandatory supplemental fee of \$513.73; ancillary fee for clinical residency \$900. The supplementary fee is charged yearly and learners can opt out of the health and dental insurance, which reduces it significantly.

### **PREREQUISITES AND QUALIFICATION FOR ADMISSION**

A candidate for this program must:

- hold a four (4) year pass or honours or graduate entry master or professional doctorate degree in physiotherapy.
- have completed five (5) years full-time relevant professional experience (or equivalent) with two (2) years in a speciality area.
- produce evidence of continuing professional education including Level II-III Exams, Intermediate Practical Exam, 90 mentorship hours from Canadian Physiotherapy Association (CPA) Orthopaedic Division or equivalent prior to initiating REHAB 715. Advanced standing for Orthopaedic Division Level IV/V are recognized.
- meet admission requirements to the M.Sc. (RS) Course-based Option or permission of the Program Coordinator.

### **REGISTRATION DEADLINE**

**January Admission** is Sept 1; **September Admission** is May 1 (may consider late application to June)

### **SPECIALTY COURSE FACULTY**

The clinical courses will be facilitated or mentored by leading Canadian experts or CPA certified clinical specialists.

#### **REHAB: Special Topics**

Judith Hunter (PhD), Bill Parkinson (PhD), Zakir Uddin (PhD), Pulak Parikh (PhD), Roxy Azoory (MSc).

#### **REHAB 715: OMPT Specialization**

Course Coordinator: Anita Gross (MSc)

Lecturers and Clinical Instructors: Kristin Long (MCIsc), Tim Rogers (MSc), Laurie McLaughlin (DSc), Pat Miller (PhD), Ashley Smith (PhD), Geoff Schneider (PhD), Lisa Carlesso (PhD), Lucianna Mechado (PhD), LJ Lee (PhD), Greg Spadoni (MSc), Michael Westaway (DSc), Roxy Azoory (MSc), Beth Kroetsch (MSc), Kathryn Schneider (PhD), Meg Smith (MSc), Pat Fonstad (DSc); Sean Gibbons (PhD); Bill Parkinson (PhD Psychology); Zakir Uddin (PhD), and others will give expert guidance during on-line modules.

### **PROFESSIONAL RECOGNITION**

This Advanced OMPT Specialization field has requested to be officially monitored by Canadian Academy of Manipulative Physiotherapy (CAMPT) to ensure our program meets the International Federation of Orthopaedic Manual Therapists (IFOMPT) educational standards.

## **ADMISSION PROCESS**

Detailed on website:

**Link:** <https://healthsci.mcmaster.ca/srs-rehabsci/education/future-students/program-information>

## **CONTACT**

Cindy Permejo, Program Coordinator, RS Graduate Program  
School of Rehabilitation Science, IAHS, Rm. 402B  
McMaster University, 1400 Main St. W. Hamilton, ON L8S 1C7

**Fax:** (905) 524-0069

**Email:** [rsgrad@mcmaster.ca](mailto:rsgrad@mcmaster.ca)

### **Rehabilitation Science (RS) Graduate Program**

**Contact:** Ada Tang, PT, PhD, Assistant Dean, RS Graduate Program

Email: [atang@mcmaster.ca](mailto:atang@mcmaster.ca)

### **Rehabilitation Science (RS) MSc Course-based Option**

**Contact:** Shami Dhillon, OT, PhD, Program Coordinator, RS Graduate Program

**Email:** [sdhill@mcmaster.ca](mailto:sdhill@mcmaster.ca)

### **Rehabilitation Science (RS) OMPT Field**

**Contact:** Anita Gross, PT, OMPT Coordinator, RS Graduate Program

**Email:** [grossa@mcmaster.ca](mailto:grossa@mcmaster.ca)