

Curriculum
Syllabus/Courses of Study

For

**MASTER OF SCIENCE IN
ORTHOPEDIC MANUAL PHYSICAL
THERAPY
(MS,OMPT)**

Two-years Specialized Manual Therapy Degree
program



MAHBOOB INSTITUTE OF PHYSIOTHERAPY & REHABILITATION SCIENCES

GANDHARA UNIVERSITY - PESHAWAR

This program is designed keeping in mind the mission statement of MIPRS i-e

The Mahboob Institute of physiotherapy & Rehabilitation sciences is committed to a holistic and integrated approach in education Character building, intellectual and academic development, for us, are equally important. We want to build total human personality of our youth with concern for the welfare of humanity. A value based education alone, in our view can produce a generation of dynamic, committed and progressive, leaders and builders of the Ummah.”

Goals of the Program:

There are many under graduate programs and few master programs, but not a single specialized program in any area of physical therapy in the country according to international standards, so the MS-OMPT will be the first specialized program which is a dire need in the country to have specialized programs which will produce specialized physical therapists who will be Certified Manual Therapy Specialists. They will be able:

1. To provide specialized physical therapy care.
2. To serve as responsible members in the professional community and are willing and able to assume leadership roles in the communities they serve.
3. To identify researchable problems, advocate and participate in research, and incorporate research findings into clinical practice.
4. To understand and place in context the social, economic and cultural issues of practice and effectively advocate for changes in policy
5. To apply different techniques of manual therapy in a safe and effective manner.
6. To adopt only those manual techniques which are evidence based.
7. To know the methods of diagnosis and classification of disorders in relation to indications for manual therapy treatment.

Detail description of the program:

Program:	Master of Science in Orthopedic Manual Physical Therapy (MS-OMPT)
Duration:	Two years, full time, 28 Credit Hours course work + 4 Credit Hours Residency + 6 Credit Research (Thesis).
Level:	Postgraduate
Eligibility:	1. Doctor of physical Therapy (DPT-5 years from any HEC

Recognized University or equivalent qualification.
2. NTS test GAT-GERNAL 50 % score

Course: Semester Based (4-Semesters) duration (18-weeks each)

Credit Hours: 38- credit Hours

Description of the Master of Science in Orthopedic Manual Physical Therapy

(MS-OMPT) Program:-

This program provides students with an advanced level of skills in planning and implementing appropriate manual therapy treatment programs and build ups a high level of competence in the application of passive treatment techniques for articular and associated structures. Main focus of the program to determine the impact of research evidence in relation to the management of musculoskeletal disorders and how this may impact on treatment prescription in the individual case. Specific importance is given to determining indications for treatment, treatment prescription and progression, and determining prognosis and response to treatment. The program includes clinical placements where students will have the opportunity to develop clinical examination and treatment methods under the supervision of experienced and certified manual physical therapists. Students will become familiar with methods of treatment outcome evaluation and their role in manual therapy practice.

Assessment Criteria/Plan

- Sessional Exam after 8 weeks
- Final semester Exam after 18 weeks

❖ Subjects with theory,viva and practical

- a) Theory paper : 50 MCQs : Marks =100
 b) Duration of paper : 1 hours

Assessment Criteria:

- a) Assignments: 10%
 b) Sessional Exam: 30%
 c) Final Exam : 40 %
 d) Viva & practical(Clinical Exam): 20 %

❖ Subjects only have theory papers:

- a) Theory paper : 50 MCQs : Marks 100
 b) Duration of paper : 1 hours

Assessment Criteria:

- a) Assignments: 10%
 b) Sessional Exam: 40%
 c) Final Exam : 50%

❖ Residency exam: Clinical Exam- Total Marks 100

- a) Case Evaluation : 40%
 b) Treatment session Observation: 40%
 c) Viva 10 questions : 20%

❖ **Cumulative 60%** = **pass**

Grading System:

Sr.No	Letter Grade	Grade Point Value	Numerical Grade (%)
1.	A	4.0	80% to 100%
2.	B	3.0	70% to 79.9%
3.	C	2.0	60% to 69.9%
4.	F	0	Below 60% considered FAIL

Course Code Description:

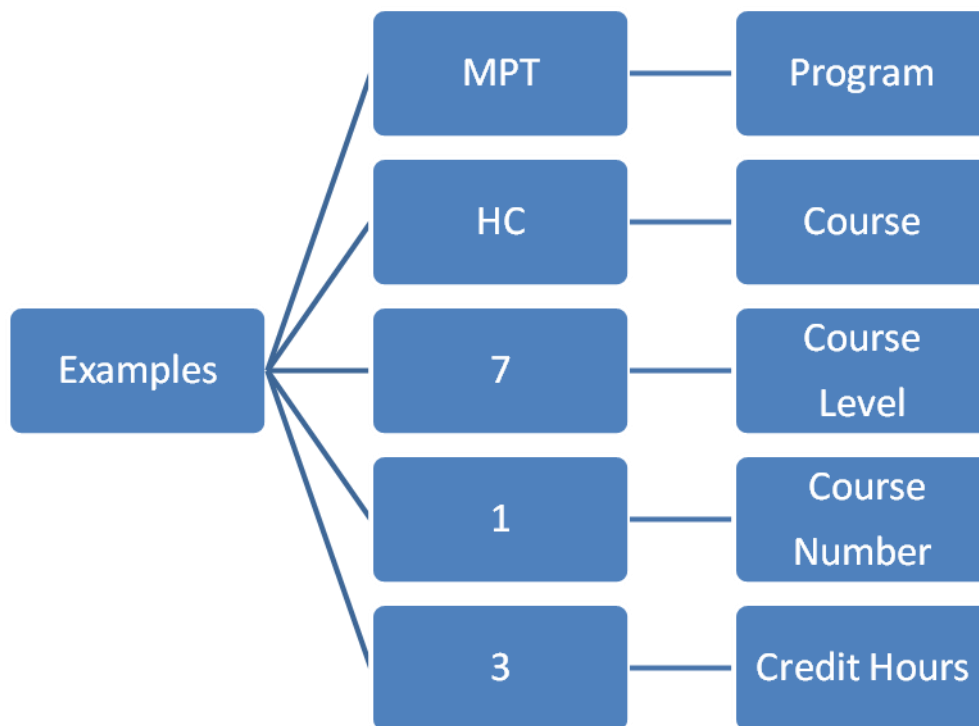
1st Three Alphabets → Program

2nd two Alphabets → Course

1st digit → Course Level

2nd digit → Course Number

3rd digit → Credit Hours



Course Number: Same subject and multiple courses, e.g. Clinical Science-1, Clinical Science -2 etc.

Detail Contents:

Break down of Semesters with subject codes & credit hours

1st Semester

Subject code	Courses	Credit Hours
MPTHC-713	Manual Therapy Practice (History and Concepts)	3(3+0) Credit Hours
MPTDM-713	Diagnosis in Manual Therapy	3(2+1) Credit Hours
MPTCS-713	Clinical Sciences-I Joint Structure, Physiology & Response to Injury	3(2+1) Credit Hours
MPTCS-723	Clinical Sciences-II Skeletal Muscle and Tendon	3(2+1) Credit Hours
Total Credit Hours		12-Credit Hours

2nd Semester

Subject code	Courses	Credit Hours
MPTCS-733	Clinical Sciences-III Pathoanatomy & Mechanics of the Vertebral Column	3(2+1) Credit Hours
MPTMT-713	Manual Therapy Techniques-I Soft tissue Mobilization	3(1+2) Credit Hours (Clinical practice)
MPTMT-723	Manual Therapy Techniques-II Joint Mobilization & Manipulation (Upper & Lower extremities)	3(1+2) Credit Hours (Clinical practice)
MPTMT-733	Manual Therapy Techniques-III Spinal Mobilization & manipulation including cervical, thoracic and lumbar regions	3(1+2) Credit Hours (Clinical practice)
Total Credit Hours		12-Credit Hours

**3rd Semester
Residency program**

Subject code	Courses	Credit Hours
MPTRS-711	1. Manual Therapy Techniques-I Soft tissue Mobilization (STM)	1-Credit Hours STM- 40 contact hours practice
MPTRS-721	2. Manual Therapy Techniques-II Joint Mobilization & Manipulation (Upper & Lower Extremities(JM))	1- Credit Hours JM- 40 contact hours practice
MPTRS-732	3. Manual Therapy Techniques-III Spinal Mobilization & manipulation including cervical, thoracic and lumbar regions(SM&M)	2- Credit Hours SM&M-2 Credit hours 80 Contact Hours
MPTRM-713	Research Methodology & Article writing Skills	4(3+1) Credit Hours
Total Credit Hours		8-Credit Hours

4th Semester

Subject code	Courses	Credit Hours
MPOTP-716	Terminal Project	6 CR hours
	One article is required to be published on the topic of research for the completion of the terminal project	
Total Credit Hours		6-Credit Hours

<i>Total Credit Hours (MS-OMPT)</i>	<i>38-Credit Hours</i>
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MS-OMPT-COURSE-1

Subject code	Course	Credit Hours
MPTHC-713	Manual Therapy Practice (History and Concepts)	3(3-0) Credit Hours

Course Description:

This course covers the history of manual therapy in different parts of the globe and an introduction to different concepts of manual therapy developed by physical therapy professionals in the field of physical therapy and rehabilitation. It also provides introductory information of the health professionals other than physical therapists who use manual therapy in their practice.

Course Objectives:

- To know the history and different concepts of manual therapy.
- To know about different professional who use manual therapy as treatment modality in their practice.
- To know the progress to words modern manual therapy
- To know the terminology used in manual therapy
- To know about the prominent personalities in the field of manual therapy and their contribution.
- To know the effectiveness of manual therapy in musculoskeletal disorders.
- To know the manual therapy techniques used by Physical Therapists.

Course contents:

1. History of Manual Therapy

- Introduction
- Folk Medicine
- Professional Bone setters
- Osteopathy
- Chiropractic

2. *Chiropractic versus Physical Therapy:*

- Introduction
- Differences

3. *Development of Manual Therapy in different parts of the globe:*

- The development of manual therapy in Norway
- The development of manual therapy in Australia
- The appearance of International manual therapy organizations

- Introduction of manual therapy in the united States

4. Different concepts in manual therapy:

- Kaltonborn concept
- Maitland concept
- Mechanize approach
- Ola Grimsby approach

5. Modern manual Therapy:

- Introduction
- Techniques
- Evidence based practice

6. Manual Techniques used by Physical Therapists:

- Soft tissue mobilization techniques
- Joint mobilization techniques
- Manipulation techniques
- Exercises Therapy

7. Principles of Manual Therapy:

- Rules for motion in concave and convex joints
- Basic Manual Therapy treatment rules
- Basic Mobilization techniques

8. Terminology in Biomechanics:

- Statics
- Dynamics
- Kinematics

9. *Osteokinematics:*

- Longitudinal access
- Mechanical axis
- Circumdution
- Rotation
- Swing
- Spin
- Impure swing

- Adjunct rotation

10. Arthrokinematics:

- Translatory(linear) motion
- Cardinal swing
- Arcuate swing
- Conjunct rotation
- Summary of spine and rotation movements

11. Positions of Joints:

- The closed packed position
- The loose packed position
- The Position of reference

Recommended books:

1. Science course (OMT-605) History of Manual Therapy by Ola Grimsby institute-1998.
2. Spinal Manual Therapy by Howard W.Makofsky.
3. The Spine (Basic Evaluation and Mobilization Techniques)
By Freddy M. Kaltenborn

MS-OMPT-COURSE-2

MPTDM-713	Diagnosis in Manual Therapy	3(2+1) Credit Hours
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Course Description:

The aim of this course is to develop an advanced level of knowledge and clinical skill in methods of patient interview and physical examination. Physical examination of the articular, muscular and neurological systems within the context of manual therapy practice will be comprehensively reviewed. Methods of diagnosis and classification of disorders in relation to indications for manual therapy treatment will be central objectives of this course. It will cover anatomy laboratory sessions and review of the neurophysiology of peripheral and central pain mechanisms.

COURSE OBJECTIVES:

- To introduce students the process of evaluation in manual therapy.
- To enhance the capability of the students to thoroughly review of the articulator, muscular and neurological systems.
- To enhance the knowledge and skills of the students for interpretation and understanding of laboratory work and other special tests to diagnose musculoskeletal disorders.
- To enhance the knowledge and skills of the students for differential diagnosis in manual therapy practice.

COURSE CONTENTS:

1. Genral Principles of Evaluation:

- Methodology in differential diagnosis for low back pain.
- Initial observation
- History
- Structural inspection
- Active Motion
- Passive Motion
- Resisted Motion
- Palpation
- Neurology
- Special Tests
- Joint play
- Segmental play
- Lab Tests
- Conclusion

- Treatment

2. Principles of Manual Examination, Diagnosis, and intervention:

- Somatic Impairment
- The CHARTS Method of Manual Examination
- Direct Versus Indirect Technique
- Sequencing, Therapeutic Intervention
- Body Holism and Adaptive Potential
- Contraindications to Spinal Manual Therapy

3. Examination and Evaluation of the Scapulothoracic Region:

- Posture
- Active Movements
- Passive Accessory Intervertebral Movements
- Passive Physiologic Intervertebral Movements
- Soft Tissue Palpation
- Special Tests

4. Examination and Evaluation of the Cervical Spine:

- Posture
- Active Movements
- Repeated Movements Exam for cervical Derangement(Phase 1 to 4)
- Apophyseal Joint Opening/Closing (C2 to C7)
- Soft Tissue Palpation
- Special Tests

5. The Role of Cervical Spine in Headache:

- Headache
- Dizziness

6. Examination and Evaluation of the Temporomandibular Joint: Posture

- Active Mandibular Movements
- Intraoral joint Play Motion
- Soft Tissue Palpation

7.Examination and Evaluation of the Lumbar Spine:

- Posture
- Active Movements
- Repeated Movements Exam for Lumbar Derangement (Phase-1 to 3)
- Passive Physiologic,Intervertebral Movements
- Soft Tissue Palaption
- Special Tests

8.Examination and Evaluation of the pelvic Girdle:

- Structural Exam (Asymmetry of Bony Landmarks)
- Iliosacral Mobility Tests
- The One-Legged Stroke or Gillette Test
- Superior Iliosacral Joint, Posterior Iliac Rotation
- Inferior Iliosacral Joint, Posterior Iliac Rotation
- Inferior Iliosacral Joint, Anterior Iliac Rotation
- The Long Sitting Test
- Soft Tissue Palpation
- Special Tests

9. The Evidence for Spinal Manual Therapy and Therapeutic Exercises

Recommended Books:

1. Spinal Manual Therapy by Howard W.Makofsky.
2. Orthopedic Manual Therapy Course (OMT-665) Manual Therapy of the spine by Ola Grimsby institute-1998.

MS-OMPT-COURSE-3

MPTCS-713	Clinical Sciences-I Joint Structure, Physiology & Response to Injury	3(2+1) Credit Hours
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Course Description:

This course provides physiotherapists with a background in joint structure, mechanics and response to injury which is essential knowledge for developing clinical reasoning skills. Specific content includes Structure and mechanics of ligament, mechanisms of injury and repair, inflammation following ligament injury, recovery of ligament mechanics, articular cartilage injury, degeneration & repair, response to joint surface injury, neurogenic inflammation, peripheral pain mechanisms following injury, biomechanical and neurophysiological effects of joint injury, biomechanical consequences of joint injury, clinical issues in anterior knee pain.

Course Objectives:

1. The students will have advance knowledge about the joint category, anatomy, physiology and biomechanics.
2. The students will be able to understand the inflammatory response of the soft tissues, articular cartilage and ligaments.
3. The students will be able to understand the mechanism of injury to the joints, healing and repair process of the ligaments and articular cartilage.
4. The students will be able to understand the consequences of injury and its effects on the body over all function and posture.

Course Contents:

1. Joint Categories:

- *Synarthrotic joints*
- Diarthrotic joints

2. Classification of Joints:

- Joint classification according to MacConaill
- Joint classification according to Gray.

3. Biomechanics and Terminology:

- Shoulder
- Elbow
- Wrist and hand
- Hip
- Knee
- Ankle and foot

4. Traumatology:

- Vasoconstriction and vasodilatation
- Edema
- White Blood Cell Mobilization
- Summary of Trauma-induced inflammatory reaction

5. Immediately After Trauma (Irritation):

- Acute stage-edema
- Settled stage- Muscle Spasm
- Chronic stage-Fibrous reaction

6. Dysfunction, Evaluation and Treatment :

- Shoulder
- Elbow
- Wrist and Hand
- Hip
- Knee
- Ankle & Foot

7. Pain; Mechanisms, Assessment and Management:

- Neuroanatomic Basis
- Modulation
- Role of the Cerebral Cortex in pain perception
- Chronic pain mechanisms
- Pain Mediated Through the Sympathetic Nervous System

8. Joint Mechanoreceptor:

- Mechanoreceptor type I
- Mechanoreceptor type II
- Mechanoreceptor type III
- Mechanoreceptor type IV

Recommended:

1. The physiology of the Joints by I.A.Kapandji Volume One (Upper Limb)
2. The physiology of the Joints by I.A.Kapandji Volume Two (Lower Limb)
3. Modern Manual Therapy of the Extremities by Ola Grimsby Institute (USA)
4. Soft Tissue Pain and Disability (3rd Edition) by Rene Caillet.
5. Orthopedic Physical Therapy (4th Edition) By Robert A. Donatelli/Michael j. Wooden

MS-OMPT-COURSE-4

MPTCS-723	Clinical Sciences-II Skeletal Muscle and Tendon	3(2+1) Credit Hours
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Course Description:

This course covers the organization and mechanical properties of skeletal muscle in relation to mechanisms of injury, muscle regeneration, repair, exercise-induced muscle injury and implications for injury management. Other topics include: neurophysiology of muscle pain, muscle proprioception, muscle in the control of joint mobility , biomechanics of the scapulothoracic articulation, tendon structure, response to overuse and degeneration, tendon repair, diagnosis and pathomechanics of achilles tendon and rotator cuff injuries, anatomy and pathology of the thoracic outlet region.

Course Objectives:

1. The students will have advance knowledge about the mechanical properties of skeletal muscle and tendon.
2. The students will be able to understand the mechanism of injury to the skeletal muscles and tendon.
3. The students will be able to understand the healing process including muscle and tendon regeneration and repairs.
4. The students will be able to understand the consequences of injury and its effects on the body over all function and posture.

Course Contents:

1. Muscle:

- Introduction
- Morphology
- Muscular Contraction
- The Cross-Bridge Theory
- Physical Properties
- Applications

2. Tendon/Aponeurosis:

- Morphology and Histology
- Physical Properties
- Physical properties and Adaptive Function
- Tendon-Muscle-Aponeurosis Interaction

3. Skeletal Muscle and Tendon Mechanical Properties:

- Anatomical arrangement of skeletal muscles
- Blood supply of skeletal muscles
- The physiological Cross-section of muscle
- Work capacity

4. The effect of Mechanical Load on soft connective tissues:

- Principles Underlying Soft-tissue Response to Mechanical Loading
- Components of Connective Tissues and Responses to Mechanical Loading
- The strong relationship between structure and function in Connective Tissues
- Connective Tissue response to Immobility.

5. Types of Muscle work:

- Concentric Muscle work
- Eccentric Muscle
- Isometric Muscle work

6. The principles of overload:

- Voluntary and Involuntary muscles
- Aerobic and anaerobic muscles
- Muscle neurology
- Energy and Fatigue

7. Functional Qualities:

- Resistance Maximum
- Strength and endurance
- Coordination
- Pain, 1RM and Dosage

8. Speed of Contraction:

- Peak Torque
- Maintaining strength gains
- Eccentric and concentric training
- Fatigue and static work
- Stretch shorting cycle

9. Delayed Onset Muscle Soreness (DOMS):

- Preventing DOMS
- Training effects of eccentric work
- Indication for eccentric work

Recommended Books:

1. Biomechanics of the Musculo-Skeletal System (3rd Edition) by Benno M. Nigg and Walter Herzog.
2. Functional Soft-Tissue Examination and Treatment by Manual Methods (3rd Edition) by Warren I. Hamme

MS-OMPT-COURSE-5

MPTCS-723	Clinical Sciences-III Pathoanatomy & Mechanics of the Vertebral Column	3(2+1)Credit Hours
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Course Description:

This course covers critical aspects of articular and neuroanatomy and pathology of the vertebral column from a clinical perspective. Issues reviewed in the course relate specifically to examination techniques and clinical reasoning. Content includes adaptations of the spine to load bearing, intervertebral disc and zygapophyseal joint pathoanatomy, biomechanics, and clinical presentations.

Course Objectives:

- The students will have advance knowledge about anatomy, physiology and mechanical properties of intervertebral disc.
- The students will be able to understand the mechanism of injury to the intervertebral disc.
- The students will be able to understand the biomechanics of the vertebral column and zygapophyseal joints.
- The students will be able to understand the consequences of injury and its effects on the body over all function and posture.

Course Contents:

1. Anatomy, Physiology and Biomechanics of the spine:

- The vertebral column taken as a whole
- The Bony pelvis and the Sacro-Iliac Joint
- The Lumbar Vertebral Column
- The Thoracic Vertebral Column
- The Cervical Vertebral Column

2. Vertebral Motion Dynamics:

- Physiologic Motion
- Motion Axes
- Rule of Superior Motion
- Rule of Vertebral Body Motion
- Fryette's Rules of Spinal Motion
- Apophyseal Joint Kinematics
- Motion Barriers

3. Tempomandibular Disorders, Head and Orofacial pain: Cervical Spine Consideration.

4. Cervical Spine & Thoracic Inlet:

- Dysfunction
- Evaluation
- Treatment
- Differential Diagnosis
- Cervical and Upper thoracic Mobilization

5. The Lumbopelvic System:

- Anatomy
- Physiology
- Motor Control
- Instability
- Description of a Unique Treatment Modality

6. Lumbar Spine Instability: Assessment and Exercises Based Restabilization:

- The Injury process-Tissue Damage
- Summary of Specific Tissue Injury Mechanism Relevant for Therapeutic Exercises
- The Injury Process-Motor Changes
- Instability as a cause of Injury
- On Stability: The Foundation
- The stabilizers of the Lumbar Torso

7. Advances in Lumbar Spine Surgery:

- Intervertebral Disc and The degenerative Lumbar Spine
- General Indications for the Surgical Treatment of the Lumbar Spine
- Discogenic Low-back Pain and Degenerative Disc Disease
- Standard Techniques for Surgical Treatment

8. Lumbar-Pelvic-Hip Complex:

- Evaluation
- Diagnosis
- Treatment

9. Soft Tissue Mobilization-Special Considerations:

- Soft tissue Components
- Connective-Tissue Structures
- Functional Joint Concept
- Dysfunctional Factors
- Response to Treatment
- Dysfunctions of the Myofascial Unit

- Evaluation Process

Recommended Books:

1. Orthopedic Physical Therapy (4th Edition) by Robert A. Donatelli/Michael J. Wooden
2. The Physiology of the Joints (Volume Three) By Kapandji
3. Functional Soft-Tissue Examination and Treatment by Manual Methods (3rd Edition)
By Warren I. Hammer
4. Spinal Manual Therapy by Howard W. Makofsky.

MS-OMPT-COURSE-6

MPTMT-713	Manual Therapy Techniques-I Soft tissue Mobilization	3(1+2)Credit Hours
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Course Description:

This course covers the theory and techniques of manual therapeutics as applied to the soft tissue dysfunctions. It covers the basic concepts of currently used soft tissue mobilization techniques in the advanced practice of Manual Physical Therapy including the history, mechanism to work and research evidences about the technique.

Course Objectives:

- The student will have advance knowledge of the history, mechanism and research evidences about the soft tissue techniques currently used in the Modern Evidence Based Practice of Manual Therapy.
- The students will be able to identify the signs and symptoms of the soft tissue dysfunctions & will evaluate and asses the dysfunctions.
- The student will be able to select and correctly apply an appropriate treatment technique for the soft tissue dysfunctions
- The students will be able to recognize the indications and contraindications for the use of mobilization procedures.

Course Contents:

1. Muscle Energy Techniques (MET)

- Muscle Hypertonicity
- Common Postural Syndromes
- Muscle Length Assessment
- Muscle Energy Techniques
- Conclusion

2. Strain/Counterstrain:

- History of Counterstrain Techniques
- Physiology of Manipulation
- Counterstrain System
- Manipulation of the Specific Regions of the spine

3. Graston Technique:

- Tensegrity “The architecture of Life”

- Posterior layer of the lumbar Fascia
- Testing for Shortened Lumbar Fascia
- Graston Technique Methods
- Use of Graston Technique (GT) for different areas of the body

4. Soft-Tissue Treatment of Temporomandibular Disorders:

- Relevant Anatomy and Biomechanics
- Temporomandibular Disorders
- Additional Interventions for TM soft Tissue Conditions

5. Integration of Taping Techniques with Myofascial Therapy:

- The Role of Taping in Myofascial Therapy
- The proprioceptive Effects of taping
- Introduction to kinesio Taping Method

6. ELDOA: Longitudinal Osteo-Articular De-Coaptation Stretching:

- The Spine
- The effects of ELDOA
- Technique

7. Active Isolated Stretching:

- Technique introduction
- Mechanism
- Application

8. Active Release Techniques: Long Tract Nerve Release

- Median Nerve at the Pronator Teres/Flexor Digitorum Superficialis
- Saphenous Nerve at the Sartorius/Gracillis
- Meniscal Entrapment of the knee

9. Myofascial Release, Direct Fascial Technique and Friction.

- Thoracic Inlet Release
- Anterior Chest Wall Fascial Techniques
- Scapular Fascial Techniques
- Superficial Posterior Tissue Release
- Erector Spinae Fascial Technique
- Transversospinalis Fascial Techniques and Friction
- Respiratory Diaphragm Release

Recommended Books:

1. Orthopedic Physical Therapy (4th Edition) by Robert A. Donatelli/Michael J. Wooden
2. The Physiology of the Joints (Volume Three) By Kapandji
3. Functional Soft-Tissue Examination and Treatment by Manual Methods (3rd Edition)
By Warren I. Hammer
4. Spinal Manual Therapy by Howard W. Makofsky

MS-OMPT-COURSE-7

MPTMT-723	Manual Therapy Techniques-II Joint Mobilization & Manipulation (Upper & Lower extremities)	3(1+2)Credit Hours
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Course Description:

This course covers the theory and application of treatment techniques to upper and lower extremity joint dysfunctions. Included in this course will be covered the appropriate application of joint mobilization (JM) and manipulation to upper and lower extremity joints.

Course Objectives:

- The student will have advance knowledge of the history, mechanism and research evidences about the Joint Mobilization (JM) & Manipulation techniques currently used in the Modern Evidence Based Practice of Manual Therapy.
- The students will be able to identify the signs and symptoms of joint dysfunctions (upper & lower extremity) & will be able to evaluate and asses the related conditions.
- The student will be able to select and correctly apply an appropriate treatment technique for joint dysfunctions
- The students will be able to recognize the indications and contraindications for the use of mobilization and manipulation procedures.

Course Contents:

1. The Hand and Fingers:

- Joint Mobilization(JM) Technique
- Indication
- Position
- Fixation
- Mobilization
- Comments

2. The Wrist:

- Joint Mobilization(JM) Technique

- Indication
- Position
- Fixation
- Mobilization
- Comments

3. The Elbow Joint:

- Joint Mobilization(JM) Technique
- Indication
- Position
- Fixation
- Mobilization
- Comments

4. The Shoulder Girdle:

- Joint Mobilization(JM) Technique
- Indication
- Position
- Fixation
- Mobilization
- Comments

5. Foot and Ankle:

- Joint Mobilization(JM) Technique
- Indication
- Position
- Fixation
- Mobilization
- Comments

6.The knee Joint:

- Joint Mobilization(JM) Technique
- Indication
- Position
- Fixation
- Mobilization
- Comments

7. The Hip Joint:

- Joint Mobilization(JM) Technique
- Indication
- Position

- Fixation
- Mobilization
- Comments

8. Mobilizations with Movements, “NAGS”, “SNAGS”, and More.....

- The Glenohumeral Joint
- Acromioclavicular Joint
- Scapular MWM
- The Hip
- The Ankle
- NAGSs and SNAGs
- NAGs
- SNAGs

Recommended Books:

1. Evidence Based Manual Therapy of the Extremities (Techniques Manual) By The Ola Grimsby Institute.
2. Functional Soft-Tissue Examination and Treatment by Manual Methods (3rd Edition) By Warren I. Hammer

MS-OMPT-COURSE-8

MPTMT-733	Manual Therapy Techniques-III Spinal Mobilization & manipulation including cervical,thorasics and lumbar regions	3(1+2)Credit Hours
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Course Description:

This course covers the theory and application of treatment techniques (Mobilization and Manipulation) to the spine including Cervical, Thoracic and Lumbar. It also covers the home exercises program for all spinal conditions.

Course Objectives:

- The student will have advance knowledge of the history, mechanism and research evidences about the Joint Mobilization (JM) & Manipulation techniques currently used in the Modern Evidence Based Practice of Manual Therapy.
- The students will be able to identify the signs and symptoms of spinal dysfunctions (Cervical, Thoracic & Lumbar) & will be able to evaluate and asses the related conditions.
- The student will be able to select and correctly apply an appropriate treatment technique for spinal dysfunctions
- The students will be able to recognize the indications and contraindications for the use of mobilization and manipulation procedures.

Course Contents:

1. Scapulothoracic Region

- Examination and Evaluation of the Scapulothoracic Region
- Mobilization and Manipulation of the Thoracic Spine and Ribs
- Technique, Position and Mobilization
- Therapeutic and Home Exercises for the Scapulothoracic Region

2. Cervical Spine:

- Examination and Evaluation of the Cervical Spine
- Mobilization and Manipulation of the Cervical Spine
- Technique, Position and Mobilization

3. Temporomandibular Joint:

- Examination and Evaluation of The Temporomandibular Joint
- Intraoral Manipulation of the Temporomandibular Joint
- Technique, Position and Mobilization
- Home Exercises for the Temporomandibular Joint

4.Lumbar Spine:

- Examination and Evaluation of The Lumbar Spine
- Manipulation of the Lumbar Spine
- Technique, Position and Mobilization
- Home Exercises for the Lumbar Spine

5.Pelvic Girdle:

- Examination and Evaluation of the Pelvic Girdle
- Manual Therapy of the Pelvic Girdle
- Technique, Position and Mobilization
- Home Exercises for the Pelvic Girdle

Recommended Books:

1.Evidence Based Manual Therapy of the spine(Techniques Manual) By The Ola Grimsby Institute.

2. Spinal Manual Therapy by Howard W. Makofsky

MS.OMPT-Course-9

MPTRM-714	Research Methodology & Article writing Skills	4(3+1)Credit Hours
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Course Description:

This course covers basic research methods and designs, including concepts of reliability and validity, interpretation of inferential statistics related to research designs, co relational statistic & designs, interclass correlation coefficients, and critical appraisal of the literature. It also covers the known writing styles for medical education the American Psychological Association (APA) and practice on Endnote and SPSS soft ware.

Course Contents:

Section 1. Basic principles of Research:

- Introduction
- Research Ethics
- Research design and Statistics
- Questionnaires, Surveys and sampling
- The Nature of the Data
- Techniques of descriptive statistics
- Testing Hypotheses
- Designing your Study
- Sources of error in research
- Matching the research design to the statistical test.
- Putting the theory into practice
- Writing up the research for publication
- Reading published research critically

Section 2. Concise and Bias-Free Writing

- General Guidance
- Grammar
- Reducing Bias in Language
- Organizing Ideas
- Punctuation, Spelling, and Capitalization
- Italicizing and abbreviating
- Numbers, Metrication, and Statistics
- Tables and Figures
- Footnotes and Appendixes
- Quotations, Reference Citations in Text, and Reference List

- Reference Examples

Section 3. Statistical Testes:

- Non-Parametric testes for same-and matched-Subject designs
- Parametric testes for same-and matched-Subject designs
- Non-Parametric testes for different(unrelated)-Subject designs
- Parametric testes for different(unrelated)-Subject designs
- Non-Parametric and parametric tests for correlation designs
- Estimation

Section 4. Research Applications:

- Attitude Scales
- Repertory grid analysis
- Using statistics in diagnostic and screening tests: Receiver Operating Characteristics
- Capturing the expert opinion: The Delphi Technique.
- Capturing the user voice: Thrustone's paired comparison technique.
- Capturing the clinician's view: Reliability measures
- Undertaking systematic reviews

Section 5. Data Analysis:

- Statistical Reasoning
- Statistical Analysis of Diffrences; The basics
- Statistical Analysis of Diffrences; Advanced and special Techniques
- Statistical Analysis of Relationships; The basics
- Statistical Analysis of Relationships; Advanced and special Techniques

Section 6. Being a Consumer

- Locating the Literature
- Evaluating Evidence One Article at a time
- Synthesizing Bodies of Evidence

1. Textbook: Rehabilitation Research (Principles and Applications) 3rd Edition

By Elizabeth Domholdt

2. Research Methods for Clinical Therapists: Applied project Design and Analysis

By Carolyn M.Hicks (Fifth Edition)

3.Concise Rules of APA Style

