

<b>Name of the Program</b>	<b>Master of Physiotherapy( Musculoskeletal)</b>			<b>Year/ Semester:</b>	<b>II year/III Sem</b>
<b>Course Name</b>	<b>Musculoskeletal Conditions &amp; Management-I</b>	<b>Course Code:</b>	<b>MPT 303M MPP 303M</b>	<b>Type</b>	<b>Theory &amp; Practical</b>
<b>Credits</b>	<b>04+01</b>			<b>Total Session Hours</b>	<b>60 + 20Hours</b>
<b>Evaluation Spread</b>	<b>Internal Continuous Assessment:</b>	<b>30 Marks</b>		<b>End Term Exam</b>	<b>70Marks</b>
<b>Type of Course</b>	Compulsory	✓ Core		Creative	Life Skill
<b>Course Objectives</b>	<p>On completion of the study of this subject the student should be able to:-</p> <ol style="list-style-type: none"> <li>1. Develop foundational knowledge in regional orthopaedics, including orthopedic assessment, fracture classification, healing processes, and principles of fracture management.</li> <li>2. Identify and manage musculoskeletal injuries of the upper and lower extremities, including fractures, dislocations, and associated complications.</li> <li>3. Evaluate and rehabilitate soft tissue injuries, applying clinical reasoning to conditions affecting both upper and lower limbs, and implementing appropriate physiotherapy interventions.</li> <li>4. Apply physiotherapy techniques in orthopaedic trauma care, including conservative and surgical management, use of splints and braces, and integration of recent advances in arthroplasty, arthroscopy, and ergonomics.</li> </ol>				
<b>Course Outcomes(CO):</b> <i>After the successful course completion, learners will develop following attributes:</i>					
<b>Course Outcome(CO)</b>	<b>Attributes</b>				
<b>CO1</b>	Demonstrate proficiency in orthopedic assessment and evaluation techniques, including history taking, clinical examination, and understanding of fracture healing and management principles.				
<b>CO2</b>	Assess and rehabilitate soft tissue injuries of the upper and lower limbs using evidence-based physiotherapy approaches, recognizing complications and applying appropriate rehabilitation strategies.				
<b>CO3</b>	Design and implement physiotherapy interventions for orthopedic trauma cases, including conservative and surgical management, with effective use of splints, braces, and recent advances in arthroplasty and arthroscopy.				
<b>Pedagogy</b>	Interactive,discussion-based,student-centered,presentation.				
<b>Internal Evaluation Mode</b>	Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 marks Bed Side behavior or Interaction in Class: 02 marks				

Session Details	Topic	Hours	Mapped CO
UNIT 1	<p><b>INTRODUCTION TO REGIONAL ORTHOPAEDICS</b>  Assessment &amp; Evaluation in detail related to orthopedic patient history taking, clinical features, clinical examination and investigation, General principles of Fracture treatment. Fracture healing (normal &amp; Pathological).  Upper Quarter Fractures &amp; Dislocations – Extrarticular fractures of Clavicle, Scapula, Humerus, Radius &amp; Ulna, Hand, Rib fracture. Dislocation of - Acromioclavicular joint. Sternoclavicular joint, Recurrent dislocation of Shoulder, Elbow, Distal radius &amp; ulna fracture, Scaphoid fractures &amp; nonunion/malunion, Carpal dislocation &amp; fractures, Compartment syndromes &amp; Vascular disorders, - Complication &amp; Management  Lower Quarter Fractures &amp; Dislocations – Acetabulum, Neck of femur, Fracture Pelvis, Trochanter, Shaft of femur, Patellar fracture. Intercondylar fracture of shaft of tibia. Pott’s fracture. Calcaneal fracture. Metatarsal fracture. Phalanges fracture. Recurrent dislocation of patella. - Hip, Ankle dislocation - Complication &amp; Management</p>	20hrs	CO1
UNIT 2	<p><b>SOFT TISSUE INJURY EVALUATION &amp; REHABILITATION</b>  Soft tissue injuries &amp; repair, Clinical presentation, &amp; general principles of – Upper limb. - Contusion and Myositis, Deltoid Fibrosis, Instability, Rotator Cuff Injuries, Impingement, Labral Tear, Acromioclavicular Joint Sprain, Bicipital Tendonitis, Bursitis, Tendonitis, Snapping &amp; winged scapula, Trapezitis, Tenosynovitis. Carpel tunnel syndrome. Dupuytren’s contracture. VIC, Reflex Sympathetic Dystrophy, Periarthritis of shoulder, Thoracic outlet syndrome, Shoulder hand syndrome, Tennis &amp; Golfers elbow, Trigger finger, Carpal instability, Carpal Tunnel Syndrome, De-quervain’s Tenosynovitis, Wrist tendonitis &amp; Sprain - Complication &amp; Rehabilitation Management.  Lower Limb – Hip flexor pain, Impingement, Labral Tears, Fat pad inflammation. Baker’s cyst. ACL, PCL, MCL &amp; LCL Injuries, Meniscal injury, Chondromalacia patella, Quadriceps Fibrosis, Bursitis around the knee, Jumpers &amp; Runners Knee, Hyperextension injuries, Knee sprain &amp; strain, IT Syndrome, Calf &amp; Shin Pain, Plantar Fascitis, Calcaneal Spur, Tendonitis, Tendinosis, Ankle sprain &amp; strain, Turf Toe - - Complication &amp; Rehabilitation Management.</p>	20 hrs	CO2
UNIT 3	<p>Physiotherapy Management Of Different Orthopaedic Trauma Conditions.  General physiotherapy management of Upper limb - Physiotherapy management of post conservative and pre and post- surgical management of trauma of upper limb, Trauma of shoulder complex &amp; associated bones, Trauma</p>	20 hrs	CO3

	<p>of elbow &amp; associated bones, Trauma of wrist and hand &amp; associated bones. Splints &amp; braces for upper limb injury management.</p> <p>Lower limb - Physiotherapy management post conservative and pre and post-surgical management of Trauma of Lower limb, General consideration of Lower limb trauma, Trauma of hip complex &amp; associated bones, Trauma of knee complex &amp; associated bones, Trauma of foot &amp; ankle complex &amp; associated bones. Splints &amp; braces for lower limb injury management.</p> <p>Arthroplasty &amp; Arthroscopy - Principles and physiotherapy management with recent advances for Shoulder, Elbow, Wrist, Ergonomics in Musculoskeletal Dysfunction</p>											
<b>Practical</b>	<p>Introduction To Regional Orthopaedics-History taking and assessment in orthopaedic patients Clinical examination techniques: inspection, palpation, range of motion. Demonstration of fracture classification. X-ray interpretation, Clinical features and evaluation.</p> <p>Demonstration of dislocation &amp; Recognition of complications.</p> <p>Soft Tissue Injury Evaluation &amp; Rehabilitation- Clinical tests &amp; Special tests for Upper limb &amp; lower Limb.</p> <p>Physiotherapy Management Of Orthopaedic Trauma-Pre and post-operative physiotherapy management.</p> <p>Demonstration of splints and braces. Practical use of modalities in trauma. Exercise demonstration in phases.</p> <p>Post-arthroplasty physiotherapy protocol. Post-arthroscopy rehab protocols. Ergonomic assessment &amp; workstation setup.</p>										20 Hrs	
<b>CO-PO Mapping</b>												
<b>CO</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>	<b>PO10</b>		
CO1	3	3	3							3		
CO2	3	3	3		2	2		2	2	3		
CO3	3	3	3	2	2	2	2	2	2	3		
Strong contribution-3, Average contribution-2, Low contribution-1,												
<b>Suggested Readings:</b>												
<b>Text-Books</b>	<ol style="list-style-type: none"> <li>1. Campbell's Orthopaedic surgery</li> <li>2. Turek's Orthopaedics (6th Edition)</li> <li>3. Textbook of Orthopaedics and trauma - Kulkarni</li> <li>4. Management of common musculoskeletal disorders - Kessler</li> <li>5. Treatment and rehabilitation fractures - Hoppenfield</li> <li>6. Tidy's Physiotherapy – Thomson, Skinner et al</li> <li>7. Clinical Orthopaedic Rehabilitation:– S. Brent Brotzman, Kevin E. Wilk</li> <li>8. Orthopedic Physical Assessment – David J. Magee</li> </ol>											
<b>Para Text</b>	<ol style="list-style-type: none"> <li>1. <a href="https://youtu.be/noN2NwLga8w?si=cznSMh7R30xqA9gi">https://youtu.be/noN2NwLga8w?si=cznSMh7R30xqA9gi</a></li> <li>2. <a href="https://youtu.be/_Bk7C5-GDiQ?si=-PTod4RTjJ6hX8PX">https://youtu.be/_Bk7C5-GDiQ?si=-PTod4RTjJ6hX8PX</a></li> <li>3. <a href="https://youtu.be/giUfeXJ0D5c?si=hxmbu_-117D03ke0">https://youtu.be/giUfeXJ0D5c?si=hxmbu_-117D03ke0</a></li> <li>4. <a href="https://youtu.be/CcMbG-IX_-Y?si=v4fRGVVNg_U2i4">https://youtu.be/CcMbG-IX_-Y?si=v4fRGVVNg_U2i4</a></li> <li>5. <a href="https://youtu.be/Mt4Pi_Qybd4?si=H9L2g7W_C4rApqCn">https://youtu.be/Mt4Pi_Qybd4?si=H9L2g7W_C4rApqCn</a></li> </ol>											

<b>Recapitulation &amp; Examination Pattern</b>		
<b>Internal Continuous Assessment:</b>		
<b>Component</b>	<b>Marks</b>	<b>Pattern</b>
Class test	12	Contains 01 long question. question carries 04 marks 02 short questions. each question carries 02 marks 04 multiple choice questions. each question carries 01 marks
Class participation or any other	04	This to be made on activities and instruction given by subject teacher
Marks assignments/project	04	Assignment to be made on topics and instruction given by subject teacher
Class presentation	04	This to be made on topics and instruction given by subject teacher
Bed side behavior or interaction in class	02	This is to be made on activities and instruction given by subject teacher
attendance	04	As per policy
<b>Total marks</b>	<b>30</b>	



**Master of Physiotherapy**  
**Era University, Lucknow**  
**Course Outline**  
**Effective**  
**From:2024-25**

<b>Name of the Program</b>	<b>Master of Physiotherapy</b>			<b>Year/Semester:</b>	<b>II year/IIIrd</b>
<b>Course Name</b>	<b>MUSCULOSKELETAL PHYSIOTHERAPEUTICS - I</b>	<b>Course Code:</b>	<b>MPT-301M MPP-301M</b>	<b>Type:</b>	<b>Theory &amp; Practical</b>
<b>Credits</b>	<b>04+01</b>			<b>Total Sessions Hours:</b>	<b>80 Hours</b>
<b>Evaluation Spread</b>	<b>Internal Continuous Assessment:</b>		<b>30 Marks</b>	<b>End Term Exam:</b>	<b>70Marks</b>
<b>Type of Course</b>	Compulsory		✓ Core	Creative	Life Skill
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>Students will learn all advance Musculoskeletal Manual Therapy approaches and their implementation in the field of physiotherapy.</li> </ul>				
<b>Course Outcomes(CO):</b> After successful completion of the course, the student will be able to-					
<b>CO1</b>	<ul style="list-style-type: none"> <li>Explain the history, principles, and evolution of various manual therapy approaches used in physiotherapy.</li> </ul>				
<b>CO2</b>	<ul style="list-style-type: none"> <li>Demonstrate understanding of clinical reasoning in manual therapy and select appropriate techniques based on patient-specific conditions.</li> </ul>				
<b>CO3</b>	<ul style="list-style-type: none"> <li>Compare and differentiate between various manual therapy concepts such as Maitland, Kaltenborn, Mulligan, and McKenzie based on their indications, contraindications, and methodologies.</li> </ul>				
<b>CO4</b>	<ul style="list-style-type: none"> <li>Apply the Maitland, Mulligan’s mobilization &amp; McKenzie approach concept for assessment and treatment of joint dysfunctions.</li> </ul>				
<b>CO5</b>	<ul style="list-style-type: none"> <li>Execute Muscle Energy Techniques (MET) for restoring normal joint motion and improving muscle flexibility.</li> </ul>				
<b>CO6</b>	<ul style="list-style-type: none"> <li>Demonstrate proficiency in PNF patterns to improve strength, coordination, and functional mobility and Apply MFR techniques for reducing soft tissue restrictions and improving range of motion.</li> </ul>				
<b>Pedagogy</b>	Interactive, discussion-based, student-centered, presentation.				
<b>Internal Evaluation Mode</b>	Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Bed Side behavior or Interaction in Class: 02				

Session Details	Topics	Hours	Mapped CO
Unit1	<b>History of manual therapy</b> <ol style="list-style-type: none"> <li>1. Overview of manual therapy approaches for all the joints.</li> <li>2. Clinical reasoning of manual therapy</li> <li>3. Differential clinical diagnosis based on different approaches such as – Maitland, Kaltenborne, Mulligan and McKenzie, Advanced manual therapy technique.</li> </ol>	20	CO1 ,CO2, CO3
Unit2	<b>Advance Manual Techniques I</b> <ol style="list-style-type: none"> <li>1. Maitland concept – history, concept, indications, contraindications, method, types</li> <li>2. mulligan’s concept - history, concept, indications, contraindications, method, types</li> <li>3. McKenzie concept - history, concept, indications, contraindications, method, syndromes, exercise plan</li> </ol>	20	CO3,CO4
Unit3	<b>Advance Manual Techniques II</b> <ol style="list-style-type: none"> <li>1. Muscle energy techniques (MET)</li> <li>2. Facilitation and inhibition techniques.</li> <li>3. PNF</li> <li>4. Myofacial release</li> </ol>	20	CO5,CO6
Practical	Introduction to advanced manual therapy techniques Understanding clinical applications, safety precautions, and patient positioning, Overview & demonstration of manual therapy techniques for upper& lower limb joints -Shoulder, elbow, wrist, hand Hip, knee, ankle, and foot joint assessment and mobilization. Maitland Concept– Grades I–IV mobilizations Demonstration and supervised practice on peripheral and spinal joints Mulligan’s Concept- SNAGS, NAGS, MWMs McKenzie Concept – Assessment & Exercise Protocols Practice of MET for spine, pelvis, and extremities Training diagonal patterns for upper limb, lower limb, and trunk Application of MFR for soft tissue restrictions and fascial adhesions	20 hours	

CO-PO and PSOMapping														
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	2	1	3	3	1	1	3	-	-	-	-	-	-
CO2	2	3	3	3	2	3	2	2	-	-	-	-	-	-
CO3	1	3	2	2	1	2	3	2	-	-	-	-	-	-
CO4	2	2	1	2	2	2	3	2						
CO5	2	2	2	3	1	2	3	3						
CO6	2	2	1	2	1	2	2	3						
<i>Strongcontribution-3,</i>			<i>Averagecontribution-2,</i>			<i>Lowcontribution-1,</i>								

<b>Suggested Readings:</b>		
<b>Reference Books</b>	1. Therapeutic exercise by Carolyn Kisner 2. Maitland's Peripheral Manipulation: 5th edition - Elsevier Health 3. Mulligan Concept Manual Therapy by B. Mulligan 4. The Mckenzie method of mechanical diagnosis and therapy of the lumbar spine. 5. Myofascial Release 6. Illustrated guide to proprioceptive neuromuscular facilitation (PNF) in practice.	
<b>ParaText</b>	1. <a href="https://youtu.be/3y9xvenNoCo?si=dq_lfRqK6bcCDUPD">https://youtu.be/3y9xvenNoCo?si=dq_lfRqK6bcCDUPD</a> 2. <a href="https://youtu.be/UQevUU58j0g?si=5vDERnslXKzs06KM">https://youtu.be/UQevUU58j0g?si=5vDERnslXKzs06KM</a> 3. <a href="https://youtu.be/sGdaojhjlrk?si=G0IARr13VN9b2Jnm">https://youtu.be/sGdaojhjlrk?si=G0IARr13VN9b2Jnm</a> 4. <a href="https://youtu.be/LePMCq7qGP4?si=uDbCHRdb8J_NnQ4K">https://youtu.be/LePMCq7qGP4?si=uDbCHRdb8J_NnQ4K</a>	
<b>Recapitulation&amp;ExaminationPattern</b>		
<b>InternalContinuousAssessment:</b>		
<b>Component</b>	<b>Marks</b>	<b>Pattern</b>
Class test	12	Contains <b>01 long question.</b> question carries <b>04Marks.</b> <b>02 Short questions.</b> Each question carries <b>02Marks</b> <b>04 multiple choice questions.</b> Each question carries <b>01Marks</b>
Class participation or any other	04	This to be made on activities and instruction given by subject teacher.
Marks Assignments/Project:	04	Assignment to be made on topics and instruction given by subject teacher
Class Presentation:	04	This to be made on topics and instruction given by subject teacher
Bed Side behavior or Interaction in Class	02	This to be made on activities and instruction given by subject teacher.
Attendance	04	As per policy
<b>Total Marks</b>	<b>30</b>	