

Branch Name:	I MPT
Program Code:	PT201
Course Title:	Physical and Functional Diagnosis in Orthopaedics
Course Code:	2PT2010104
Pre-requisite Course:	Physical and Functional Diagnosis

Teaching and Examination Scheme:

Teaching Scheme				Evaluation Scheme (Marks)				
Lecture (L)	Practical (P)	Credit	Total credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
120	120	8+4	12	100	-	-	-	100

Course Outcomes:

- Elicit and interpret clinical signs and symptoms of diseases commonly seen in Orthopaedics & interpret clinical tests and special investigations commonly used in the diagnosis of these conditions.
- Generate a primary diagnosis and a list of differential diagnoses consistent with typical presentations.
- Identify normal & pathological anatomy on diagnostic images.
- Discuss how the serious and common disorders and the specialized areas of medical practice may impact on Orthopaedic Physiotherapy practice.
- Demonstrate a broad range of technical skill in diagnosing the Physiotherapy related Orthopaedic conditions.
 - Cardiac efficiency tests and spirometry
 - Fitness test for sports
 - Physical disability evaluation and disability diagnosis. Gait analysis and diagnosis.
 - Coping Strategies in chronic painful musculoskeletal conditions. Check outs of orthotics and prosthetics for neuro-musculoskeletal problems. Effect of immobilization on Musculoskeletal System.
 - Application of ICF in Musculoskeletal diagnosis.
 - Medical screening for potential referred pain and Red Flags.

Contents: Clinical, Physical and Functional diagnosis in Musculoskeletal physiotherapy (MCPFD)

SECTION A: Ethics and Law

MCPFD 1.1. Clinical Decision Making - Planning Effective Treatment. Clinical decision-making models, Team approach, Foundation for clinical decision making.

MCPFD 1.2. Vital Signs. Identification of reasons for monitoring vital signs; importance of monitoring vital signs; common techniques of monitoring vital signs; identification and analysis of normal value with that of abnormal values.

MCPFD 1.3. Principles and application of investigative and imaging techniques in Physiotherapy

- Blood test
- Arterial Blood Gas (ABG) analysis
- Pulmonary Function Test (PFT)
- Radiological examination

- E. Computerized Tomography (CT)
- F. Magnetic Resonance Imaging (MRI)
- G. Ultrasonography (US)
- H. Electrocardiography (ECG)
- I. Dope testing

MCPFD 1.4. Evaluation assessment and treatment planning strategies for musculoskeletal, neurological, cardiopulmonary, sports specific and other physiotherapy conditions: Principles of evaluation, clinical manifestations, general and specific clinical examination.

i. Physiotherapy assessment of the following:

- A. Range of motion (ROM)
- B. Tone
- C. Muscular strength and endurance
- D. Flexibility
- E. Coordination - Non equilibrium test - Equilibrium test
- F. Sports specific skills
- G. Cardiac efficiency
- H. Sensory evaluation
- I. Functional Evaluation - Various scoring methods in functional assessment - Validity and reliability
- J. Fitness evaluation - Aerobic – Anaerobic
- K. Spasm
- L. Trigger Point
- M. Tender Point
- N. Spasm

ii. Assessment of cognitive, perceptual dysfunctions and vestibular dysfunction.

Recommended books for LEM:

1. Magee D. J. Orthopedic Physical Assessment. 6th Edition, Elsevier, 2014.
2. Dutton M. Dutton's Orthopaedic Examination, Evaluation and Intervention. 5th Edition, McGraw Hill Education, 2020.
3. Kendall F. P., McCreary E. K., Provance P. G. Muscles: Testing and Function with Posture and Pain. 5th Edition, Lippincott Williams & Wilkins, 2005.
4. O'Sullivan S. B., Schmitz T. J., & Fulk G. D. Physical Rehabilitation. 7th Edition, F.A. Davis Company, 2019.
5. Braddom R. L. Physical Medicine and Rehabilitation. 6th Edition, Elsevier, 2021.
6. Norkin C. C., & White D. J. Measurement of Joint Motion: A Guide to Goniometry. 5th Edition, F.A. Davis Company, 2016.
7. Porter S. Tidy's Physiotherapy. 16th Edition, Elsevier, 2020.
8. Licht S. Physical Medicine and Rehabilitation: Principles and Practice. 4th Edition, Lippincott Williams & Wilkins, 2005.
9. Goodman C. C., & Snyder T. E. K. Differential Diagnosis for Physical Therapists: Screening for Referral. 6th Edition, Elsevier, 2020.
10. Cibulka M. T. Orthopaedic Manual Physical Therapy: From Art to Evidence. Elsevier, 2021.

List of Open-Source Software/learning website:

- k-hub.in e library/A single platform for all e resources (K-hub, E Resource)
 - User Name- KB4605VNG
 - Password- BL@69BX!
- knowledgegainer.delnet.in (Delnet, E Resource)
 - User Name-gjspum
 - Password- spu10924