

Subject Title:	PHYSICAL AND FUNCTIONAL DIAGNOSIS
Subject Code:	1PT2010102
Year:	First Year MPT
Pre-requisite Subject	- NONE -

Objectives of course:

1. Demonstrate skills related to communication, assessment and management and recognize potential adverse outcomes for the musculoskeletal disorders.
2. Interpret the clinical findings, laboratory report and imaging studies based on the evidence.
3. Integrate diagnostic skill in clinical assessment and management of Musculoskeletal Disorders and diseases.
4. Demonstrate as an effective interdisciplinary team member and communicate effectively with various stakeholders involved in Musculoskeletal Care.
5. Demonstrate knowledge of ethical and medico-legal consideration, professional responsibility in the assessment and diagnosis of Musculoskeletal Disorders.

Subject Contents (50 Hours)

- 1 Clinical Decision Making - Planning Effective Treatment. Clinical decision making models, Team approach, Foundation for clinical decision making.
- 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 values with that of abnormal values.
- 3 Principles and application of investigative and imaging techniques in Physiotherapy
 - a. Blood Test
 - b. Arterial Blood Gas (ABG) analysis
 - c. Pulmonary Function Test (PFT)
 - d. Radiological examination
 - e. Computerized Tomography (CT)
 - f. Magnetic Resonance Imaging (MRI)
 - g. Ultrasonography (US)
 - h. Electrocardiography (ECG)
 - i. Dope testing

- 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.
 - A. 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
 - B. Assessment of cognitive, perceptual dysfunctions and vestibular dysfunction.
- 5 Electro-Diagnosis:
 1. Characteristics and components of Electro therapeutic stimulation systems and Electro physiological assessment devices.
 2. Instrumentation for neuromuscular electrical stimulation.
 3. Electrical properties of muscle and nerve.
 4. Neurobiology of afferent pain transmission and central nervous system mechanisms of pain modulation.
 5. Electrical stimulation and circulation.
 6. Clinical Electro physiological testing: Instruments, Techniques and Interpretations of
 - a. Nerve conduction Velocity including Repetitive Nerve Stimulation (RNS)
 - b. Electromyography
 - c. Biofeedback technique.
 - d. Late responses
 7. Concepts of electro physiological studies in neuromuscular diseases as a diagnostic and therapeutic tool.
 8. Evoked potentials – VEP, SSEP, MEP, BAEP.