

Subject Title:	PT in Orthopedics (ELECTIVE II)
Subject Code:	1PT2010204
Year:	Second Year MPT
Pre-requisite Subject	- NONE -

Objectives of course:

1. To expand the advanced scope of learning in Physical and Functional outcome measures in the various Musculoskeletal Conditions and advance application on therapeutic strategies with decision making in professional practice.
2. To emphasize the advance practice of Functional outcome measures in the Physical Diagnosis with hands on skills, clinical reasoning, and evidence / outcome based physiotherapy practice.

Subject Contents (150 Hours)

CLINICAL MUSCULOSKELATAL CONDITIONS

- 1 General Musculoskeletal disorders:
 - a. Degenerative disorders of joints
 - b. Infections of bones and joints
 - c. Arthropathies
 - d. Tumors of the bone
 - e. Congenital deformities
 - f. Spinal deformities
 - g. Developmental disorders of bone
 - h. Metabolic and endocrine disorders
 - i. Conditions related to upper extremity, lower extremity and spine
 - j. Soft tissue: overuse injuries
 - k. Musculoskeletal problems in neuromuscular disorders
- 2 Traumatic Orthopedics:
 - a. Classification of fractures
 - b. Dislocation of various joints
 - c. Fractures and dislocation of upper extremity
 - d. Fractures and dislocation of lower extremity
 - e. Fractures and dislocation of spine and pelvis
 - f. Fractures of skull, face bones and ribs
 - g. Soft tissue: acute traumatic injuries
- 3 Orthopedic surgeries:
 - a. Amputation
 - b. Joint replacement surgeries
 - c. Osteotomy and Arthrodesis
 - d. Surgery for correction of bone deformities and contractures
 - e. Surgical procedures for fracture, dislocation
 - f. Tendon transfer principles and procedures
 - g. Bone grafting
 - h. Nerve suturing and grafting
 - i. Implants in Orthopedics

PHYSIOTHERAPY INTERVENTIONS IN MUSCULOSKELETAL CONDITIONS

- 1 Physiotherapy management procedures in general musculoskeletal disorders:
 - a. Degenerative disorders of joints
 - b. Infections of bones and joints
 - c. Arthropathies
 - d. Tumors of the bone
 - e. Congenital deformities
 - f. Spinal deformities
 - g. Developmental disorders of bone
 - h. Soft tissue: overuse injuries
 - i. Neuromuscular disorders
 - j. Conditions related to upper extremity, lower extremity and spine
 - k. Metabolic and endocrine disorders
 - l. soft tissue acute traumatic injuries
- 2 Physiotherapy management procedures in Traumatic Orthopedics:
 - a. Fractures and dislocation of upper extremity
 - b. Fractures and dislocation of lower extremity
 - c. Fractures and dislocation of spine
 - d. Fractures of sternum and ribs
- 3 Physiotherapy management procedures in orthopedic surgeries:
 - a. Amputation
 - b. Joint replacement surgeries
 - c. Osteotomy and arthrodesis
 - d. Surgery for correction of bone deformities and contractures
 - e. Surgical procedures for fracture, dislocation
 - f. Tendon transfers
 - g. Bone grafting
 - h. Nerve suturing and grafting
- 4 Orthosis, Prostheses and mobility aids in musculoskeletal problems:
 - a. Principles of Orthosis and prostheses
 - b. Biomechanical compatibility, materials and designs of mobility aids
 - c. Different types of Orthosis and Prostheses used in musculoskeletal problems
 - d. Functional training with Orthosis and Prostheses
- 5 Physiotherapeutic approaches in musculoskeletal conditions:

Manual therapy approaches for specific joints of upper extremity, lower extremity and spine

 - b. Therapeutic exercises commonly used in musculoskeletal conditions including correction exercises and home exercises.
 - c. Pilates and core stability exercises
 - d. Proprioceptive Neuromuscular Facilitation (PNF)
 - e. Hydrotherapy in common musculoskeletal conditions
 - f. Swiss ball exercises
 - g. Taping, Wrapping and Bracing techniques.
- 6 Ergonomic principles and its application.
- 7 Recent advances in Orthopedic Physiotherapy.
- 8 Community based rehabilitation in musculoskeletal conditions.
- 9 Evidence based physiotherapy management for different musculoskeletal conditions.