

---

## **Electrophysical Agents(1120223)**

This course acquaints students with the principles of electrophysical agents and hydrotherapy in the field of rehabilitation. For each modality studied the followings will be discussed: physiological and therapeutic effects, indications, contraindications, precautions, and safety issues. Moreover, methods of applications of each modality will be discussed emphasizing clinical skills, and treatment planning based on patient/ client condition.

## **Neuroscience(1120320)**

This course acquaints students with the structure and function of the nervous system (central and peripheral nervous systems). Topics covered include: general organization of the nervous system, neurocytology, action and synaptic potential, joint and muscle receptors, spinal cord, ascending and descending pathways, brainstem, cranial nerves, vestibular system, basal ganglia, cerebellum, cerebral cortex, pain, visual system, auditory system, and blood supply to the nervous system.

## **Human physiology (111014400)**

The course is designed to provide the students with knowledge about the normal functions and physiological mechanisms of various systems based on the anatomical and histological

correlation, including: physiology of integumentary system, bones and muscles, blood and cardiovascular system, digestive system, respiratory system, renal system, central nervous system and peripheral nervous system, physiology of endocrine glands, and reproductive system and finally Fluids and electrolytes .

## **Musculoskeletal Anatomy (1120111)**

The course entails an advanced exploration of the gross anatomy structure of the human skeletal and muscular systems, including their vasculature, innervation, and joints. The location and structure of major components of the musculoskeletal system will be examined. The surface anatomy of the human body will be examined to identify skeletal markings, muscles, and related

structures, and to locate major organs. The functional and clinical relevance of selected anatomical topics will be also discussed. The theory component is accompanied by laboratory course (1120112) and case studies.

### **Musculoskeletal Anatomy (1120112)**

The course entails an advanced exploration of the gross anatomy structure of the human skeletal and muscular systems, including their vasculature, innervation, and joints. The location and structure of major components of the musculoskeletal system will be examined. The surface anatomy of the human body will be examined to identify skeletal markings, muscles, and related structures, and to locate major organs. The functional and clinical relevance of selected anatomical topics will be also discussed. The theory component is accompanied by laboratory course (1120112) and case studies.

### **Biomechanics (1120226)**

This course is designed to impart knowledge to students about biomechanical principles and its analysis in the context of physical therapy. This course covers structure, kinematics, and kinetics of all joints of human body. It also covers biomechanical analysis of normal posture and its abnormalities as well as normal gait and its deviations. The practical aspects of the material included in this course will be covered in (1120227) Biomechanics lab.

### **Biomechanics (1120227)**

This course is designed to impart knowledge to students about biomechanical principles and its analysis in the context of physical therapy. This course covers structure, kinematics, and kinetics of all joints of human body. It also covers biomechanical analysis of normal posture and its abnormalities as well as normal gait and its deviations. The practical aspects of the material included in this course will be covered in (1120227) Biomechanics lab.

### **Kinesiology ( 1120229)**

This course provides students with knowledge about movement analysis of all joints of the body by integration of musculoskeletal

anatomy, and biomechanical principles. The principles and theories of motor learning and control of normal and pathological conditions will be discussed. Movement analyses of all functional activities of human beings are also covered in this course.

### **Pathophysiology (111026000)**

This course is designed to teach students about disease and dysfunction, cell injury including causes, mechanisms, morphologic changes and alterations, cellular death, adaptations of cellular growth and differentiation, inflammation including its types, and hemodynamics disorder including edema. Diseases and dysfunction of various body systems with special emphasis on the musculoskeletal, nervous (peripheral and central), and cardiovascular systems will be covered.

### **Anatomy (0910342)**

This course covers normal human gross anatomy with emphasis on the structure of the musculoskeletal, neuromuscular, cardiopulmonary, and integumentary systems. Other anatomical systems will be covered briefly, especially as they relate to the function of the four emphasized systems. This course is designed to help students establish a foundational understanding of the neuromusculoskeletal systems of the human body for the practice of physical therapy.

### **Therapeutic (112023000)**

This course focuses on acquainting students with different types of therapeutic exercise. For every type indications, contraindications, precautions, and applications will be discussed. Evidence based practice will be used to Justify the type of therapeutic exercise selected for a particular condition. Case scenarios will be used to enforce the concepts covered in the course

### **Orthopedic 1(1120225)**

This course is the first of two courses which cover assessment and management of various musculoskeletal upper limb dysfunctions. The course provides fundamental knowledge in clinical upper limb musculoskeletal disorders related to physical therapy practice

including: fractures, soft tissue injuries, arthritis, and bone diseases. Basic methods of musculoskeletal assessment of peripheral joints will be introduced and linked to clinical situations. Physical therapy treatment and rehabilitation of peripheral joints will be taught to prepare students for clinical situations. This course will be taught by lectures, active learning, and case studies. The rationale for choosing assessment and treatment methods for patients with various upper limb musculoskeletal dysfunctions will be emphasised. A practical (lab and clinical) sessions will be given in parallel to the theory sessions.

### **Introduction to physiotherapy (0950122)**

This course introduces students to the profession of physiotherapy as a discipline within the health care field. Topics covered include history, development, philosophy, purposes, legal and ethical aspects of physiotherapy. Additionally, medical terminology, documentation, legal and professional aspects, and the role of physiotherapist as a health care member will be explored.

### **Communication skills and professional ethics( 1120100)**

This course provides an overview of professional communication skills to enhance students' performance, as well as their satisfaction with performance in the workplace. The course also covers selected issues in biomedical ethics. Such topics include careful examination of the philosophical theories of ethics which have guided medical practice since its inception. Additionally, new medical ethics issues that appeared with recent development in medicine will be also covered.

### **Assessment of the Musculoskeletal system (1120220)**

This course is designed to impart the basic musculoskeletal assessment knowledge to students in the context of physical therapy. The assessment covers history taking, skills of observation, palpation, range of motion (ROM) measurement, end feel, and muscle strength testing. This course also covers the basic Subjective, Objective, Assessment and Plan (SOAP) documentation. The practical aspects of the material included in this course will be covered in Assessment of the Musculoskeletal system lab.

## **Therapeutic Exercises – 1- clinical (1120228)**

This course focuses on acquainting students with different types of therapeutic exercise. For every type indication, contraindications, precautions, and applications will be discussed. Evidence based practice will be used to Justify the type of therapeutic exercise selected for a particular condition. Case scenarios will be used to enforce the concepts covered in the course

## **Electrophysical Agents- clinical (1120224)**

This course acquaints students with the principles of electrophysical agents and hydrotherapy in the field of rehabilitation. For each modality studied the followings will be discussed: physiological and therapeutic effects, indications, contraindications, precautions, and safety issues. Moreover, methods of applications of each modality will be discussed emphasizing clinical skills, and treatment planning based on patient/ client condition.

## **Musculoskeletal Evaluation Clinical (1120221)**

This course is designed to impart the practical aspects of musculoskeletal assessment to students in the context of physical therapy. The practical aspects of assessment covers the skills of history taking, observation, palpation, range of motion (ROM) measurement, end feel, and muscle strength testing and its documentation using SOAP method.