

**College of Allied Medical Sciences  
Department of Physical Therapy**

**Study Plan for Obtaining a Bachelor's Degree in  
Physical Therapy**

**2021-2022**

## **Course Description**

### **11011107 General Chemistry (3 Cr. Hr.):**

This course provides the students with the scientific measurements, Chemical interactions, chemical calculations, gaseous states, thermal chemistry, electronic and periodic structure, chemical bonds, particle shapes, material states and the power of attraction between molecules, physical properties of solutions and principles of equilibrium

### **11011108 General Chemistry Lab (1 Cr. Hr.): Prerequisite: 11011107**

The course is designed to provide the students with basic laboratory techniques, determining the physical and chemical properties of the material, and how to determine the experimental formula between compounds

### **11011281 General Biology (3 Cr. Hr.):**

This course provides the students with the basic information's regarding The chemistry of water, Biological macromolecules and lipids, Cell structure, cell membrane, cell respiration, cell cycle, Sexual life cycle and meiosis, and gene expression

### **11011282 General Biology Lab (1 Cr. Hr.):**

This course deal with the practical study of cell structures, chemical components of the living cell and cellular activities (reproductive methods, enzymatic activities, physical properties, respiration and photosynthesis). The study also included the study of plant and animal tissues, the diversity of living organisms, and genetics.

### **11021205 General Medical Physics (3 Cr. Hr.):**

This course will familiarize the students with the basic concepts and principles of mechanics (the motion of the objects, laws of motion, work and energy), elasticity, and fluid dynamics. Describing the elasticity and general information about fluid dynamics, heat and temperature, waver (sound, electromagnetic).

### **12011211 Anatomy and Histology: (3 Cr. Hr.), Prerequisite: 11011282**

This course provides a theoretical introduction to general anatomy of the human body including anatomy of the skin, musculoskeletal system, nervous system, endocrine system, circulatory system, lymphatic system, respiratory system and urinary system.

**12011212 Anatomy and Histology Lab: (1 Cr. Hr.), Prerequisite: 11011282, Co-request: 12011211**

This course provides practical anatomy of the human body including anatomy of the skin, musculoskeletal system, nervous system, endocrine system, circulatory system, lymphatic system, respiratory system and urinary system. Additionally, understand structures of cells.

**.12011213 Human Physiology (3 Cr. Hr.), Prerequisite: 11011282, 12011211**

This course teaches the study of how body organs function, deals with the functions of the various body systems with some clinical applications, including study of the respiratory system, circulatory system, circulatory system, urinary system, gastrointestinal system, endocrine system, muscles and nervous system. Where natural functions.

**12011214 Human Physiology Lab (1 Cr. Hr.), Prerequisite: 12011213**

This course practical experience of functions of the various body systems with some clinical applications, including study of the respiratory system, circulatory system, circulatory system, urinary system, gastrointestinal system, endocrine system, muscles and nervous system. Where natural functions.

**12012115 Pathology (3 Cr. Hr.):**

This course contains introduction to general and basic knowledge of diseases, their causes, pathogenesis, general morphological and changes at gross, microscopic and submicroscopic levels as well as the prognosis of the disease.

**12012216 Psychology for Rehabilitation students (2 Cr. Hr.):**

This course presents an introduction to psychology and deals with mental and psychological diseases with a focus on the impact of injuries and disabilities on the psychological and social situation of patients and the role of the natural therapist in improving the mental state of the injured.

**12011218 Medical Rehabilitation Ethics (2 Cr. Hr.):**

This course is offered to physiotherapists with a focus on the role of the physiotherapist in providing the best and highest service to the patient, the patient's family and the community.

**12012121 Musculoskeletal Anatomy (3 Cr. Hr.), Prerequisite: 12011213**

This course covers in greater depth skeletal system, the skeletal muscles system, and the articular system. The course will discuss all aspects of anatomical dimension, functional dimensions and neural supplement related to it.

**12012122 Musculoskeletal Anatomy practical (1Cr.Hr.), Prerequisite: 120112121**

This course provides a detailed explanation and practical application in the lab of the structural system, the musculoskeletal system and the articular system of the anatomical, functional aspects and the study of the nerves and blood vessels that feed this device.

**12012131 Anatomy of the nervous system (3 Cr. Hr.), Prerequisite: 12011213**

The course includes the general layout of the nervous system, and a detailed study of anatomy of the brain and spinal cord, the ascending and descending tracts of the cord and the distribution of the cranial nerves, the vascular supply to the brain and the cerebrospinal fluid.

**12012119 Introduction to Physical Therapy (1Cr. Hr.):**

This course introduces students to physical therapy, focusing on the role of physiotherapists in the prevention and treatment of disease, teaching, research, medical consultation and treatment of patients

**12012123 Kinesiology (2 Cr. Hr.):**

This theory course includes basic concepts and terminology of Kinesiology, It deals with different types of forces, analysis the human body motion kinetic and kinematic. It is also include understanding gait analysis, and natural biomechanics of bone and soft tissue under normal and pathological conditions.

**12012124 Kinesiology practical (1Cr. Hr.), Prerequisite: 12012123**

This course practical application in the laboratory of basic concepts and terminology of motion science. And deals with different types of forces and analysis and applications on the human body. Uses of mechanics in physiotherapy. It also includes understanding walking analysis and natural biomechanics of bone and soft tissue under normal and pathological conditions.

**12012241 Musculoskeletal Evaluation (1Cr. Hr.), Prerequisite: 12012121, 12012119**

A principal course in which the students are trained on methods of assessment of the musculoskeletal system from physiotherapy view. It includes the manual muscle testing for upper, lower extremities, trunk and neck muscles. Measurement of range of motion for body joints generally.

**12012242 Musculoskeletal Evaluation practical (1Cr. Hr.), Prerequisite: 12012241**

A practical course in which the students are trained on methods of assessment of the musculoskeletal system from physiotherapy view. It includes the manual muscle testing for upper, lower extremities, trunk and neck muscles. Measurement of range of motion for body joints generally.

**12012243 Therapeutic exercise (2 Cr. Hr.), Prerequisite: 12012123, 12012242**

This course provide introduction for therapeutic exercises and methods of use and application in physical therapy, include the different types of passive and active movements, the types of muscle effort and ways of strengthening the muscle groups or individually, and flexibility exercises, in addition to the practical training of students to apply different types of exercises.

**1202244 Therapeutic exercise practical (2 Cr. Hr.), Prerequisite: 12012243**

This course introducing a practical information about therapeutic exercises and methods of use and application in physical therapy, include the different types of passive and active movements, the types of muscle effort and ways of strengthening the muscle groups or individually, and flexibility exercises, in addition to the practical training of students to apply different types of exercises.

**12013145 Electro-Therapy (2 Cr. Hr.), Prerequisite: 12012119**

This course includes types of electrical currents used to raise electrical nerve, muscle and physiological effects and therapeutic uses in addition to the risks and preventive measures and students are trained on how to use electrical appliances. It also includes physiological effects of hydrotherapy, its uses, dangers, and preventive measures in addition to ways of using water treatment devices, students are trained in the use of these devices.

**12013146 Electro-Therapy practical (1 Cr. Hr.), Prerequisite: 12013145**

This course is a practical application for the types of electrical currents used to stimulate the nerves and muscles and its use as preventive measures. Students are required to practice on how to use therapeutic electrical appliances safely.

**12012225 Musculoskeletal injuries and pathology (3 Cr. Hr.), Prerequisite: 12011213**

This course introduces the musculoskeletal conditions that will be dealt with in physical therapy profession. These conditions range from congenital to acquired cases. We will go through body sections and different joints, study evaluation, symptoms and specific test for special cases

**12012232 Neurology Science (3 Cr. Hr.) Prerequisite: 12011213**

This course discuss a content about motor control processes by nervous system. It also provides detailed information about the common neurological diseases among adults, development and clinical picture.

**12012233 Neurology Science practical (1 Cr. Hr.) Prerequisite: 12012232**

This course provides practical issues and information on how to actually deal with the nervous system. It includes detailed description of the most common neurological diseases among adults, their development and clinical symptoms. It also focuses on acquiring and developing multiple methods for evaluating various neurological diseases.

**12012236 Neuromuscular developments (3 Cr. Hr.) Prerequisite: 12012121, 12012131**

This course is designed to explore factors affecting motor and neural development across the life span as they relate to physiotherapy. Different theories regarding motor behavior will be explored from the fetal period through the years of adulthood.

**12013226 Manual Therapy (2 Cr. Hr.) Prerequisite: 12012124**

This course provides theoretical approaches of manual therapy designed to teach students specific practical techniques to increase the level of joints movement of the upper and lower limbs, as well as increase the level of movement in the spine and maintain the level of normal movement in all joints of the body.

**12013227 Manual Therapy practical (1 Cr. Hr.) Prerequisite: 12013226**

This course equipped students with a practice experience of the methods of manual therapy which designed to teach students specific practical techniques to increase the level of joints movement of the upper and lower limbs, as well as increase the level of movement in the spine and maintain the level of normal movement in all joints of the body.

**12013162 Physical Therapy for Geriatric (3 Cr. Hr.), Prerequisite: 12012244**

Detailed information in aging and physiological changes that occur in the human body during the age and focus on changes in the nervous system and circulatory system and musculoskeletal system and discusses the methods of evaluating the activity of the elderly and methods of physical therapy appropriate

**12013147 Orthotics & Prosthetics (3 Cr. Hr.), Prerequisite: 12012123**

This course presents a review of the role of prostheses in the rehabilitation of patient with motor disabilities and the identification of types of prostheses suitable for various diseases and types of better and appropriate limbs and compensatory devices and cooperation with the art of artificial limbs to reach the best results in the rehabilitation of the patients.

**12013161 Research Methods (3 Cr. Hr.), Prerequisite: 12013145, 12013146**

This course is an introduction to the research methods in physiotherapy profession. Topics covered include: research design, hypothesis, identify research problems and sampling procedures, literature review, and writing skills.

**12013228 Physical Therapy for Musculoskeletal Conditions (2 Cr. Hr.), Prerequisite: 12013226, 12013227**

This course introduces the professional aspects of assessing and using the methods and means of physiotherapy for bone and muscular diseases, including fractures of various types, and focuses on spine disorders and joint diseases in the upper and lower limbs, including assessment and treatment methods.

**12013229 Physical Therapy for Musculoskeletal Conditions practical (1 Cr. Hr.), Prerequisite: 12013228**

This course provides practical experience in the laboratory to assess the cases and the use of methods and means of physical therapy for cases of bone and muscle diseases, including fractions of all types and focuses on diseases of the spine and joint diseases in the upper and lower limbs, including the means of assessment and treatment.

**12014134 Physical Therapy for neurological cases (2 Cr. Hr.), Prerequisite: 12012232, 12013226**

The course includes clinical knowledge and skills are needed for physiotherapy evaluation and management of neurological disorders. The course allows students to independently evaluate, treat, and set long- and short-term goals for the patients with neurological impairments.

**12014135 Physical Therapy for neurological cases practical (1 Cr. Hr.), Prerequisite: 12014134**

The course applies practically clinical knowledge and skills are needed for physiotherapy evaluation and management of neurological disorders. The course allows students to independently evaluate, treat, and set long- and short-term goals for the patients with neurological impairments.

**12014151 Physical Therapy for cardiopulmonary system (2 Cr. Hr.), Prerequisite: 12013226**

This course will provide theoretical information in cardiopulmonary system and how it dealt with in physical therapy, it will include in depth cardiac and respiratory disease where the students will be required to understand physical therapy treatment protocols in different cardiovascular and respiratory problems.

**12014152 Physical Therapy for cardiopulmonary system practical (1 Cr. Hr.), Prerequisite: 12014151**

This course will provide practical information in cardiopulmonary system and how it dealt with in physical therapy, it will include in depth cardiac and respiratory disease where the students will be required to understand physical therapy treatment protocols in different cardiovascular and respiratory problems

**12014153 Physical Therapy for surgery and burn (2 Cr. Hr.), Prerequisite: 12011211**

The course focuses on theoretical aspects of physical therapy in cases of burns and surgery. It also includes a focus on physiotherapy in postoperative situations. It covers abdominal surgery, skin surgery, deep wound healing, bed ulcers, breast surgery and women's surgery, as well as burns.

**12014154 Physical Therapy for surgery and burn practical (1 Cr. Hr.), Prerequisite: 12014153**

This course focuses on the practical application of physical therapy in cases of burns and surgery. It is also focus on physiotherapy practice in postoperative situations. It covers abdominal and skin surgery, deep wound healing, bed ulcers, breast surgery and women's surgery, as well as burns,

**12013166 Principles of Diagnostic Radiology (3 Cr. Hr.), Prerequisite: 12011213**

This course will introduce the basic information about X ray used for diagnosis and assessments of different ailment. It will inform students about the diagnostic X ray. Also it will help students to explore methods and types of x ray like US and CTS and MRI.

**12013137 Pediatric Physical Therapy (3 Cr. Hr.), Prerequisite: 12012119**

This course provides extensive information on pediatric diseases and focuses on diseases related to the nervous system, the musculoskeletal system, congenital diseases of birth, and methods of physiotherapy.

**12013263 Sports injuries (3 Cr. Hr.), Prerequisite: 12011213, 12013228**

This course introduces students to the natural treatment of sports injuries, bones and joints resulting from accidents outside and inside sports fields. It includes the identification of risk factors, first aid kits for sports injuries and fracture-related injuries, rehabilitation of these injuries and rehabilitation of the injured athlete, including examination, diagnosis, intervention and outcome.

**12013264 Sports injuries practical (1 Cr. Hr.), Prerequisite: 12013263**

This course offers a practical application to deal with sports injuries, bones and joints resulting from accidents outside and inside sports fields. Including the identification of risk factors, how to use first-aid kits for sports injuries and fracture-related accidents, rehabilitation of these injuries and rehabilitation of the injured athlete, including examination, diagnosis, intervention and outcome.

**12014148 Clinical Training I (4 Cr. Hr.), Prerequisite: 12013229, 12014135, 12014152**

This is a clinical training period for students to acquire skills in assessment, treatment and patient management in all areas of physical therapy, it is divided into 2 periods. The first period is 4 credit hours, students must spend two full days a week in a clinical physical therapy setting for 16 weeks, 8 hours a day.

**12014249 Clinical Training II (8 Cr. Hr.), Prerequisite: 12014152**

The second period of 8 credit hours consists of working 8 hours /4 days a week for 16 weeks. During this periods, students were supposed to practice under supervision of clinical instructors to acquire physiotherapy skills in cases of heart and lung disease, orthopedic surgery, neurology and pediatrics.

**12014268 Symposium on Physiotherapy (1 Cr. Hr.):**

In this course, the student selects a clinical case as a research project. The student starts by conducting a literature review about the methods of evaluation and treatment in such cases. Finally, a presentation is to be made at the end of semester to colleagues in a seminar format.

**12014165 Community BASED Rehabilitation (3 Cr. Hr.), Prerequisite: 12013145**

This course introduces students to the basic principles of community Rehabilitation programs, medical qualification and teamwork. It highlights the role of each of the rehabilitation team member and its relation to the roles of other members. The course also focuses on the medical and research ethics of rehabilitation team members in clinics and hospitals.

**12014169 Pharmacology (3 Cr. Hr.):**

This article deals with the effect of different drugs on the human, and the knowledge of the effectiveness of the drug correctly and treated in a manner not affected the health of the patient.

**12014217 Patient care principle (3 Cr. Hr.)**

This course is to prepare the future therapist to interact with patients, families of patients and other relevant individuals at all levels. Taking into account the psychosocial conditions in the development of self-understanding and communication skills with patients, families, the public and other health teams.

**12014267 Management in physical therapy services:**

The course is an introduction to the administration of hospitals and physiotherapy services. Topics covered include departmental design, records, procedure manuals, scheduling of patients, recruiting, supervising and evaluating staff. The course also touches on the ethics of physical therapy