

504207 Pathology: (1 credit hour)

This course will cover cellular pathology acute and chronic inflammation, tissue repair, hemodynamic disorder, neoplasia, and infectious diseases. It will also give an overview of some of the pathological conditions of the system which are related to the students of the Rehabilitation Sciences.

0508102 Internal Medicine For Rehabilitation Students (2 credit hours)

pre-requisite : (0501107)

This course focuses on the underlying concepts and principles common to major health problems, alterations in cell function and growth, alterations in integrated body function and defenses, fluids and electrolytes. It covers different medical conditions with emphasis on the diseases which lead to disabilities such as neuromuscular, rheumatology, pulmonary and cardiac diseases.

0508103 Diagnostics : (2 credit hours)

Prerequisite or concurrent : (0508102)

The student is introduced to the principles of radiology including different modalities and reading x-ray films. It also includes other diagnostic tests such as laboratory test, ultrasound, MRI and CT scans used in the diagnosis and follow-up of treatment of cases that require rehabilitation.

1801201 Principles of Rehabilitation Medicine Credit hours : 3h

Prerequisite : (0507102)

This course introduces students to the basic principles of rehabilitation and team work. It focuses on the role of each member of the team and their relation to each other. The 1 credit

hour laboratory will focus on the application of these basic principles

1801202 Physiotherapy Techniques I Credit hours :
3h
Prerequisite or concurrent : (1801201)

This course will cover the basic principles of therapeutic exercises, starting position, range of motion exercises, resistive exercises, therapeutic massage, connective tissue massage and acupressure. The student will attend physiotherapy gymnasium and get to know all the instruments used for treatment purposes.

180130 **Physiotherapy Techniques II** **Credit**
6 **hours : 3h**
Prerequisite : (1801202)

This course will cover the physical principles, physiological effects, therapeutic uses, and clinical application of physical agents used in electrotherapy like short wave diathermy, ultrasound, and electrical stimulation. It also includes the basic principles of stretching exercises and joint mobilization techniques.

180130 **Physiotherapy Techniques III** **Credit hours**
7 **: 3h**
Prerequisite : (1801306)

This course covers the basic knowledge and principles for application of certain advanced modalities in physical therapy like laser therapy and magnetic therapy as well as the basic principles of electrodiagnosis. It also includes the basic knowledge and principles of hydrotherapy and under water exercises.

180131 **Musculoskeletal Physiotherapy I** **Credit**
3 **hours : 3h**
Prerequisite : (0507103)

This course covers skills in analytical thought and numerical calculation, for study of human movement disorders. This course concentrates on physical therapy assessment and treatment of different cases of traumatology including fractures, dislocations and sports injuries. This course also has detailed information concerning the process of normal and abnormal healing of fractures and the complications of fractures including those related to prolonged bed recumbence. This will include scientific study and application of selected physical therapy principles in both assessment and treatment.

180131 **Musculoskeletal Physiotherapy II** **Credit**
8 **hours : 4h**
Prerequisite : (1801313)

This course focuses on standard safety precautions, new research and clinical experiences concerning evaluation and treatment of different orthopaedics disease. This course concentrates on the indications, contra indications and precautions of different physical therapy techniques for treatment of surgical orthopaedics conditions. This course gives special attention to the evolution and

treatment of rheumatic diseases including rheumatoid arthritis, poly myositis and a wide scale of other rheumatic conditions. This course also concentrates on different types of deformities and neonatal orthopaedics from both medical and rehabilitation point of view. This is achieved by close integration between theoretical and practical sessions.

180132 **Cardiopulmonary Physiotherapy I** **Credit hours**
4 **: 3h Prerequisite (0508102)**

This course covers signs and symptoms, etiology, pathology, course and prognosis of common disorders of the respiratory system, cardiopulmonary conditions, and surgical procedures. Also it concentrates on how to assess a patient with respiratory dysfunction, breathing patterns, vital capacity and chest mobility.

180132 **Cardiopulmonary Physiotherapy II** **Credit**
8 **hours : 3h**
Prerequisite: (1801324)

This course covers the methods of planning, implementing and evaluating conservative or post-surgical physiotherapy program for patients with cardiopulmonary disorders. The practical part will focus on how to implement all kinds of breathing exercises, postural drainage, positioning techniques, and suctioning.

180133 **Neuromuscular Physiotherapy I** **Credit**
9 **hours : 3h**
Prerequisite : (1801306)

This course covers basic knowledge of anatomy and physiology of the nervous system as well as different tests and measurements of the neuromuscular system. It also includes a description of the causes, clinical features, course, recovery, physical examination and the appropriate rehabilitation program of certain disorders like Hemiplegia, Ataxia, Parkinsonism and Facial palsy.

180136 **Kinesiology** **Credit**
5 **hours : 3h**
Prerequisite : (1803201)

This course includes forces and their effects (mechanics) and the application of mechanical principles to the human body in movement and at rest (biomechanics). It covers also the roles of muscle action (agonist, antagonist, stabilizer, and neutralizer), the relationship between the muscle's line of pull and the joint axis which affects the produced movement .

180143 **Neuromuscular Physiotherapy II** **Credit hours**
4 **: 4h**
Prerequisite : (1801339)

This course covers concepts, basic principles, and procedures of the common therapeutic techniques as well as the different methods of facilitation and inhibition of the neuromuscular system. It also includes a description of the causes, clinical features, course recovery, physical examination and the appropriate rehabilitation program of certain disorders like paraplegia, spinal cord injuries, disseminated sclerosis, myopathies, neuropathies, myotonias and motor neuron diseases.

180144 **Pediatric Physiotherapy “1”** **Credit hours**
4 **: 3h**

Prerequisite : (1801306)

This course covers basic knowledge of different aspects of child development and reflexive maturation as well as different tests and measurements for different pediatric cases. It also include a description of the causes , clinical features , course, recovery , physical examination and the appropriate rehabilitation program of certain related disorders affecting the musculoskeletal and cardiopulmonary systems .

180144 **Pediatric Physiotherapy “2”** **Credit**
6 **hours : 3h**

Prerequisite : (1801444)

This course covers basic concepts, basic principles, and procedures of the common therapeutic approaches used for treatment of neuro pediatric disorders. It also include a description of the course, clinical features, course recovery, physical examinations and the appropriate rehabilitation program of certain disorders like cerebral palsy, poliomyelitis, brachial plexus injury, muscle diseases, learning disabilities, and mental retardation. .

180145 **Psychiatric Physiotherapy** **Credit hours : 2h**
7 **Prerequisite : (1801307)**

This course describes the more common psychiatric disorders in terms of etiology, signs, symptoms, course and prognosis. Emphasis will be on physical functions of the body. Emphasis will be or how to plan, implement and evaluate a physiotherapy program for patients with these psychiatric disorders.

180147 **Physiotherapy In Special Cases** **Credit**
1 **hours : 3h**
Prerequisite : (1801434)

This course covers the necessary knowledge to understand, assess, evaluate and treat certain conditions. These conditions include: burns, hypertension , diabetes Mellitus , amputations, and vascular disorders and their complications and methods of rehabilitation .

180148 **Physical therapy for gynecology and obstetrics** **Credit**
1 **hours : 2h**

This course includes a brief knowledge about anatomy and physiology of female genital organs, normal and abnormal pregnancy and labor. It also includes the basic knowledge and skills for applying physical therapy treatment for common obstetric and gynecological conditions.

180320 **Biomechanics :** **(3 credit**
1 **hours)**

pre-requisite : (0502108 + 0302103)

This subject will cover the theory of dynamics with particular application to human bodies . It also covers the active and passive mechanical behavior of the body tissues with specific applications of biomechanics of topics of interest to rehabilitation science specialties . The practicum will concentrate on development of observational skills and objective measurements of human movements .

180344 **Orthotics and Prosthetics** **Credit**
9 **hours : 3h**
Prerequisite : (1801365)

This course covers the basic knowledge about the materials used in making braces, splints and artificial limbs for upper limbs , lower limbs and spinal cord . It covers also which type of orthosis is needed, how to evaluate the patient and his needs, methods to train the patient how to make use of it functionally. It includes all types of walking aids, wheel chairs, application and removal of casts.

180141
9 **Clinical musculoskeletal physiotherapy** **Credit**
hours : 3h

Prerequisite : (1801318)

This course involves in patient training in different orthopedic departments to have the possibility to identify different orthopedic pathologies that needs in and out patient physiotherapy , it includes history taking , physical examination , comprehensive evaluation , and application of proper physiotherapy program according to the diagnosis .

180143
5

Clinical neuromuscular physiotherapy **Credit**
hours : 3h
Prerequisite : (1801434)

This course involves in patient training in different neurology departments to have the possibility to identify different neuromuscular pathologies that needs in and out patient physiotherapy , it includes history taking , physical examination , comprehensive evaluation , and application of proper physiotherapy program according to the diagnosis .

180142
9

Clinical cardiopulmonary physiotherapy **Credit**
hours : 2h
Prerequisite : (1801318)

This course involves in patient training in different medical departments to have the possibility to identify different cardiopulmonary pathologies that needs in and out patient physiotherapy , it includes history taking , physical examination , comprehensive evaluation , and application of proper physiotherapy program according to the diagnosis .

180144
7

Clinical pediatric physiotherapy **Credit hours**
: 2h
Prerequisite : (1801445)

This course involves in patient training in different pediatric departments to have the possibility to identify different pediatric pathologies that needs in and out patient physiotherapy , it includes history taking , physical examination , comprehensive evaluation , and application of proper physiotherapy program according to the diagnosis .

180147
5

Electrodiagnosis **Credit hours**
: 2h
Prerequisite : (1801434)

This course provides the student with the physiological basis and techniques of the electrodiagnostic evaluation of the neuromuscular system through the use of nerve conduction studies and needle

180147
3 electromyography . Students learn the application of these techniques to the upper and lower extremities , and the interpretation of results / reports through case studies . Surface and needle kinesiological electromyographic recordings for research application will be examined .

Rheumatology physiotherapy
hours : 3h

Credit

180147
4 This course introduces the student to the major rheumatic diseases , the related pathological changes and the physiotherapy management of patients with these conditions within the context of the health care team . Emphasis is placed on holistic patient management taking account of the physical , psychological and social impact of diseases .

Sports physiotherapy
3h

Credit hours :

180147
2 The propose is to introduce sport physiotherapy for the students . During the course usual acute and overuse injuries will be discussed . Acute treatment will be introduced as well as what first-aid kit for sports injuries should contain . Rehabilitation of sports injuries will be discussed and examples taken from specific injury types . Risk factors for injuries will also been discussed as well as preventive measures . Some usual methods of taping will also be introduced .

Physical therapy in Geriatrics
hours : 2h

Credit

This is an introductory course in geriatrics , designed to facilitate understanding of the elderly and their special needs. Biological and functional changes due to aging are condisdered , with emphasis on necessary modification of physical therapy procedures for geriatric patients . Evaluation and treatment planning with geriatric patients will provide clinical experience and enhance learning .