THE UNIVERSITY OF JORDAN
COURSE DESCRIPTION
Faculty of Rehabilitation Sciences

Course Description for Faculty Requirements

0304101	**General Biology "1"** **(3 credit hours)** Internal structure of the cell. Molecules of the cell. Metabolism-respiration and photosynthesis, cell- cell signaling, cell division, Mendelian inheritance, molecular biology of the gene, DNA technology, chemical signals in plants and animals, phylogeny and systematic introduction to ecosystematics and introduction to ecosystems
1802131	**Psychology in Rehabilitation Sciences** **(2 credit hours)** **Concurrent (1801101) Principles & Ethics of Medical Rehabilitation** This course discusses the psychosocial aspects of disability commonly encountered in rehabilitation settings. The course will help students communicate with patients in a therapeutic manner while consider important factors that may affect intervention planning and implementation in all rehabilitation fields for children and adults. Common conditions include congenital, physical, mental, and long term disabilities
0342103	**General Physics** **(3 credit hours)** Motion in a Straight Line, Motion in two Dimensions, Newton's Laws of Motion, STATICS, Work, Energy, and Power, Linear Momentum, Temperature and the Behavior of Gases, Thermodynamics, Thermal Properties of Matter, Electric Forces, Electric Fields, Electric Potentials, Direct Currents.
0501107	**Physiology 1** **(2 credit hours)** **Prerequisite : (0304101) General Biology "1"** This course is designed to introduce the students to the basic concepts of cardiovascular , respiratory and nervous systems physiology . The course begins with the basic concepts of physiological control and homeostasis . It focuses on the contribution of the above systems on the general functions of the human body . Special senses will be covered
0502107	**Anatomy of Head, Neck , and Thorax** **(3 credit hours)** **Prerequisite : (0304101) General Biology "1"** This course will cover head, neck and brain , and thorax . It concentrates on parts of the above subjects and their functions and relations It focuses

	on brain centres and the tracts which transmit orders to extremities , with special emphasis on functional anatomy and its relation to disabilities which require rehabilitation
1801381	**Biostatistics (2 credit hours)** The course provides students with basic principles of statistical analysis. This course introduces the concepts of several statistical methods encountered in health-related research such as scales of measurement of variables, descriptive statistics, hypothesis testing, z-tests, t-tests, ANOVA, non-parametric tests, correlation, regression, and measures of disease risk. Students will be taught to perform several of the tests discussed and will be shown several examples of the use of these methods in recent research articles.
1804340	**Research Methods in Rehabilitaion Sciences (3 credit hours)** **Prerequisite : (1801381) Biostatistics** This course focuses on evaluation of research designs and Biostatistics. Application of research on clinical practice and methodological considerations in rehabilitation sciences with emphasis on hypothesis statement, data collection, results and conclusions and students involvement in critique of published articles
1802447	**Management and Leadership (3 credit hours)** **Prerequisite : (1804340) Research Methods in Rehabilitation Sciences** This course discusses the general principles of management and leadership with emphasis on those needed by rehabilitation professionals in healthcare management. Examples of such skills include communication skills with the medical team, crisis management, delegating responsibilities, time management and improving service quality. Also important skills for resume preparation, job interviews and presentation skills are discussed
1801101	**Principles & Ethics of Medical Rehabilitation (3 credit hours)** The course introduces to students the basic principles of rehabilitation including preparations for patient care activities, approaches to infection control, proper body mechanics and patient education. This course is also intended to explain ethical principles in health care and its application in rehabilitation. Professionalism in health care and the basic professional standards are also discussed. Team work and the role of each member of the rehabilitation team in the evaluation and

	management of the patient, and their relation to each other is also included.
1902103	**Computer Skills for Medical Students (3 credit hours)** Introduction: forms, controls, properties, methods, events, files, Mouse events, click, mouse movement, drag and drop, Keyboard events: Press, up and down, Menus: Creation and Code writing, Dialogue boxes: Messges, input, built-in boxes, programming: Variables, statements, arithmetic logical operators, strings, built-in functions, Control statements: simple IF, multiple IF, CASE, Loops, FOR-NEXT, DO-WHILE,DO-UNTIL, Arrays, Files: Random, sequential, binary, procedures and functions, Applications using Visual Basic, Introduction to Microsoft Access. Weekly practice in the lab

Course Description for Physiotherapy Department

0303101	**General Chemistry (1) (3 credit hours)** Measurements and significant figures, chemical reactions, stoichiometry, the gaseous state, themochemistry , electronic structure and periodicity, chemical bonding, molecular shapes, states of matter and intermolecular forces, physical properties of solutions, principles of equilibrium
0501108	**Physiology II (2 credit hours)** **Prerequisite (0501107) Physiology 1** This course is designed to introduce the students to concepts of nerve and muscle, blood , endocrine , reproductive and renal systems . the course elaborates on the contribution of the above systems on the general well being of the human body
0502108	**Anatomy of extremities (3 credit hours)** **Prerequisite : (0304101) General Biology "1"** This course will cover upper limbs, lower limbs, abdomen , pelvis and

	perineum . The lectures and practicum will emphasize on structures , blood supply , nerve supply of all structures , with special concentrations on functions of all parts . It will also cover the spinal cord structure and roots
0503101	**Therapeutics : (1 credit hours)** **pre-requisite or concurrent : (0501108) Physiology II** This course introduces the student to the application of pharmacological principles in the treatment of common medical and surgical problems including the indications, side effects and contraindications of medications. Emphasis will be on medications used in rehabilitation medicine such as diseases of muscles , joints and nervous system
0507103	**Surgery for Rehabilitaion Students: (2 credit hours)** **pre-requisite : (0502108) Anatomy of extremities** This course will cover the surgical principles as a treatment modality for some conditions. The concentration will be on surgical intervention for diseases commonly met in the field of rehabilitation medicine. This will include surgeries for brain and spine , orthopedics and trauma , burns and plastic surgeries , urology , and pediatric surgery
0508102	**Internal Medicine For Rehabilitation Students (2 credit hours)** **pre-requisite : (0501107) Physiology 1** 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 neuromusculor, rheumatology, pulmonary and cardiac diseases
0504207	**Pathalogy: (1 credit hour)** **pre-requisite : (0502108) Anatomy of extremities +(0501107) Physiology 1** 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
1801203	**Therapeutic exercise 1 (3 credit hours)**

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	pre-requisite : (1801101) Principles & Ethics of Medical Rehabilitation This course is composed of theoretical and practical elements. The theoretical lectures cover an introduction of the concept of therapeutic exercise, flexibility exercises which include range of motion exercise, stretching exercise and mobilization. Lectures include case studies and discussion of the latest evidence. The practical element covers the flexibility exercises of range of motion, stretching and mobilization. Practical sessions are mainly based on peer modelling to master the skills and techniques learned.
1801204	**Therapeutic exercise 2 (3 credit hours)** **pre-requisite : (1801203) Therapeutic exercise 1** This course is composed of theoretical and practical elements. The theoretical element covers the concepts and principles of resistance exercises, aerobic exercises, aquatic exercises, and balance and coordination exercises. Lectures include case studies, discussion of the latest evidence and exercise prescription. The practical element cover all the exercises learned in the theory and are based on peer modelling. Practical session takes place in different indoor and outdoor settings
1801205	**Physical and electrical modalities (3 credit hours)** **Pre-requisite : (0342103) General Physics + (0303101) General Chemistry+ (0501108) Physiology II** This course covers the principles (physics, chemical and mechanical), tools, methods of application and clinical applications of a variety of electrical and physical modalities used in physiotherapy. The modalities covered are heat, cold, electrical current, shock wave, laser, hydrotherapy, magnetic therapy, spinal traction and pneumatic compression.
1801200	**Exercise Physiology (2 Credit hours)** **Prerequisite: (0501107) Physiology 1** This course examines the physiological responses to exercise, with a focus on skeletal muscles physiology, energy metabolism, the oxygen transport system, cardiovascular responses, respiratory system responses temperature and fluid balance. This course prepares you with the evidence based knowledge to design and deliver client-centered exercise

	programs to athletes, healthy people and people with chronic health conditions.
1801313	**Musculoskeletal Physiotherapy I (3 Credit hours)** **pre-requisite : (0507103) Surgery for Rehabilitation Students + 181202 Test and Measures** This course includes an introduction to principles of musculoskeletal evaluation, assessment and management of the joints of the lower extremities, and bone fractures including their normal and abnormal healing process and complications. Emphasis will be placed on the musculoskeletal evaluation and evidence-based management of different pathological, surgical, and traumatic conditions and movement dysfunction related to the lower extremities. Lecture and laboratory sessions are used to develop skills in pathomechanics, patient evaluation, clinical decision-making, treatment planning, and implementation for patients with lower extremity musculoskeletal dysfunction
1801318	**Musculoskeletal Physiotherapy II (4 Credit hours)** **Prerequisite : (1801313) Musculoskeletal Physiotherapy I** This course focuses on evaluation and treatment of the lumbar-pelvic and cervical-thoracic regions of the spine, as well as the joints of the upper extremities. This course is designed to improve clinical decision-making rationale by analyzing the latest evidence-based practice concepts and principles for the upper and lower quarter regions. Also it includes musculoskeletal evaluation and treatment of movement dysfunctionsand pathologies/injuries related to the upper extremities. Classes will include lecture, laboratory, and clinical training
1801324	**Cardiopulmonary Physiotherapy I (3 Credit hours)** **Prerequisite: (1801200) Exercise physiology+ (0504207) Pathology + (0503101) Therapeutics** The focus of this course is on the assessment of a range of clinical presentations in a variety of environments within cardio-respiratory care. Such as, the patient in ICU, the patient who has chronic lung disease requiring admission, the patient who has undergone surgery and the cardio-respiratory patient managed in the community. This course will guide the student to develop skills in the assessment of the patient with cardiorespiratory problems and to develop a

	physiotherapy problem list that will be used later on for planning management. The teaching and learning opportunities are structured to encourage you to develop effective patient assessment and clinical reasoning, decision making and evidence-based clinical practice for patients with cardio-respiratory compromise.
1801325	**Cardiopulmonary Physiotherapy II (4 Credit hours)** **Prerequisite: (1801324)** Cardiopulmonary Physiotherapy I This course provides the principles of the design and delivery of the management of cardiorespiratory patients. This includes the physiological basis of the various cardiorespiratory techniques and their application. The module also provides an in-depth study of the physiological responses to exercise in patients with cardiorespiratory disease. Exercise testing and training.
1801339	**Neuromuscular Physiotherapy I (3 Credit hours)** **Prerequisite : (1801231) Neuro Science+ (1801204) Theraputic exercise "2"** This three-credit course incorporates the foundations of the latest findings from motor control research and best evidence rehabilitation science to develop a problem-solving approach for the evaluation and management of a broad range of motor control impairments resulting from neurological dysfunctions. The course will provide students with a systematic approach of motor control issues as they relate to normal and abnormal posture and balance, mobility, and upper extremity function. Additionally, this course will provide basic knowledge and essential clinical reasoning skills for the physiotherapy assessment and treatment of complex problems and multiple activity restrictions encountered by patients with stroke. By emphasizing the fundamentals of neurological assessment, problem analysis, clinical reasoning, and treatment planning, this course builds a conceptual framework that continues into the following Neurological Physiotherapy course, where more neurological conditions and treatment methods will be presented.
1801334	**Neuromuscular Physiotherapy II (4 Credit hours)** **Prerequisite : (1801339) Neuromuscular Physiotherapy I** This four-credit course follows the integration of the principles of neurological rehabilitation as applied to complex neurological conditions

	(such as SCI, MS, PD, TBI). Emphasis is on evidence-based practice, interdisciplinary and client-centered care as well as health promotion and prevention of secondary complications. This practical and problem-based course promotes clinical reasoning skills for the PT assessment and treatment of complex problems and multiple handicaps encountered by patients with neurological conditions.
1801344	**Pediatric Physiotherapy "1" (3 Credit hours)** **Prerequisite : (1801231) Neuroscience, (1801313) Musculoskeletal Physiotherapy I** The course will introduce the principles and process of normal development, fine and gross movement development, and atypical development. The family centered-care model and the ICF models will be used to introduce assessment and evaluation measures to plan therapeutic intervention strategies for the pediatric population. The course will cover selected medical conditions specific to the certain pediatric population such as cerebral palsy. Current procedural interventions will be introduced and applications will be discussed. The course will have both theoretical and practical components.
1801446	**Pediatric Physiotherapy "2" (3 Credit hours)** **Prerequisite : (1801344) Pediatric Physiotherapy "1"** This course applied the motor control and systems approaches to understanding the basis for pediatric disabilities. This course considers the physical, cognitive, emotional, and social-cultural aspects of human development and the changes that occur during childhood and adolescence. Examination and intervention planning are discussed both broadly and in terms of specific disabilities in the context of current evidence for client management models. This course provides an overview to disabilities related to musculoskeletal, cardiopulmonary and neurological systems using the ICF model. Lab component provides opportunity to work with a child with a disability in acute care and school setting under direct supervision.
1801261	**Biomechanics (3 Credit hours)** **Prerequisite : (0342103) General Physics + (0502108) Anatomy of extremities** This course covers the theory of motion and their application to the

	human body as well as the mechanical behavior of active and static body tissues with a focus on biomechanical topics to the specialty of medical rehabilitation. The practical part of this course will develop the student's skill of observation and will teach the students how to do the objective measurement of human body movements
1801262	**Kinesiology (2 Credit hours)** **Prerequisite : (1801261) Biomechanics** This course covers kinesiology of the human musculoskeletal system. It focuses on the interaction between the joints and muscles through the application of the principles of physics and physiology to human movement. This course helps the student to mentally transform a static anatomic image into a dynamic, three-dimensional movement. The course will focus on movement analysis in both normal and pathological conditions.
1811471	**Physiotherapy in Acute Care (3 Credit hours)** **Prerequisite: (0508102) Internal Medicine For Rehabilitation Students + (1801318) Musculoskeletal Physiotherapy II + (1801325) Cardiopulmonary Physiotherapy II + (1801334) Neuromuscular Physiotherapy II** This course consists of a mixture of theoretical and practical learning experiences designed to fulfil the needs of the student in the critical evaluation and physiotherapy management of the patient with either acute or chronic cardiac, vascular, respiratory, neurological, and/or musculoskeletal dysfunction commonly treated in the acute care (hospital) setting
1811472	**Physiotherapy for older adults (2 Credit hours)** **Prerequisite : (0508102) Internal Medicine For Rehabilitation Students** This is an introductory course in geriatric physiotherapy, designed to facilitate understanding of older adults and their needs. Normal physiological and functional changes due to ageing are considered, with emphasis on necessary modification of physiotherapy procedures for geriatric patients. This course focuses on management planning and exercise design for older adults and addresses patient education and motivation The courses addresses the psychological and cognitive changes and conditions in relation to physiotherapy in older adults.
1811202	**Tests & Measures (2 Credit hours)** **Prerequisite : (1801101) Principles & Ethics of Medical Rehabilitation + (0502108) Anatomy of extremities**

	This course focuses on the importance of assessment and measurement in rehabilitation. It provides an overview of the concepts related to assessment, measurement and evaluation in clinical rehabilitation settings. This course is an introduction to the concepts and models of functioning as a central outcome for rehabilitation. The practical aspect of this module will be a practical application of musculoskeletal assessment (assessment of range of motion ROM and manual muscle testing MMT) and the application of the ICF model to clinical scenarios.
1801231	**Neuro Science (3 Credit hours)** **Prerequisite : (0502107) Anatomy of Head, Neck , and Thorax + (0501108) Physiology II** This course aims to provide the student with neurophysiological and neuroanatomical principles, concepts and mechanisms underlying normal and pathological functioning of the individual. These principles will be illustrated by reference to normal brain functions as well as through illustrations of the effects of their disruption in diseases and other conditions that compromise the normal functioning of the nervous system. Principles and mechanisms underlying balance and postural control, mobility functions, coordination, reach grasp, and manipulation will also be introduced. At the end of this course, the student will understand the function of major brain structures and will have learned signs and symptoms of some important neurological disease processes that illustrate principles of brain function
1801491	**Clinical Physiotherapy 1 (6 Credit hours)** **Prerequisite : (1801205) Physical and electrical modalities+ (1801334) Neuromuscular Physiotherapy II + (1801318) Musculoskeletal Physiotherapy II + (1801328) Cardiopulmonary Physiotherapy II + (1801344) Pediatric Physiotherapy "1"** This course involves physiotherapist-supervised application of physiotherapy theory, examination, evaluation, and intervention. This course involves hands-on training on musculoskeletal, burn, cardiopulmonary, and internal medicine in hospitals
1801492	**Clinical Physiotherapy 2 (6 Credit hours)** **Prerequisite : (1801491) Clinical Physiotherapy 1 + (1801446) Pediatric Physiotherapy "2"** This course involves physiotherapist-supervised application of Physiotherapy theory, examination, evaluation, and intervention.

	This course involves hands-on training on neuromuscular, burn, pediatrics, and internal medicine in hospitals
1801476	**Special Cases in Physiotherapy (2 Credit hours)** **Prerequisite: (1811471) Physiotherapy in Acute Care** This course covers the necessary knowledge to understand, evaluate, and treat special conditions in the fields of physical therapy such as burns, amputations, vascular and lymphatic disorders, and neurodynamics. Also, it covers the different types and proper use of wheelchairs. The students will be required to integrate the theoretical knowledge and practical skills that they gained in their previous modules to actively participate in discussions and critically analyze the different case scenarios in this module.
1811474	**Physiotherapy in Sport injuries (2 Credit hours)** **Prerequisite: (1801318) Musculoskeletal Physiotherapy II + (1801200) Exercise Physiology** This course will introduce the students to the most common sport injuries using both regional and sport specific approaches. This course will enable students to critically evaluate current assessment and treatment methods and formulate management plans for the treatment of sports injuries based on evidence based practice.
1813449	**Orthotics and Prosthetics (2 Credit hours)** **Prerequisite : (1801262) Kinesiology** 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