

PHYSIOTHERAPY AND REHABILITATION DEPARTMENT COURSE

CONTENTS

**ATA 111 ATATÜRK PRINCIPLES AND THE HISTORY OF TURKISH
REVOLUTION I, C, 2 C, 2 ECTS**

Fundamental concepts related to Atatürk's Principles and the History of the Turkish Revolution. Topics include: the Industrial Revolution and the French Revolution, the dissolution of the Ottoman Empire (19th century), the Tanzimat and Reform Edicts, the First and Second Constitutional Periods, the Tripoli and Balkan Wars, World War I, the Armistice of Mudros, Wilson's Principles, the Paris Conference, Mustafa Kemal's arrival in Samsun and the situation in Anatolia, the Amasya Circular, National Congresses, the opening of the Chamber of Deputies, the establishment of the Grand National Assembly of Turkey and internal rebellions, the Constitution, the establishment of the Regular Army, the First Battle of İnönü, the Second Battle of İnönü, the Kütahya-Eskişehir Battle, the Sakarya Battle, the Great Offensive, treaties during the War of Independence, the Treaty of Lausanne, and the abolition of the Sultanate.

TRD111 TURKISH I, C, 2 C, 2 ECTS

Definition of “language”; Language-communication relationship; The importance of communication in daily life; Body language; Place of Turkish language between the other languages; Types of language; Alphabets of Turkish Language; Description of language; Origin of languages; Language-thought relationship; Language-literature relationship; Language-communication relationship; Language-culture relationship; Communication; Body language; Types of language; World languages

PTR101 ANATOMY I, C, 4 C, 6 ECTS

Introduction to Anatomy includes fundamental information on terminology, basic anatomical planes, anatomy of the head, spine, upper and lower extremity bones, joints, smooth muscles, striated muscles, heart muscle anatomy, circulatory system anatomy, lymphatic system, and the characteristics of blood tissue.

PTR103 PHYSIOLOGY I, C, 3 C, 4 ECTS

The course covers fundamental principles of physiology and homeostasis, body fluid compartments and fluid-electrolyte balance, cell membrane structure and substance transport

mechanisms, structural and functional organization of the nervous system, sensory and motor pathways, skeletal muscle physiology and contraction mechanisms, muscle energy metabolism and fatigue, neuromuscular junction and related diseases, and structural and functional characteristics of cardiac muscle and smooth muscle.

PHYS115 PHYSICS, C, 2 C, 4 ECTS

Measurement, Vectors, Motion in One Dimension, Planar Motion, Particle Dynamics I, Particle Dynamics II, Work and Energy, Conservation of Energy, Dynamics of Particle Systems, Collision, Rotational Motion, Rotational Kinematics, Rotational Dynamics

PTR111 INTRODUCTION TO PHYSIOTHERAPY PROFESSION AND ETHIC PRINCIPLES, C, 2 C, 4 ECTS

The history of physiotherapy, physiotherapy and rehabilitation, definitions of physiotherapists, duties and responsibilities of physiotherapists, multidisciplinary approach, ethics in healthcare, principles of ethics, ethical principles and their importance in rehabilitation, healthcare personnel-patient-patient relative relationship, patient rights, ethics in the clinic, research ethics.

OPTIONAL FOREIGN LANGUAGE, E, 3 C, 4 ECTS (1nd Semester)

HM310, HEALTH COMMUNICATION, E, 3 C, 4 ECTS

Effective communication with patients and healthcare professionals, active listening skills, patient education and counseling techniques, cultural sensitivity in health communication and the use of communication tools and techniques in therapy, conveying complex medical information in an understandable way, building trust and cooperation with patients, emphasizing nonverbal communication and its impact on patient outcomes, and examining communication in various healthcare settings as well as ethical and professional communication standards.

ATATÜRK PRINCIPLES AND THE HISTORY OF TURKISH REVOLUTION II, C, 2 ECTS

Developments after World War I, the impact of World War I on the Ottoman Empire. The beginning of the National Struggle. The War of Independence, the establishment of the

Republic of Turkey, the reforms, Atatürk's principles. Turkish foreign policy. Turkey from Atatürk's death to the present day.

TRD112 TURKISH II, C, 2 C, 2 ECTS

Instructional texts, Literary texts, Meaning in words and semantic relations, Morphology: roots and affixes, Morphology: word classes and word structure, Spelling rules, Punctuation marks, Sentence structure: sentence elements, Sentence structure: types of sentences, Expression disorders: word-level errors, Expression disorders: sentence-level errors, End-of-term general evaluation

PTR102 ANATOMY II, C, 4 C, 6 ECTS

Urogenital system, Endocrine system, Nervous system (Gross anatomy of the CNS, spinal cord, brainstem, medulla oblongata, pons, mesencephalon, brain, cerebrum, diencephalon, cranial nerves, spinal nerves and the plexuses they form, autonomic nervous system, sympathetic system, parasympathetic system, sensory organs and receptors, skin), Olfactory organs and pathways, Taste organ and pathways, Auditory organ and pathways, Reflex and reflex arc.

PTR104 PHYSIOLOGY II, C, 3 C, 4 ECTS

The heart and circulatory system, heart valves and heart sounds, pressure-volume relationship in the heart, respiratory system, gas exchange in the lung alveoli, ventilation-perfusion relationship, regulation of respiration, introduction to digestive physiology, gastrointestinal secretions, mechanical processes in the digestive tract, chewing and swallowing, digestion and absorption, regulation of body temperature, basal metabolic rate, nutrition and regulation of nutrient intake, introduction to excretory physiology, renal circulation, functions of renal glomeruli, reabsorption and secretion in renal tubules, autoregulation of glomerular filtration rate, sensory physiology, endocrine system, reproductive system hormones.

PTR106 HEAT - LIGHT AND HYDROTHERAPY, C, 2 C, 2 ECTS

Basic information on the use of heat agents (inflammation and healing mechanisms), theories regarding the use of heat agents in pain, physical properties and physiological effects of heat, light sources, laws and their use in physiotherapy, physiological effects of infrared, ultraviolet, and laser, diseases in which lasers are used and application methods, heliotherapy. Definitions used in hydrotherapy, physiological concepts in hydrotherapy, application

methods in hydrotherapy, whirlpool baths, butterfly baths, showers and sprays, fluidotherapy, moist heat applications, hot packs, paraffin and saunas, pool therapy and aquatic exercises, tests used in hydrotherapy, thermal springs.

PTR109 PSYCHOSOCIAL REHABILITATION, C, 2 C, 2 ECTS

Within the framework of the International Classification of Functioning, Disability and Health (ICF), the biopsychosocial approach, community-based rehabilitation, the concept of disability and disability groups, obesity and psychosocial problems in obese individuals, projects to combat obesity, psychosocial processes and adaptation stages after accidents and traumatic injuries, psychosocial rehabilitation and coping methods in progressive chronic diseases and psychological problems, psychosocial rehabilitation in children and psychosocial problems in families with disabled children, old age and psychosocial problems in elderly individuals, psychosocial rehabilitation in individuals with hearing, speech and visual impairments, sports and the role of sports in rehabilitation for people with disabilities, physical activity for health and physical activity guidelines, and psychosocial rehabilitation in neurological diseases are covered.

PTR108 PATHOLOGY, C, 2 C, 2 ECTS

Definition and general information about pathology; Pathology laboratory; Hospital; Cell damage; Necrosis and its types; Cellular Adaptation I; Cellular Adaptation II; Fluid balance disorders and edema; Congestion, hyperemia and bleeding; Thrombosis, embolism, infarction and shock; Metabolic disorders I; Metabolic disorders II; Inflammation; Acute and chronic inflammation; Granulomatous inflammation; Wound healing; General inflammation of the immune system; Pathology Laboratory; Tumors; Tumor nomenclature; Tumor etiopathogenesis; Special tumors; Pathology Laboratory; Pathology of infectious diseases.

OPTIONAL FOREIGN LANGUAGE, E, 3 C, 4 ECTS (2nd Semester)

PTR107 BASIC CONCEPTS OF PSYCHOLOGY, E, 2 C, 4 ECTS

The history of psychology and related fields, the positioning of psychology as a scientific discipline, how behavioral and mental processes are approached from a historical perspective and the methods used to study them, human behavior and the social environment, developmental periods (child, adolescent, adult, and elderly psychology), and personality development.

PTR201 TESTING AND EVALUATION IN PHYSIOTHERAPY, C, 3 C, 4 ECTS

Patient history and general physiotherapy assessments, basic principles of movement, posture analysis, anthropometric measurements, circumference-length-diameter and fat tissue measurements, shortness tests, flexibility assessment, assessment of normal joint movements, goniometric measurements, muscle testing.

PTR203 BIOMECHANICS AND KINESIOLOGY I, C, 3 C, 3 ECTS

Definition of kinesiology, topics within the scope of kinesiology, movement and types of movement, general mechanical principles, development-nutrition-bone cells of bone tissue, physiological properties and laws, stresses on bone, functional adaptation of bone in pathological conditions, bone diseases, structure-properties, mechanics, pathokinetics of cartilage tissue; mechanics and pathomechanics of muscle function; mechanical properties and pathomechanics of collagen tissue, classification of body joints, synovial joints and their properties, joint cohesion, movements in joints according to planes, gliding and rocking motion, levers, balance, orientation planes and coordinates, normal and pathological gait.

PTR205 ELECTROTHERAPY I, C, 3 C, 4 ECTS

Electrophysical mechanisms, physiological responses of muscle and nerve, excitation characteristics of healthy and denervated muscle, basic properties and application principles of low and medium frequency currents, galvanic current and modified galvanic currents, iontophoresis and electrodiagnosis, low frequency and interferential currents, functional electrical stimulation, Ultra-Reiz and Russian currents.

PTR207 MANIPULATIVE THERAPY I, C, 3 C, 4 ECTS

Mechanisms of action, techniques, dosage, indications and contraindications of classical massage, correct positioning and regional applications (face, neck, back, lumbar region, abdominal massage, thigh, leg, foot, arm-forearm and hand massage), deep friction massage and its application, history of connective tissue manipulation, mechanism of action, reflex areas of CTM, reactions resulting from CTM, diseases in which it is applied, initial examinations, basic region manipulation, methods of applying CTM to the lower thoracic-scapular-interscapular, cervical and occipital, arm-forearm-hand, thigh-leg-foot, pelvic and abdominal, chest and face regions.

PTR209 FUNCTIONAL NEUROANATOMY, C, 2 C, 3 ECTS

Introduction to the CNS, gross anatomy of the spinal cord, internal structure of the spinal cord, descending pathways, ascending pathways, pathologies of the peripheral nervous system, gross anatomy and internal structure of the oblongata muscle, gross anatomy and internal structure of the pons, mesencephalon, cerebellum, diencephalon, basal ganglia, cerebral cortex, cranial nerves, blood circulation of the CNS, membranes, hemispheres, cerebrospinal fluid (CSF).

PTR211 NEUROPHYSIOLOGY, C, 2 C, 3 ECTS

Introduction to neurophysiology, structural and functional organization of the central nervous system, cerebrospinal fluid and blood-brain barrier, thalamus, hypothalamus, reticular formation, basal ganglia and cerebellum Functions, sensory processing mechanisms, motor cortex and control of voluntary movement, pain physiology and clinical aspects, sleep physiology, cortical mechanisms associated with learning, memory and speech, cerebral blood flow and metabolism.

PTR213 ORTHOPEDICS, C, 2 C, 3 ECTS

Introduction to orthopedics, fractures, muscle injuries, tendon pathologies, ligament injuries and orthopedic treatments, endoprotheses, bone tumors, congenital anomalies of the upper and lower extremities, poliomyelitis, cerebral palsy, sports injuries, amputations, scoliosis, hand injuries, osteomyelitis and inflammatory arthropathies, compartment syndromes and Wolkman ischemic contracture.

PTR215 BASIC FIRST AID, C, 2 C, 3 ECTS

Importance and objectives of first aid. Rescue and transport of casualties. Assessment and triage of casualties. Providing basic life support. First aid for bleeding and shock. First aid for wounds. First aid for traumas. First aid for musculoskeletal injuries. First aid for stings and bites. First aid for poisonings. First aid for burns and frostbite. Medical conditions requiring first aid, first aid related institutions, first aid in natural disasters.

PTR231 PHARMACOLOGY E, 3 C, 4 ECTS

This course addresses the fundamental concepts of pharmacology and the effects of drugs on living organisms from a physiotherapy and rehabilitation perspective. Mechanisms of action, pharmacokinetic and pharmacodynamic principles, and drug-drug and drug-organism

interactions are examined. The therapeutic effects, side effects, toxicities, and principles of safe use of drugs are evaluated. The course covers drug groups used in cardiovascular, respiratory, central and autonomic nervous system, digestive, and endocrine system diseases. Drugs used in oncology, antibiotics, rational drug use, and pharmacovigilance are also covered. The aim is to enable students to interpret the effects of frequently encountered drugs in physiotherapy and rehabilitation applications in relation to exercise and rehabilitation processes. Students are expected to be able to evaluate the potential effects of drug use on the rehabilitation process and develop a conscious approach within a multidisciplinary healthcare team.

PTR220 PRINCIPLES OF THERAPEUTIC MOVEMENT, C, 3 C, 4 ECTS

Planning of exercise programs, active-passive-active assistive and resistance exercises, stretching exercises, posture exercises for lordosis-kyphosis-scoliosis-round back-shoulder and lower extremities, progressive resistance exercises, regional isometric exercises, relaxation exercises, home program planning, traction, areas of use and methods.

PTR204 BIOMECHANICS AND KINESIOLOGY II, C, 3 C, 3 ECTS

Mechanics and pathomechanics of the vertebral column; mechanics and pathomechanics of scoliosis, pelvis-hip-knee-ankle and foot; mechanics and pathomechanics of the shoulder-arm complex, elbow, wrist and hand.

PTR206 ELECTROTHERAPY II, C, 3 C, 4 ECTS

Thermal and non-thermal effects. Generation of high-frequency currents. Properties and classification of high-frequency currents. Properties of short-wave diathermy. Application methods of short-wave diathermy. Properties of intermittent short-wave diathermy. Properties and application methods of microwave diathermy. Wave properties of ultrasound. Ultrasound application techniques. Magnetotherapy. Extracorporeal Shockwave Therapy (ESWT). Biofeedback. Environmental electro-pollution.

PTR208 MANIPULATIVE THERAPY II, C, 3 C, 4 ECTS

Definition and historical development of manipulation and mobilization, types of manipulation and mobilization, indications and contraindications, application principles, mobilization and manipulation techniques for joints and soft tissues, and transverse friction techniques.

PTR210 EXERCISE PHYSIOLOGY, C, 3 C, 4 ECTS

Skeletal muscles and exercise. Control of movement. Energy. Effect of exercise on the cardiovascular system. Effect of exercise on the respiratory system. Effect of exercise on the endocrine system and fatigue. Defining physical fitness, cardiorespiratory fitness. Assessment of cardiorespiratory fitness and creation of exercise prescriptions. Assessment of strength, power and muscular fitness. Creation of exercise programs related to strength, power and muscular endurance. Planning of resistance training programs, assessment of flexibility and creation of flexibility programs. Creation and interpretation of exercise prescriptions.

PTR212 INTERNAL MEDICINE AND RHEUMATOLOGY, C, 2 C, 3 ECTS

Respiratory and circulatory system diseases, hematological, nephrological-endocrinological, gastroenterological, geriatric diseases, infectious diseases, oncology.

PTR214 NEUROLOGY AND NEUROSURGERY, C, 2 C, 3 ECTS

Definition and causes of cerebrovascular diseases. Causes of spinal cord injuries. Spinal cord injury assessment scales. Neurological deficits and diagnostic criteria. Assessment scales. Reflex examination. Extrapyramidal system functions. Brain and spinal cord structure. Motor nerves. Neuromuscular junction disease symptoms. Increased intracranial pressure syndrome. Focal injuries. Myopathies. Assessment and lesions. Cerebral cortex. Brainstem. Diagnostic approaches to diseases.

PTR216 CHILD HEALTH AND PEDIATRIC DISEASES, C, 2 C, 3 ECTS

Identification of the newborn, identification of the motor development of the newborn. Identification and characteristics of the healthy child, examination of the structure and functions of breast milk. Identification of normal mental and motor development. Evaluation of newborn motor development. Examination of the components of the newborn screening program, importance of the screening program. Vaccinations administered to children and newborns, importance and history of vaccination. Common causes of infection in children and newborns, symptoms of infection, effect of infection on normal development. Definition of hyperbilirubinemia, causes and indications. Definition of hypoxic ischemic encephalopathy, causes and indications. Respiratory distress syndrome, definition and symptoms. Causes and symptoms of chronic lung disease. Definition, classification, symptoms and disease

progression of hereditary muscle diseases. Definition of cerebral palsy, causes, classification. Development of CP and expected complications. Definition and causes of autism.

PTR218 DEVELOPMENT OF MOVEMENT AND FUNCTION, C, 1 C, 2 ECTS

The course will cover anatomy, normal motor development, growth and development terminology, cognitive and emotional development, embryogenic and fetal development, reflexes, motor, sensory and other developmental characteristics of the neonatal, natal, infant, childhood and adolescent periods, and some abnormal developmental conditions.

PTR222 CLINICAL SUMMER INTERNSHIP I, 5 ECTS

Second year students must complete a (20) working day internship in the clinics/hospitals determined by the department during the summer term to improve their clinical experience in physiotherapy and rehabilitation and patient documentation skills.

PTR301 NEUROPHYSIOLOGICAL APPROACHES I, C, 3 C, 6 ECTS

The fundamentals of proprioceptive neuromuscular facilitation techniques, patterns and application of techniques, and their applications in rehabilitation.

PTR303 PEDIATRIC REHABILITATION, C, 3 C, 5 ECTS

Assessment and physiotherapy and rehabilitation in pediatric diseases causing disability and impairment, and rehabilitation of other congenital and genetic neuromuscular system diseases.

PTR305 PHYSIOTHERAPY AND EVALUATION IN SPORTS, C, 2 C, 4 ECTS

Definition and scope of sports physiotherapy, role of the sports physiotherapist in athlete health, sports in different age groups and special populations, sports psychology and athlete nutrition, physical fitness and performance assessments, sports injuries and physiotherapy approaches, assessments of strength, endurance, aerobic capacity, proprioception, agility, speed and coordination, plyometric exercises, aquatherapy and functional rehabilitation.

PTR307 CARDIOPULMONARY REHABILITATION, C, 3 C, 5 ECTS

Anatomy and physiology of the respiratory system, assessment in pulmonary rehabilitation, respiratory system diseases, bronchial hygiene techniques, chest physiotherapy methods, pulmonary rehabilitation in obstructive and restrictive respiratory system diseases, pulmonary rehabilitation applications in intensive care; anatomy and physiology of the circulatory

system, assessment in cardiac rehabilitation, cardiac rehabilitation after myocardial infarction and coronary artery bypass grafting surgery, heart valve diseases and rehabilitation, peripheral artery-vein diseases and rehabilitation, hypertension, diabetes mellitus, obesity and rehabilitation.

PTR317 ORTHOPEDIC REHABILITATION, C, 3 C, 5 ECTS

Physiotherapy rehabilitation approaches and bandaging techniques applied after orthopedic and reconstructive surgery in traumatic, infectious, and degenerative pathologies of the musculoskeletal system and collagen tissue diseases.

PTR311 ORTHOTIC AND PROSTHETIC REHABILITATION, C, 2 C, 3 ECTS

Pathomechanical conditions requiring orthotic use, the purposes, classification, and biomechanical control principles of orthotics, characteristics, indications, and rehabilitation processes of upper and lower extremity and trunk orthotics, prevention and management of problems and complications that may arise from orthotic use, causes and levels of amputation, congenital amputations, upper and lower extremity and partial hand and foot prostheses, types and components of prostheses, stump-socket adaptation, static and dynamic adjustments, prosthetic control mechanisms, myoelectric prosthetic systems, and amputee rehabilitation.

OPTIONAL FOREIGN LANGUAGE, E, 3 C, 4 ECTS (5nd Semester)

PTR351 BASIC RADIOLOGY E, 2 C, 2 ECTS

This course covers the following topics: the physical basis of radiological methods, radiological anatomy (extremities, pelvis, spine, thorax), radiological pathology (subluxation, dislocation, fracture, neoplasia, atrophy, sclerosis, infection, implants, peripheral nerve lesions, etc.), pathology in specific situations (lung pathologies, etc.), regional pathologies and evaluation (cervical and lumbar region, pelvis and hip, knee, ankle, foot, shoulder, elbow, wrist, hand), and evaluation in different tissue pathologies (bone, cartilage, nerve, muscle, tendon, ligament).

PTR353 PHYSIOTHERAPY IN WOMEN'S AND MEN'S HEALTH, E, 2 C, 2 ECTS

Physiological differences between genders, common physiotherapy practices in women and men, and specific treatment methods for women's health issues such as pregnancy, postpartum recovery, and menopause. Also, physiotherapy approaches for men's health issues such as

prostate diseases and osteoporosis, musculoskeletal disorders, and the creation of gender-specific treatment plans.

PTR355 ANATOMICAL PALPATION, E, 2 C, 2 ECTS

Students will be able to functionally utilize human anatomy and identify tissues through palpation. This includes palpating anatomical structures such as bone, muscle, tendon, peripheral nerve, and fascia through the skin and distinguishing different tissues. By learning to palpate the trunk, head, and extremities, they will be able to identify anatomically significant points and assess muscle tone from an anthropometric perspective.

PTR357 CLINICAL PILATES AND YOGA FOR PHYSIOTHERAPISTS, E, 2 C, 2 ECTS

This text covers the definition and philosophy of Pilates and yoga, their place and importance in health, Pilates and yoga sessions, physiological responses to Pilates and yoga practices, the application of breathing and relaxation techniques, the importance and application of concentration and meditation, the importance and application of Pilates and yoga therapy in different clinical situations, the differences of clinical Pilates, its use in rehabilitation areas, and examples of Pilates equipment application.

FTR359 SENSORY INTEGRATION THERAPY IN PHYSIOTHERAPY E, 2 C, 2 ECTS

Assessment of sensory processing disorders and application of sensory integration therapy methods. Structure and function of sensory systems, causes and symptoms of sensory processing disorders, theoretical foundations of sensory integration therapy techniques, assessment of vestibular, proprioceptive, tactile, and other sensory systems, clinical signs of sensory integration problems and intervention methods for these problems, play-based therapy approaches, adaptation of sensory integration techniques in physiotherapy to different age groups, effectiveness of sensory integration therapy approaches in light of current scientific evidence, case studies and applied practices. Supporting students in translating their theoretical knowledge into practice and developing individualized treatment plans.

PTR361 SPINAL REHABILITATION, E, 2 C, 2 ECTS

The course covers the following topics: Cervical spine assessment, Thoracic spine assessment, Lumbar spine assessment, Cervical region exercises and treatment approaches,

Thoracic region exercises and treatment approaches, Lumbar region exercises and treatment approaches, Exercise selection according to dysfunction, Principles of progressive exercise programs according to dysfunction, Group exercises to protect spinal health, Group exercises for those with spinal problems, Case studies (Cervical), Case studies (Thoracic), Case studies (Lumbal) I, Case studies (Lumbal) II.

PTR302 NEUROPHYSIOLOGICAL APPROACHES II, C, 3 C, 6 ECTS

Introduction to hemiplegia, Basic principles in the neurophysiological approach, Evaluation of the hemiplegic patient according to the Bobath approach, Evaluation of the hemiplegic patient according to the Brunstrom approach, Evaluation of the hemiplegic patient according to the Johnstone approach, Comparison of neurophysiological methods.

PTR304 SPECIAL TOPICS IN PHYSIOTHERAPY, C, 2 C, 2 ECTS

Scoliosis and Kyphosis assessment/rehabilitation, Blood-restricting exercise application, Therapeutic approaches in chronic musculoskeletal pain, Physiotherapy in Temporomandibular Dysfunction, Chronic fatigue syndrome, Use of technology in physiotherapy, Osteopathic Approaches, Vestibular Rehabilitation, Rehabilitation in Anorectal Diseases, Facial Rehabilitation, Cranial Nerves, Lymphatic system and Lymphoedema, Psychology and Exercise.

PTR306 NEUROLOGICAL REHABILITATION, C, 3 C, 5 ECTS

Physiotherapy rehabilitation approaches in infectious, vascular, traumatic, degenerative and idiopathic diseases of the central and peripheral nervous system. Clinical decision-making in neurological physiotherapy and rehabilitation, physiotherapy approaches in poliomyelitis and Guillain-Barré syndrome, physiotherapy in Parkinson's disease, physiotherapy and rehabilitation in multiple sclerosis, physiotherapy in balance and coordination disorders, physiotherapy in amyotrophic lateral sclerosis and facial paralysis, spasticity and physiotherapy approaches, assessment and physiotherapy in spinal cord injuries, peripheral nerve injuries and physiotherapy.

PTR308 GERIATRIC REHABILITATION C, 2 C, 3 ECTS

Definitions related to gerontology, geriatrics and aging, physiological changes occurring with aging, physiological changes occurring with aging in the musculoskeletal and

cardiopulmonary systems, sensory-perceptual-motor changes occurring with aging, functional assessment methods and falls, the importance of multidisciplinary teamwork in geriatrics, exercise programs suitable for the elderly, healthy aging and quality of life and areas of study for physiotherapy in old age.

PTR310 RHEUMATOLOGICAL REHABILITATION, C, 2 C, 3 ECTS

Immunogenetic system in rheumatic diseases, assessment methods and treatment approaches in rheumatic diseases, rheumatic diseases and risk factors, rehabilitation in rheumatoid arthritis, rehabilitation in juvenile rheumatoid arthritis, rehabilitation in osteoarthritis, rehabilitation in ankylosing spondylitis, rehabilitation in systemic lupus erythematosus, rehabilitation in fibromyalgia, rehabilitation in myofascial pain syndrome, rehabilitation in lateral epicondylitis, rehabilitation in medial epicondylitis, rehabilitation in Behçet's disease, rehabilitation in scleroderma, rehabilitation in inflammatory myopathies, chronic pain and coping with chronic pain, cognitive exercise treatment approaches.

PTR312 OCCUPATIONAL THERAPY, C, 2 C, 2 ECTS

Basic information and application examples on the role of occupational therapy (ergotherapy) in rehabilitation teamwork, basic job and occupational assessment methods in performance areas, developing appropriate job and occupational approaches.

BBA222 ENTREPRENEURSHIP APPLICATIONS, C, 2 C, 3 ECTS

Successful examples in entrepreneurship; role models in the field of entrepreneurship; development of entrepreneurial culture and awareness; the entrepreneurship ecosystem; financial opportunities for entrepreneurship.

PTR322 CLINICAL SUMMER INTERNSHIP II, C, 0 C, 5 ECTS

Third year students are required to do (20) working days of internship in clinics/hospitals determined by the department during the summer term in order to improve their clinical experience in physiotherapy and rehabilitation and patient documentation skills.

OPTIONAL FOREIGN LANGUAGE, E, 3 C, 4 ECTS (6nd Semester)

PTR315 ATHLETE NUTRITION, E, 2 C, 2 ECTS

The content of this course aims to examine sport and nutrition for a healthy lifestyle; calculation of energy requirements and energy sources; the importance of carbohydrates, proteins, fats, vitamins, minerals, and water in athlete nutrition; sports drinks; hormonal adaptations to exercise; nutritional strategies before, during, and after training; fluid and electrolyte requirements and weight control; and ergogenic aids.

PTR352 PHYSIOTHERAPY IN INTENSIVE CARE UNIT E, 2 C, 2 ECTS

Assessment of respiratory and motor functions of critically ill patients, prevention of complications, implementation of early mobilization strategies, and rehabilitation approaches aimed at improving quality of life.

PTR354 HAND REHABILITATION E, 2 C, 2 ECTS

Anatomy and biomechanical principles of the hand and upper extremity, soft tissue problems, fractures, joint problems, and rehabilitation principles after nerve injuries.

PTR356 NEONATAL PHYSIOTHERAPY AND REHABILITATION, E, 2 C, 2 ECTS

This course covers problems encountered in high-risk infants during the neonatal period, physiotherapy and rehabilitation needs in these problems, a review of general physiotherapy and rehabilitation assessment methods in high-risk infants, neuromotor assessment methods in high-risk infants, early physiotherapy and rehabilitation approaches in high-risk infants, positioning and specific holding techniques in high-risk infants, family education, cardiopulmonary problems in high-risk infants during the neonatal period, neonatal cardiopulmonary assessment methods, and neonatal cardiopulmonary rehabilitation and rehabilitation applications.

PTR358 PHYSIOTHERAPY IN BURN AND WOUND CARE E, 2 C, 2 ECTS

Burns, causes of burns, types of burns, early intervention in burns, surgical intervention, conservative and post-surgical physiotherapy, types of wounds, wound management in dependent patients, wound care, rehabilitation methods used in wound treatment.

PTR360 ONCOLOGICAL REHABILITATION E, 2 C, 2 ECTS

The topics covered include cancer statistics worldwide and in Turkey, cancer rehabilitation according to stages, quality of life in cancer patients, different approaches to cancer

prevention, problem-solving approaches in cancer, the role of rehabilitation in cancer treatment, multidisciplinary work in cancer rehabilitation, assistive rehabilitation equipment in cancer rehabilitation, rehabilitation in palliative care, and psychomotor rehabilitation approaches in cancer, along with case studies.

PTR415 CLINICAL PRACTISE I, C, 12 C, 18 ECTS

Internships lasting 4 weeks each in the following units: Prosthetics-Orthotics and Biomechanics, Neuromuscular Diseases, Children with Cerebral Palsy, Occupational Therapy, Connective Tissue Manipulation, Sports Health and Physiotherapy, Orthopedic Rehabilitation; Neurological Rehabilitation, Cardiac Rehabilitation, Pulmonary Rehabilitation, Rehabilitation in Neurosurgery, Obstetrics and Gynecology Rehabilitation, Vocational Rehabilitation, and Physical Therapy Rehabilitation Department.

PTR403 CLINICAL PROBLEM SOLVING I, C, 2 C, 3 ECTS

Presenting cases with different clinical diagnoses to students, guiding them as group work, literature review, evaluation, listing problems related to the case under the concepts of disability, impairment and meaning, physiotherapy-rehabilitation solution suggestions, discussing and determining appropriate physiotherapy-rehabilitation programs.

PTR405 REHABILITATION SEMINAR I, C, 2 C, 3 ECTS

Seminar presentation techniques and presentation preparation on current topics in the field of physiotherapy and rehabilitation, physiotherapy assessments and rehabilitation applied in orthopedic diseases, rheumatic diseases and sports injuries. Defining evidence-based practices and developing presentation skills, preparing group seminar presentations on physiotherapy and rehabilitation.

PTR417 PREPARATION OF PROJECT PROPOSAL, C, 2 C, 4 ECTS

Formulating a research question, Literature review methods, Determining research hypotheses and objectives, Selection and analysis of data collection methods, Creating a project budget and time plan, Ethical rules and legal regulations, Scientific reporting and presentation techniques, Designing and presenting a project proposal specific to their field using what they have learned.

PTR419 SCIENTIFIC RESEARCH METHODS, C, 3 C, 6 ECTS

The scientific research process and stages, Identifying a research problem, formulating hypotheses and conducting a literature review, Types of research (descriptive, analytical, experimental and qualitative research) and appropriate data collection methods, Data analysis, statistical methods and interpretation of findings, scientific reporting, presentation of research results and scientific ethical principles.

PTR416 CLINICAL PRACTISE II, C, 12 C, 18 ECTS

Internships lasting 4 weeks each in the following departments: Prosthetics-Orthotics and Biomechanics, Neuromuscular Diseases, Children with Cerebral Palsy, Occupational Therapy, Connective Tissue Manipulation, Sports Health and Physiotherapy, Orthopedic Rehabilitation; Neurological Rehabilitation, Cardiac Rehabilitation, Pulmonary Rehabilitation, Rehabilitation in Neurosurgery, Obstetrics and Gynecology Rehabilitation, Vocational Rehabilitation, and Physical Therapy Rehabilitation Department.

PTR404 CLINICAL PROBLEM SOLVING II, C, 2 C, 3 ECTS

Presenting students to cases with different clinical diagnoses, guiding them as group work, literature review, evaluation, listing the problems related to the case under the concepts of disability, impairment, and meaning, physiotherapy-rehabilitation solution suggestions, discussing and determining appropriate physiotherapy-rehabilitation programs.

PTR406 REHABILITATION SEMINAR II, C, 2 C, 3 ECTS

Physiotherapy and rehabilitation in neurological diseases, physiotherapy and rehabilitation in pediatric diseases, physiotherapy and rehabilitation in cardiac diseases. Defining evidence-based practices and developing presentation skills.

PTR418 PROJECT PRESENTATION, C, 2 C, 4 ECTS

Accessing information, collecting data, evaluating the information obtained, discussing and presenting the results on a topic chosen by the student under the guidance of the advisor in the field of Physiotherapy and Rehabilitation.

PTR420 BIOSTATISTICS, E, 2 C, 4 ECTS

Definition of statistics and biostatistics, use of statistics in health sciences and studies in this field, data collection, descriptive statistics, tables and graphs, probability and probabilistic distributions, sampling, hypothesis testing, regression and correlation analysis.

PTR440 PHYSIOTHERAPY IN INDUSTRY, E, 2 C, 2 ECTS

Basic concepts of physiotherapy in industry, the role of the physiotherapist, work-related musculoskeletal risks, symptoms, diseases, treatment and rehabilitation processes, cumulative trauma, ergonomics and ergonomic approaches in the workplace, occupational rehabilitation approaches for individuals with functional impairment.

FTR442 REHABILITATION IN MOVEMENT DISORDERS, E, 2 C, 2 ECTS

This course covers the underlying causes of movement disorders, neurological and musculoskeletal disorders, and their treatment through physiotherapy approaches. It includes the pathophysiology of movement disorders, assessment of Parkinson's disease, cerebral palsy, ataxias, and other neurological movement disorders, rehabilitation methods for musculoskeletal diseases and postural disorders, the use of current evidence-based rehabilitation techniques, treatment planning, implementation, and evaluation of outcomes, the importance of multidisciplinary teamwork, and a patient-centered approach. Theoretical knowledge is supported by case studies and practical training.

PTR444 PREVENTIVE PHYSIOTHERAPY AND REHABILITATION, E, 2 C, 2 ECTS

Preventive physiotherapy methods and their application to different populations, evaluation of their effects, and discussion with the literature.

PTR446 APPLICATIONS OF ARTIFICIAL INTELLIGENCE AND MOTOR LEARNING IN HEALTHCARE, E, 2 C, 2 ECTS

Introduction and importance of artificial intelligence in healthcare, artificial intelligence in physiotherapy, the future of artificial intelligence in physiotherapy, and motor learning.

PTR450 TECHNOLOGY IN REHABILITATION, E, 2 C, 2 ECTS

Technological rehabilitation and neuroplasticity, Virtual Reality, Rehabilitation game development process, Video-based games and rehabilitation, Motion analysis and rehabilitation with inertial sensors, Robotic rehabilitation, Wearable technologies in rehabilitation, Technology in cognitive rehabilitation, Muscle stimulation techniques and functional electrical stimulation, Mobility-assisted technologies, Technologies that improve physical activity, Information and educational technologies, Technological solutions in physiotherapy education, Technology-assisted pulmonary rehabilitation.