

## New (current) Curriculum Course information

Course Year 1,2, 3,4,	code	Subject, descriptive title of subject, session, theme or module name	Content and examination method, hours studied.	Assessment Method. Verbal = V Written = W Practical = P
1	Ph A1	Anatomy of Musculoskeletal System	<p>This course is the first part of a two-semester sequence that provides a comprehensive study of the anatomical structure of the human body. General Anatomy. Cells, tissues, organs, systems, and parts of the human body. Osteology and Arthrology. Ligaments. Myology. Types, characteristics, and functions of muscles: Face, head, neck, thorax, spine, abdomen, pelvis, upper and lower extremities. Origins of muscle-insertion-movements. Surface and functional anatomy on the living model. The structure of the human body.</p> <p>Total hours: 52h lecture, 13h laboratory</p>	Lec: W  Lab: V
2	Ph A2	Anatomy of Nervous System & Organs	<p>This course follows on from Anatomy I to focus on Specific Anatomy Systems. Bowels. Alimentary System, Intestinal pipe. Alimentary System, Intestinal pipe. Alimentary glands. Respiratory system. Cardiovascular system. Urogenital system. Reticuloendothelial system. System of secretory glands. Nervous system. System of sensory organs.</p> <p>Total hours: 52h lecture, 13h laboratory</p>	Lec: W  Lab: V
3	Ph A3	General Kinesiology	<p>1. Introduction to Kinesiology &amp; the Mechanics of Motion. - History. The philosophy of the necessity of studying the movement. Basic principles. The human body and the external environment. - Basic engineering principles: force, torque, friction, gravity, levers, pairs of forces, angular characteristics of motion, center of mass, momentum - inertia, work - energy.</p> <p>2. Movements &amp; Terminology. - Types of Bones &amp; joints. Degrees of freedom. Basic principles of joints motion. Terminology and classification of movements. - Systems of forces. Force analysis. Action - reaction. Lever arms. Kinematic chains.</p> <p>3. Muscle function. - Introduction to the muscles and constructions. Muscle mechanics. Force-length &amp; force-velocity relationship. Angle of traction. Pairs of muscle forces in the human body and their role.</p> <p>4. Neuromuscular control. - The role of muscles and coordination of the muscular system. Single-joint and multi-joint muscles. The muscles as joint stabilizers. - Neurophysiological basis of human movement. Central &amp; peripheral nervous system muscle control. Proprioceptive receptors and Proprioception. Kinetic unit. Muscle tone. Voluntary motion and reflexes.</p> <p>5. Kinesiology of Upper &amp; Lower Extremity. - Upper limb: Introduction - osteology, muscle function. The role of the upper extremity – scapulohumeral rhythm. - Lower limb: Introduction - osteology, muscle function. The role of</p>	Lec: W  Lab: V

			<p>the lower extremity.</p> <ul style="list-style-type: none"> <li>- Differences and similarities between upper and lower extremity.</li> </ul> <p>6. Kinesiology of spine &amp; pelvis.</p> <ul style="list-style-type: none"> <li>- Spine: Introduction - osteology, muscle function. The role of cervical, thoracic and lumbar spine in posture and motion. Similarities and differences between the spine parts.</li> <li>- Pelvic zone: Introduction - osteology, muscle function. The movements of the pelvis.</li> </ul> <p>7. Kinesiology of the whole Human Body as a kinematic unit.</p> <p>8. Posture &amp; Balance.</p> <ul style="list-style-type: none"> <li>- Terminology. Center of gravity, stability &amp; balance. Factors influencing balance. Muscular work in the upright human body position.</li> <li>- Importance of upright posture. Support and factors associated with upright posture.</li> <li>- Adjustments of posture and balance to exogenous factors.</li> </ul> <p>9. Effect of Exogenous Factors in the Movement.</p> <ul style="list-style-type: none"> <li>- Movement and physical environment: gravity, air resistance, fluid resistance, external resistance, etc. Movement and external objects: push &amp; pull, throw, kicking, bumping, rubbing, suspension and support, etc. Presentation and analysis of typical examples.</li> </ul> <p>10. Introduction to Human Gait.</p> <ul style="list-style-type: none"> <li>- History. Usefulness of the study of gait. Description and terminology. Definitions and steps-gait cycle. Gait motion analysis. Mechanical principles of gait. Macroscopic kinematics analysis: temporal and topographic parameters (temporal &amp; spatial). Variations of gait. Running. Differences between posture - walk - run.</li> </ul> <p>11. Introduction to Analysis of Human Movement.</p> <ul style="list-style-type: none"> <li>- Motion analysis methodology. Identification of factors influencing motion. Reasoning and conclusions.</li> <li>- Kinesiological analysis of several daily activities</li> </ul> <p>12. Kinesiology &amp; Clinical Reasoning; theory and practice.</p> <ul style="list-style-type: none"> <li>- The process of clinical reasoning and decision-making and the usefulness of motion analysis. Movement observation. Recording of subjective and objective characteristics. Motion evaluation. Decision making models, reasoning and problem solving strategies. Hypothetical examples.</li> <li>- Analysis of movements: 1. Different body positions in space 2. Involving different musculoskeletal structures, 3. On the influence of different external factors. Presentation of typical examples.</li> </ul> <p>13. Shoulder and scapulohumeral rhythm.</p> <ul style="list-style-type: none"> <li>- Scapula, clavicle, humerus. The joints of the region.</li> <li>- The muscles of the region and their function. Stabilizing role of muscle mechanisms and stability. Pairs of muscle forces. Rotator cuff. Pathokinesiology.</li> </ul> <p>Total hours: 52h lecture, 26h laboratory</p>	
4	Ph A4	Human Physiology	<p>The cell. Blood. Breath. Cardiovascular system. Peripheral circulation. Kidneys-uropoietic system. Alimentary system-Food stuffs. Thermo-regulation. Nervous system. Secretary glands. Laboratory exercises.</p> <p>Total hours: 52h lecture, 13h laboratory</p>	Lec: W Lab: V
5	Ph	Massage	Introduction. Types of massage. Techniques of classical V	Lec: W

	A5	Techniques	<p>massage of the connective tissue and specific cross-section. Functional massage. Massage of reflective points and lymphatic system. Massage selection criteria, indications, contra- indications. Students are trained to perform deep connective tissue and specific cross-fiber frictional massage, functional massage, lymphatic massage, reflexology, acupressure, and Shiatsu. Introduction to manual therapy.</p> <p>Total hours: 13h lecture, 39h laboratory</p>	Lab: V
6	Ph B1	Pathology	<p>1. International Classification of Diseases General concept of health and disease. Introduction and discrimination to concepts: prevention, risk factors, predisposing factors, morbidity, handicap, disability, clinical syndrome, treatment, mortality, mortality. Explanation of terms: autoimmunity, idiopathic, secondary, infection, infection, epidemic, endemic, septicemia.</p> <p>2. Introduction to patient assessment: history physical examination. Basic Laboratory and clinical tests</p> <p>3. Diseases of the Upper Respiratory System. - Pharyngitis. Rhinitis: allergic and idiopathic. Tracheitis, hoarse voice. The etiology of chronic cough. Obstructive sleep apnea.</p> <p>4. Lower respiratory tract diseases. Bronchial Asthma, Chronic Obstructive Pulmonary Disease, Diseases of the pleura, Pneumonia, Cystic Fibrosis. Diffuse Lung Diseases (idiopathic interstitial lung disease, idiopathic pulmonary fibrosis, sarcoidosis)</p> <p>5. Cardiovascular Diseases Angina, myocardial infarction. Chronic heart failure. Congenital heart disease and valve. Cardiac arrhythmias. Peripheral vascular diseases: occlusive arterial disease, venous thrombosis and superficial phlebitis.</p> <p>6. Pathology and Clinical characteristics of Collagen Diseases. S.E.L., ankylosing spondylitis, scleroderma, dermatomyositis, polymyositis.</p> <p>7. Arthritis: Pathology and clinical characteristics Definition of osteoarthritis, rheumatoid arthritis, juvenile rheumatoid arthritis.</p> <p>8. Kidneys and gastrointestinal system diseases. Acute and chronic renal failure. Acid-base regulation. Peptic ulcer, irritable colon. Diverticulosis, ileus.</p> <p>9. Metabolism and Endocrine Glands. Diabetes mellitus. Obesity. Metabolic syndrome. Diseases of the adrenal cortex, Hyperthyroidism, Hypothyroidism, Osteoporosis, Paget disease.</p> <p>10. Infectious diseases. Meningitis, pulmonary tuberculosis, septicemia, infectious mononucleosis.</p> <p>11. Neurological disorders. Alzheimer's disease. Parkinson. Peripheral neuropathy. Myasthenia Gravis. Vertigo. Stroke.</p> <p>12. Blood and Skin Diseases Disorders of blood coagulation: deep vein thrombosis and pulmonary embolism. Bleeding. Anemia: Iron, haemolytic. Leukemias. Hemoglobinopathies. Skin changes with age, environmental and occupational conditions. Skin infections: scabies, herpes, fungal infections. Eczema. Burns.</p>	Lec: W  Lab: V

			<p>Psoriasis</p> <p>13. Pelvic floor disorders. Common problems in pregnancy.</p> <p>Amminorroia</p> <p>Total hours: 52h lecture</p>	
7	Ph B2	Special Kinesiology	<p>1. Kinesiology of the Elbow and wrist.</p> <p>- Joints and arthrokinematics. The muscles of the region and their function. Joints stabilization. Links. Special joint characteristics. Anatomical landmarks and muscle palpation.</p> <p>2. Kinesiology of the hand.</p> <p>- The joints of the thumb and fingers. The muscles of the region and their function. Stabilizing role of muscles. The role of multi-joint muscles and pulleys on the functionality of the hand. Anatomical landmarks and muscle palpation. Architecture of the hand as a whole. Hand as an organ: grip types and their role in everyday activities.</p> <p>3. Kinesiology &amp; Pathokinesiology of the Upper Extremity.</p> <p>- The upper extremity as a kinetic chain. The collaboration of the individual structures of the upper extremity in various activities and sports ( everyday movements, volley, golf, basket, push-ups, etc.).</p> <p>- Pathokinesiology of the upper extremity and individual structures. Clinical observations.</p> <p>4. Kinesiology of the head.</p> <p>- The role of facial muscles and eyes. Mechanics of voice and vocal muscles. Mechanics of swallowing. The joints of the region. Anatomical landmarks and muscle palpation.</p> <p>5. Kinesiology of the cervical spine.</p> <p>- Bones, ligaments, joints &amp; muscles: structures, kinematics, kinetics and arthrokinematics. The muscles and their function. Anatomical landmarks and muscle palpation. Pathokinesiology. Clinical observations.</p> <p>6. Kinesiology of the thoracic spine - Chest - Breathing.</p> <p>- Bones, ligaments, joints &amp; muscles: structures, kinematics, kinetics and arthrokinematics. The muscles and their function. Anatomical landmarks and muscle palpation. Pathokinesiology. Clinical observations.</p> <p>7. Kinesiology of the Lumbar Spine.</p> <p>- Bones, ligaments, joints &amp; muscles: structures, kinematics, kinetics and arthrokinematics. The muscles and their function. Anatomical landmarks and muscle palpation. Pathokinesiology. Clinical observations.</p> <p>8. Kinesiology of the Pelvis and the Spine as a unit.</p> <p>- Cooperation of the spine and pelvis during movement body. Motion analysis.</p> <p>9. Kinesiology of the hip joint.</p> <p>- Bones, ligaments, joints &amp; muscles: structures, kinematics, kinetics and arthrokinematics. The muscles and their function. Anatomical landmarks and muscle palpation. Pathokinesiology. Clinical observations.</p> <p>10. Kinesiology of the knee joint and the patellofemoral joint.</p> <p>- Bones, ligaments, joints &amp; muscles: structures, kinematics, kinetics and arthrokinematics. The muscles and their function. Anatomical landmarks and muscle palpation. Pathokinesiology. Clinical observations.</p> <p>11. Kinesiology of the Foot.</p>	<p>Lec: W</p> <p>Lab: V</p>

			<p>- Bones, ligaments, joints &amp; muscles: structures, kinematics, kinetics and arthrokinematics. The muscles and their function. Anatomical landmarks and muscle palpation. Pathokinesiology. Clinical observations.</p> <p>12. The Human Body as a Motor Unit – Analysis of complex motions and Human Gait.</p> <p>- Analysis of movements: 1. Different body positions in space 2. Involving different musculoskeletal structures, 3. On the influence of different external factors. Presentation and solve of typical examples with emphasis on recognition of the role and participation of all constructions.</p> <p>- Muscle function and gait. Kinetic and kinematic analysis. Energy requirements. Gait &amp; Children. Aging &amp; walking. Pathological gait. Clinical evaluation of gait.</p> <p>13. Muscle Power Assessment- Electromyography.</p> <p>- Basic principles of muscle force. Normal and abnormal electromyographic activity. Technology of EMG. Electromyographic analysis. Electromyography in the rehabilitation (biofeedback) and physical therapy evaluation. Clinical examples.</p> <p>Total hours: 52 hours lecture, 39 hours laboratory</p>	
8	Ph B3	Physiology of Nervous System	<p>Characteristics and functions of sensory-motor mechanisms. Their relation with the control system of standing and motion. Proprioceptive neuromuscular facilitations. The effects of cold and heat (warmth, therapeutic applications). The mechanism of pain and its restraint.</p> <p>Total hours: 26 lecture</p>	Lec: W Lab: V
9	Ph B4	Orthopedics	<p>1. Introduction to Orthopaedics. Terminology and classifications. Diseases, Disorders, Syndromes. Trauma (fractures, dislocations etc).</p> <p>2. Introduction to Orthopaedic Diseases (Inflammatory arthritis. Degenerative arthritis. Neuropathetic arthritis. Inflexional arthritis. Fibrositis).</p> <p>3. Soft Tissue Syndromes, and Metabolic Disorders.</p> <p>4. Paralytic Diseases, Cancer and Amputations. Prosthetics and Orthotics.</p> <p>5. Musculoskeletal Injuries: Introduction.</p> <p>6. Peripheral Nerve Injuries.</p> <p>7. Spine and Pelvis- Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p> <p>8. Hip - Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p> <p>9. Knee- Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p> <p>10. Foot- Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p> <p>11. Shoulder- Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p> <p>12. Elbow- Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p> <p>13. Wrist &amp; hand- Bone and soft tissue Diseases, Disorders and Injuries. Assessment and therapy.</p>	Lec: W Lab: V

			Total hours: 52 hours lecture	
10	Ph B5	Informatics in health	<p>Introduction, Basic Principles of management information systems. Health information Systems (protocols, classification, coding, communication, telemedicine). Electronic patient file, Internet. Artificial intelligence and Medicine. Image Reality Systems, medicine imaging.</p> <p>Total hours: 26h lecture, 13h laboratory</p>	Lec: W  Lab: V
11	Ph B6	Biomechanics	<p>1. Introduction to Biomechanics. - Biomechanics: Definitions, disciplines and applications, past, present and future. - Basic material testing: Types of loads (compression, tensile, shear, torsion, bending). Stress-strain diagrams (yield points, break points, fatigue, hysteresis, elasticity, plasticity). Material properties (Young modulus, shear modulus, poisson's ratio, etc.). Isotropic, anisotropic, orthotropic materials. Biomaterials-an introduction. Viscosity-elasticity-viscoelasticity. Viscoelastic properties and simple mathematical models of viscoelastic materials (Creep, etc.).</p> <p>2. Applied Biomechanics: Isocinetics - Definition - Principles. Features and differences from other movements-contractions. Indications and contraindications. Isokinetics in evaluation and treatment. Isokinetic diagrams - illustrations.</p> <p>3. Biomechanical Study of human movement (I). - Observation. Quantitative parameters of motion: time and distance. - Kinematic Analysis: Definition, principles, techniques (photography, joint angle measurement etc.). Linear and angular motion, kinematics in 2 &amp; 3 dimensions. Displacement, speed, etc.</p> <p>4. Biomechanical Study of human movement (II) - Kinetic Analysis: Definition, principles, techniques. Vector analysis. Internal &amp; external joint loads.</p> <p>5. Biomechanical Study of human movement (III) - Energy requirements of motion. - Concurrent Kinetic &amp; Kinematic analysis. Techniques: forceplates, optoelectronic kinematic analysis systems (stereophotogrammetry), electrogoniometers, EMG, etc.).</p> <p>6. Mechanics of Biological Materials (I). - Mechanical Properties: Bone, cartilage, tendon and ligament.</p> <p>7. Mechanics of Biological Materials (II) - Mechanical Properties: Muscles, skin, nervous tissue.</p> <p>8. Fluid Mechanics and Biomaterials. - Introduction to fluid dynamics. Types of flow. - Mechanics of normal and abnormal breathing. Mechanical ventilatory support. - Mechanics of heart and vessels. - Biomechanics of pelvic floor and urinary system. Doppler and introduction to diagnostic Ultrasonography.</p> <p>9. Applied Biomechanics: Posture and Balance. - Biomechanics of upright posture. - Introduction to Balance. Static and dynamic balance. Factors affecting the balance. Balance measurement-CoP.</p> <p>10. Biomechanics of Gait and Human Activities.</p>	Lec: W  Lab: V

			<ul style="list-style-type: none"> <li>- Kinetic &amp; Kinematic gait analysis and features activities (climbing, running, jumping, etc). Adjustments to minimize energy costs. The role of footwear.</li> <li>- Introduction to kinetic and kinematic changes in pathology.</li> <li>11. Spine and pelvis Biomechanics.</li> <li>- Joint structure mechanics, kinetic and kinematic characteristics, abnormal mechanics - instabilities - deformities.</li> <li>- Mechanical analysis of loads in daily activities.</li> <li>12. Upper Extremity Biomechanics: Shoulder, Elbow, Wrist, hand.</li> <li>- Joint structure mechanics, kinetic and kinematic characteristics, abnormal mechanics - instabilities - deformities.</li> <li>- Mechanical analysis of loads in daily activities.</li> <li>13. Lower Limb Biomechanics: Hip, Knee, and Foot.</li> <li>- Joint structure mechanics, kinetic and kinematic characteristics, abnormal mechanics - instabilities - deformities.</li> <li>- Mechanical analysis of loads in daily activities.</li> </ul> <p>Total hours: 26 hours lecture, 26 hours laboratory</p>	
12	Ph C1	Neurology	<p>Elements of neurophysiology and anatomy of the nervous system. GENERAL PART: Sensation, mobility. General symptomatology of the brain damage. SPECIAL PART: Skull and brain damages, diseases of the brain due to vascular problems, peripheral nerves, muscle diseases Nerve diseases. Relative abnormalities-Cerebral palsy Disseminated sclerosis. Degenerative diseases of the nervous system. Paraclinic exams in neurology</p> <p>Total hours: 52 lecture</p>	Lec: W  Lab: V
13	Ph C2	Kinesiotherapy	<p>Introduction to motion.</p> <ul style="list-style-type: none"> <li>- The role of the movement and therapeutic exercise in humans and its importance in rehabilitation.</li> <li>- The clinical role of torque, force, action - reaction, work - energy – power, inertia, friction, motion - speed, center of gravity of the body, supporting surface, stable and unstable equilibrium, pendulum, pulley and the selection of these phenomena in the application of therapeutic exercise in rehabilitation.</li> </ul> <p>The role of muscle and its characteristics on rehabilitation – The effect of immobilization on the human tissues.</p> <p>General principles of assessment for the selection of motion.</p> <p>Passive motion.</p> <ul style="list-style-type: none"> <li>- The role of passive motion in rehabilitation.</li> <li>-Continues passive motion (CPM).</li> </ul> <p>Strength – length and strength – velocity relationship of the muscle and their role in rehabilitation.</p> <p>Active motion.</p> <ul style="list-style-type: none"> <li>- The role of active motion in rehabilitation.</li> <li>- Suspension movement, supporting movement, assisting movement, simple active movement and its role in rehabilitation.</li> </ul> <p>Muscle strengthening &amp; strength - Exercise with the use of resistance.</p> <p>Elasticity of tissues - Range of motion - Stretching.</p> <p>Evaluation of range of motion – Goniometer.</p> <p>Proprioception.</p> <ul style="list-style-type: none"> <li>- The role of proprioception in rehabilitation.</li> </ul>	Lec: W  Lab: V

			<ul style="list-style-type: none"> <li>- General principles for the assessment of proprioception.</li> <li>- General principles of proprioception retraining.</li> <li>Relaxation.</li> <li>- The technique of relaxation in physiotherapy.</li> <li>Exercise programs into the water.</li> <li>- Individual patient exercising into the water.</li> <li>- Group exercise into the water.</li> <li>Introduction to the physical examination aimed at the therapeutic exercise.</li> <li>Progression in therapeutic exercise - Clinical reasoning and solving problems related to therapeutic exercise.</li> <li>- Principles of the progressive exercise.</li> <li>- Progression in strengthening.</li> <li>- Progression to strength.</li> <li>- Progression in the range of motion.</li> <li>- Progression in proprioception and relaxation.</li> <li>- Progression in functionality.</li> </ul> <p>Total hours: 39 hours lecture, 39 hours laboratory.</p>	
14	Ph C3	Respiratory Physiotherapy	<ol style="list-style-type: none"> <li>1. Mechanisms of Physiology and Pathophysiology of respiratory function. Introduction to physiotherapy respiratory diseases of adults and children.</li> <li>2. Overall clinical physiotherapy assessment in the acute and chronic respiratory patients.</li> <li>Interpreting laboratory and functional tests. Spirometry</li> <li>3. Techniques of bronchial hygiene. Breathing techniques, Dyspnea treatment.</li> <li>Evidence based practice.</li> <li>4. Oxygen therapy, Nebulisation, Suction, Monitoring, Auscultation,.</li> <li>5. Respiratory physiotherapy in chronic airway obstruction.</li> <li>6. Respiratory physiotherapy in restrictive lung disorders</li> <li>7. Preoperative and Postoperative physiotherapy</li> <li>8. Physiotherapy in ICU</li> <li>9. Pulmonary Rehabilitation Programs</li> <li>10. Physiotherapy in gynecology and obstetrics</li> <li>11. Physiotherapy in hospitalized neurological patients</li> <li>12. Respiratory muscle assessment and training.</li> <li>13. Respiratory physiotherapy in infants and children</li> </ol> <p>Total hours: 39h lecture, 13h laboratory</p>	Lec: W  Lab: V
15	Ph C4	Physiotherapy of the Cardiovascular Diseases	<ol style="list-style-type: none"> <li>1. Introduction at cardiovascular diseases.</li> <li>Epidemiology.</li> <li>Aggravating factors, morbidity and mortality.</li> <li>Prevention and treatment of cardiovascular diseases.</li> <li>2. Definition and interpretation of cardiovascular parameters.</li> <li>Usefulness of the parameters in cardiac patients' assessment.</li> <li>3. Interpretation of the clinical and laboratory tests of the cardiac patient (X-rays, E.C.G., cardiopulmonary exercise test, echocardiography).</li> <li>4. Decision making and selection of therapeutic interventions.</li> <li>5. Arterial hypertension and hypotension. Predisposing and aggravating factors for developing hypertension syndromes.</li> <li>Prevention of hypertension, treatment of hypotension.</li> <li>- Changes in blood pressure in various organ systems (brain, muscle tissue, viscera) in various diseases and during exercise.</li> </ol>	Lec: W  Lab: V



			<p>6. Coronary Heart Disease Myocardial Infarction Angina. Risk factors (modifiable and non modifiable). Prevention, treatment, indications and contraindications for Physiotherapy discontinuation. Exercise in patients after MI, with CHD and angina.</p> <p>7. Cardiac ICU. Physiotherapy intervention. Design of specific exercise programs for patients with coronary artery disease, heart failure and after revascularization surgery.</p> <p>8. Peripheral vascular diseases and surgery. Peripheral occlusive arterial disease, superficial and deep venous thrombosis: Physical therapy evaluation and intervention</p> <p>9. Chronic heart failure and skeletal muscle myopathy. Exercise in the management of myopathy, the improvement of muscle metabolic and structural changes (aerobic exercise, resistance exercise).</p> <ul style="list-style-type: none"> <li>- Application criteria and signs off.</li> <li>- Selection of exercise strategy.</li> </ul> <p>10. Cardiac rehabilitation programmes. Objectives and benefits.</p> <ul style="list-style-type: none"> <li>- Planning, organization and operation of various types of cardiovascular patients.</li> </ul> <p>Inclusion criteria for patient participation.</p> <p>11. Cardiopulmonary resuscitation.</p> <p>12. Cardiovascular disorders and other chronic diseases.</p> <p>13. Cardiovascular complications in morbid obesity, diabetes type II diabetes, rheumatic diseases.</p> <p>Total hours: 39h lecture</p>	
16	Ph C5	Clinical Exercise Physiology	<ul style="list-style-type: none"> <li>- Introduction</li> <li>- Muscle and exercise I</li> <li>- Muscle and exercise II</li> <li>- Sensorimotor control and exercise</li> <li>- Metabolism- Human Energy Expenditure During Rest and Physical Activity</li> <li>- The respiratory System: Organization and Acute and Chronic Responses to Exercise</li> <li>- Aerobic capacity</li> <li>- Anaerobic capacity</li> <li>- The Cardiovascular System: Organization and Acute and Chronic Responses to Exercise</li> <li>- Body composition- nutrition</li> <li>- Physical activity, health and aging</li> <li>- The Endocrine System: Organization and Acute and Chronic Responses to Exercise</li> <li>- Clinical Exercise Physiology for disease (Cancer, Cardiovascular, Pulmonary Rehabilitation)</li> </ul> <p>Total hours: 26 hours lecture, 13 hours laboratory.</p>	Lec: W  Lab: V
17	Ph C6	Natural Methods – Electrotherapy I	<p>Superficial thermotherapy methods.</p> <ul style="list-style-type: none"> <li>- Specific methods of applying superficial thermotherapy by contact (hot whirlpool bath, paraffin bath, therapeutic spas, heat pads, low level heat wrap).</li> <li>- Specific methods of applying superficial thermotherapy by radiant heat (infrared radiation, ultraviolet radiation).</li> </ul> <p>In depth thermotherapy methods.</p> <ul style="list-style-type: none"> <li>- Specific methods of applying thermotherapy in depth (short-wave diathermy microwave diathermy, ultrasound).</li> </ul>	Lec: W  Lab: V

			<p>Cryotherapy. Laser. Polarized light. Phonophoresis. Shock waves. Deep oscillation. Magnetotherapy. Magnetophoresis. Clinical reasoning and creation of therapeutic plan.</p> <p>Total hours: 26 hours lecture, 26 hours laboratory.</p>	
18	Ph D1	Clinical Cardiorespiratory Physiotherapy	<p>Clinical Cardiopulmonary Physiotherapy - Evidence based practice.</p> <p>Clinical Reasoning in cardiorespiratory physiotherapy</p> <p>Case studies in various respiratory and cardiac diseases.</p> <p>Clinical training in patients with acute and chronic cardiorespiratory diseases and general surgeries in the hospital and in the ICU.</p> <p>Students perform their clinical practice module at public hospitals. They practice their assessment skills and develop competence in planning and implementing physiotherapy for the management of patients with specific impairments and disabilities. Students are constantly supervised by academic staff, interact with all members of the multi-disciplinary team (doctors, physiotherapists, nursing staff, etc.), and are obliged to conform to the rules concerning work ethics and health and safety issues of the hospital.</p> <p>Total hours: 26h lecture, 130h laboratory</p>	Lec: W Lab: V
19	Ph D2	Physiotherapy of Musculoskeletal Diseases	<p>Study of the standing position. Physiotherapy in deformations of the spinal column and extremities, osteoarthritis, rheumatoid arthritis syndromes and malfunctions, arthroplastic operations.</p> <p>Total hours: 39h lecture</p>	Lec: W Lab: V
20	Ph D3	Special Techniques of Mobilization	<p>1. Introduction to the Manual Therapy. - History. Definition. Importance of special techniques of mobilization. Therapeutic objectives. Mechanisms of effect. Technique Classifications.</p> <p>2. Details of the Special Techniques of Mobilization. - Parameters of mobilization. Changes in the tissues after immobilization and effectiveness of mobilizing them. Description of the concept of the "end feeling ". Indications - contraindications. Introduction to charts of motion.</p> <p>3. Evaluation using the Special Techniques of Mobilization. - Basic principles of evaluation. Objective and subjective evaluation. How to contact and investigate the patient's condition. Objectives of clinical evaluation. Examples.</p> <p>4. Treatment using the Special Techniques of Mobilization. - Goals of therapy with the use of specific techniques of mobilization. Grades in Maitland and Kaltenborn. Techniques selection process. Level of treatment. Progressiveness techniques.</p> <p>5. Special Mobilization Techniques in the shoulder.</p>	Lec: W Lab: V

			<ul style="list-style-type: none"> <li>- Implementation of special mobilization techniques in the shoulder area and joints. Indications - contraindications.</li> <li>- Examples of shoulder pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>6. Special Mobilization Techniques in the elbow.</li> <li>- Implementation of special mobilization techniques in the elbow joints. Indications - contraindications.</li> <li>- Examples of elbow pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>7. Special Mobilization Techniques in the Wrist and Hand.</li> <li>- Implementation of special mobilization techniques in the hand and wrist. Indications - contraindications.</li> <li>- Examples of hand and wrist pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>8. Special Mobilization Techniques in the hip area.</li> <li>- Implementation of special mobilization techniques in the hip area. Indications - contraindications.</li> <li>- Examples of hip pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>9. Special Mobilization Techniques in the knee.</li> <li>- - Implementation of special mobilization techniques in the knee. Indications - contraindications.</li> <li>- Examples of knee pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>10. Special Mobilization Techniques in the ankle and foot.</li> <li>- Implementation of special mobilization techniques in the ankle and foot. Indications - contraindications.</li> <li>- Examples of ankle and foot pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>11. Special Techniques in Spine Mobilization.</li> <li>- Implementation of special mobilization techniques in the spine. Indications - contraindications.</li> <li>- Examples of spine pathological arthrokinematics in which the special techniques of mobilization are indicated.</li> <li>12. Neurodynamic tests and treatment in nervous tissue through the use of Special Techniques of Mobilization.</li> <li>- Principles of neurodynamics. Application of special techniques for mobilization on the nervous tissue. Indications - contraindications.</li> <li>- Examples of pathology of the nervous tissue in which the special mobilization techniques are indicated.</li> <li>13. Special Mobilization Techniques in the soft tissues.</li> <li>- Purpose. Techniques. Parameters.</li> </ul> <p>Total hours: 26h lecture, 26h laboratory</p>	
21	Ph D4	Natural Methods – Electrotherapy II	<p>Pain.</p> <ul style="list-style-type: none"> <li>- Neurophysiology and regulation of pain. Gate control theory of pain. Types of pain.</li> <li>Mechanisms of peripheral and central sensitization.</li> <li>- Methods of measurement and evaluation of pain.</li> <li>Transcutaneous electrical nerve stimulation (TENS).</li> <li>Interferential electric currents.</li> <li>Diadynamic electric currents. High voltage electrical stimulation.</li> <li>Iontoforesis.</li> </ul>	Lec: W  Lab: V

			<p>Electrical stimulation of normal innervated and also denervated muscles. Functional electrical stimulation. Electromyographic biofeedback.</p> <p>Total hours: 26 hours lecture, 26 hours laboratory.</p>	
22	Ph D5	Principles of Neurorehabilitation	<p>Introduction to neurological rehabilitation Elements of developmental neurology The Control of Movement: Theories of Motor control. Physiology of motor control Motor Learning and Recovery of Function. Physiology of motor learning and recovery of function. Plasticity Postural control – Locomotion. Abnormal postural control Abnormalities of muscle tone &amp; movement - physical management Vestibular and balance rehabilitation Somatosensory and perceptual – cognitive impairment Muscle strengthening in neurorehabilitation Pain management in neurological rehabilitation Specific treatment techniques – introduction Physiotherapy approaches – introduction The importance of exercise and task-specificity of practice in neurological rehabilitation</p> <p>Total hours: 39 h lecture</p>	Lec: W  Lab: V
23	Ph E1	Clinical Physiotherapy of Musculoskeletal Diseases	<p>Clinical training in the physical therapy of patients with neurological problems. Students perform their Clinical Practice module at public hospitals, day hospitals and/or in community care. As in clinical practice I, students' practice their assessment skills and develop competence in planning and implementing physiotherapy for the management of patients with specific impairments and disabilities. Students are again constantly supervised by academic staff of the Department, interact with all members of the multidisciplinary team (doctors, physiotherapists nursing staff etc.), and are obliged to conform to the rules concerning work ethical, health and safety issues of the various departments. Students are graded separately for the lecture and clinical placement component. For the lecture component students have a written examination. For the placement, students are constantly being evaluated on their interpersonal skills, professionalism, clinical reasoning and treatment/management and receive a separate mark for each placement. All marks are weighted at the end of the course to receive a single mark for the placement component, which will then be weighted with the mark for the lecture component to obtain the final mark</p> <p>Total hours: 26h lecture, 104h laboratory</p>	Lec: W  Lab: V
24	Ph E2	Physiotherapy of Musculoskeletal Injuries	<p>Introduction to the rehabilitation of the musculoskeletal injuries (MSI) -The guide to physiotherapy practice, Clinical decision making in rehabilitation of MI, Disablement &amp; patient models</p> <p>Understanding &amp; managing the healing process through rehabilitation of MI -Phases of the healing process -Impeding factors, the role of physiotherapy during healing</p> <p>Clinical protocols of therapeutic exercises -Exercise prescription &amp; progression. Protocols of DeLorme, Oxford, Knight etc.</p>	Lec: W  Lab: V

			<p>-Delayed onset muscle soreness</p> <p>Assessment of musculoskeletal system -SOAP, clinical reasoning, problem solving approach &amp; clinical decision models</p> <p>Intervention strategies for specific MS injuries Physiotherapy in: - fractures of upper-lower limb &amp; pelvis-spine, stress fractures - joint instability &amp; dislocation - joint capsule, ligaments &amp; meniscus injuries - bursa &amp; tendons injuries - muscle injuries - muscle imbalance syndromes - peripheral nerve injuries &amp; nerve entrapments - Special considerations for specific patient population-geriatric, paediatric patients etc.</p> <p>Total hours: 52h. lecture</p>	
25	Ph E3	Physiotherapy of Adult's Neurological Diseases	<p>LECTURES</p> <p>Introduction to neurologic physical therapy Diagnosis of neurological conditions Aging and postural control Stroke Acquired brain injury (traumatic brain injury). Oncology – brain tumors Spinal cord injury Cerebellar ataxia Peripheral nerve injuries Multiple sclerosis (MS) Parkinson's disease, Huntington's disease – Chorea Polyneuropathies Neuromuscular junction diseases – Myasthenia Lifetime disorders of childhood onset specific neurological disorders – conditions Drug treatments in neurological rehabilitation Treatment approaches in neurological rehabilitation</p> <p>LABS</p> <p>Principles of PT assessment Assessment of posture &amp; gait ICU – PT assessment Specific treatment techniques – introduction Neuro-Developmental Treatment (NDT) – Bobath based approach Brunnstrom approach Proprioceptive Neuromuscular Facilitation (PNF) Motor re-learning program based on task-related exercises and training (Carr &amp; Shepherd, Shumway-Cook &amp; Wollacott) Muscle strengthening in neurorehabilitation Combined-eclectic approach Reaching, grasp and manipulations Self-care, ADL, Orthotics &amp; help devices Clinical reasoning and problem-solving in neurological rehabilitation (introduction). Linking theory to practice and practice to theory</p>	Lec: W  Lab: V

			Total hours: 39h lecture, 26h laboratory	
26	Ph E4	Surgery	General part. Elements of general surgery. Surgery of the thorax. Surgery of the heart. Surgery of the nerves. Abdominal surgery. Common postoperative complications. Burns.  Total hours: 26h lecture	Lec: W Lab: V
27	Ph E5	Research Methods	Introduction, research concepts, Literature review, search engines and strategies, research problem, proposal, hypotheses, pilot research, research protocol, sampling methods, reliability and validity concepts, quantitative research in physiotherapy, research designs, threats, bias, statistical analysis (SPSS, Medcalc, Excel programs), ethics in research, qualitative research in physiotherapy, questionnaires, interview, systematic review, metaanalysis, article critical appraisal, article writing, oral and poster presentations (powerpoint)  Total hours: 26h lecture, 13h laboratory	Lec: W Lab: V
28	Ph E6	Biostatistics – Economy of Health	Introduction to biostatistics, basic principles, databases, worksheets. Research, design. Kinds of research in health. Sampling surveys. Kinds of sampling. Measurement scales, Variables, measures of central tendency and variability, Descriptive statistics. Possibilities, normal distribution, mean, standard deviation, Allocations (bipolar, regular). Inference statistics, parametric and non - parametric analysis. Correlation analysis, Analysis of variance, multivariate techniques. Examples - statistics applications in physiotherapy studies.  Introduction to Health economics, basic economic models, cost-effectiveness analysis, Structure of health system in Greece, the role of health economics in decision making, insurance policies, physiotherapy and economics  Total hours: 26h lecture	Lec: W Lab: V
29	Ph G1	Clinical Physiotherapy of Musculoskeletal Injuries	Introduction to the rehabilitation of the musculoskeletal injuries (MSI) -The role of physiotherapist in multidisciplinary setting, clinical decision making in rehabilitation of MSI, disablement & patient models  Understanding & managing the healing process through rehabilitation of MSI -Pathophysiology of injury to various body tissues, phases of healing and managing the healing process through rehabilitation  Treating physiologic impairments during rehabilitation of MSI -Managing pain during rehabilitation process - Managing impaired: muscle performance, mobility, neuromuscular control, postural stability and endurance during rehabilitation process.  Tools of MSI rehabilitation -The use of: open & closed kinetic exercises, PNF techniques, muscle energy techniques, joint mobilisation, isokinetics, electromyography (EMG)  Development of clinical competencies in the assessment and	Lec: W Lab: V

			<p>management of MSI: -fractures, injuries of muscles, ligaments, tendons, bursae, joint instability &amp; dislocations, muscle imbalance syndromes, peripheral nerve injuries &amp; nerve entrapments.</p> <p>Clinical Placement Clinical placement is running during the entire semester period and is based in Orthopaedic clinic and Physiotherapy department of the local hospital, and in local rehabilitation centres and nursing homes. Students during the clinical placements are supervised by a Physiotherapy Department lecture and a clinical educator of the affiliated institution</p> <p>Total hours: 26 h. lecture, 78 h. laboratory</p>	
30	Ph G2	Physiotherapy of Pediatric Neurological Diseases	<p>LECTURES</p> <p>Introduction to pediatric neurologic physical therapy PT assessment in infancy primitive reflexes postural reflexes. Balance &amp; protective reactions The Neonatal Intensive Care Unit (NICU) – The role of physiotherapy Development of postural control Motor development. Development of movement Development of muscle tone Cerebral Palsy Brachial palsy injury Vertebral and neural tube defects: Spina bifida – hydrocephalus Neuromuscular disorders: Myopathies – muscular dystrophies Minimal Motor Impairment or Developmental Co-ordination Disorder Learning &amp; behavioural problems. Mental retardation specific pediatric neurological disorders – conditions Chromosomal abnormalities: Down syndrome, Prader-Willi etc. Pediatric oncology – brain tumors PT treatment systems. Basic principles of the physiotherapy approaches – methods Family-focused early intervention</p> <p>LABS</p> <p>Assessment of primitive reflexes, postural reactions &amp; gross motor activity Neuro-Developmental Treatment (NDT) – Bobath based approach Reflex locomotion – Vojta Sensory integration (SI) Conductive education – Peto Motor re-learning program based on task-related exercises and training (Carr &amp; Shepherd, Shumway-Cook &amp; Wollacott) Gait analysis in pediatric neurologic conditions Muscle strengthening in neurorehabilitation Combined-eclectic approach Reaching, grasp and manipulations Aids and orthotics Clinical reasoning and problem-solving in pediatric neurological rehabilitation (introduction). Linking theory to practice and practice to theory</p>	Lec: W  Lab: V

			Total hours: 39h lecture,26h laboratory	
31	Ph G3	Sports Physiotherapy	<ul style="list-style-type: none"> <li>- Introduction</li> <li>- Assessment of the injured athlete (injury, pathology, imbalances)- clinical reasoning</li> <li>- Considerations in designing a rehabilitation program for the injured athlete</li> <li>- Rehabilitation techniques and applications for the injured athlete</li> <li>- Regaining muscular function (strength, endurance, power) in injured athlete</li> <li>- Restoring ROM and improving flexibility in injured athlete</li> <li>- Reestablishing neuromuscular control in injured athlete</li> <li>- Functional progression and functional testing</li> <li>- Sports Physical Therapist and team</li> <li>- Rehabilitation of knee sports injuries</li> <li>- Rehabilitation of Groin, hip, thigh sports injuries</li> <li>- Rehabilitation of lower leg, ankle and foot sports injuries</li> <li>- Rehabilitation of shoulder sports injuries</li> <li>- Rehabilitation of upper limb sports injuries</li> <li>- Rehabilitation of sports injuries to the spine</li> </ul> <p>Total hours: 39 hours lecture, 13 hours laboratory.</p>	Lec: W  Lab: V
32	Ph G4	Physiotherapeutic Examination & Evaluation	<p>Introduction in physiotherapy evaluation and examination, the concept of SOAP, differential diagnosis in physiotherapy, evidence-based examination techniques and outcome measures, clinical reasoning in physiotherapy, subjective and objective assessment, methods and outcome measures for the assessment of pain, strength, ROM, proprioception, sensation, stereognosia, gait, posture and balance, functional assessment and activities of daily life, pathological movement patterns, ICF classification, environmental assessment</p> <p>Total hours: 39h lecture, 13h laboratory</p>	Lec: W  Lab: V
33	Ph G5	Psychology in Health	<p>Branches of Psychology Intelligence, personality and adaptation. Mental health Psychology of the child, the adolescent and the elderly. Psychology of the patient and his family. Individuals with special needs and their families. Types of psychotherapy.</p> <p>Total hours: 26h lecture</p>	Lec: W  Lab: V
34	Ph G6	Diagnosis through Images	<p>Introduction to diagnosis with the use of images. New methods of images, characterization of X- rays.. Normal radio anatomy of upper-limb bones &amp; joints: hand &amp; wrist, ulna-radius, elbow, humerus, clavicle shoulder &amp; scapula Normal radio-anatomy of the lower-limb bones &amp; joints: ankle &amp; foot, tibia, fibula, knee &amp; patella, femur, hip and pelvis Arteriography and phlebography. Normal radio-anatomy of thorax and spine (cervical-thoracic-lumbar). Cardiovascular system. Alimentary and urogenital system. Imaging of degenerative changes, pathologies &amp; injuries of the spinal column, thorax, upper limb, pelvis &amp; lower limb.</p> <p>Total hours: 26h lecture</p>	Lec: W  Lab: V
35	Ph	Clinical	Introduction to clinical neurologic physical therapy	Lec: W



	H1	Physiotherapy in Neurorehabilitation	<p>Structure &amp; organization of neurological clinic – rehabilitation units. The role of physical therapists in pediatric practice (responsibilities)</p> <p>The use of aids and orthotics, specialized equipment (wheelchairs, callipers, insoles, standing frames, rollators, balls etc.) in PT practice</p> <p>The use of specific equipment in neurological clinical practice (treadmill, robotics, FES etc)</p> <p>Physiotherapy approach in various clinical conditions (ICU, private practice etc.</p> <p>Clinical management of the motor disorders of neurological patient. Management strategies – approaches</p> <p>Factors influencing decision-making in management of muscle tone Normalisation of tone &amp; the maintenance of soft-tissue length techniques: passive stretching, splitting, weight-bearing, serial casting, positioning, pressure, neutral warmth, ice, vibration, massage</p> <p>Management of muscle weakness. The muscle strengthening in neurological clinical practice</p> <p>Assessment of gait in different neurological conditions (hemiplegic gait, ataxic gait, spastic gait etc.</p> <p>PT management of vestibular disorders. Balance and gait re-education</p> <p>Clinical practice of different PT approaches (NDT, Brunnstrom, CIMT etc.). PT intervention plan - strategies</p> <p>Clinical reasoning and problem-solving in neurological rehabilitation (introduction). Linking theory to practice and practice to theory</p> <p>Total hours: 26h lecture, 182h laboratory</p>	Lab: V
36	Ph H2	Ergonomics & Physiotherapy	<p>Introduction to basic principles of ergonomics and its usability. The workplace.</p> <ul style="list-style-type: none"> <li>- Structure of ergonomics as a science, its relationship with other humanities disciplines and the interaction with them.</li> <li>- Aims and objectives of ergonomics.</li> <li>- Description of the workplace and the parameters that interact in it. Occupational hazard.</li> <li>- Occupational risk factors associated with physical characteristics (body stance, posture, rest, vibration, material handling, etc.).</li> <li>- Occupational risk factors associated with environmental features (extreme temperatures, lighting, noise, body vibration, electricity, radiation, biological compounds, etc.).</li> <li>- Occupational risk factors associated with cognitive and organizational characteristics (stability of work, work organization, workload, mental workload, work stress, decision making,</li> </ul>	Lec: W Lab: V

			<p>relationship of perception, memory and reasoning with the kinetic response, contact, schedule jobs, human resources management, etc.).</p> <p>Anthropometry and its usefulness.  Recognition of safety conditions at work.  Preventive physiotherapy in the workplace. The erect posture, lifting, sitting, vision, mental stress. Preventive physiotherapy at the school.  Preventive physiotherapy in the workplace. The hand. Overuse syndromes.  Preventive physiotherapy through entertainment, rest and pregnancy.  Ergonomic approach of health professions.  Evaluation of the burden. People with disabilities.  Health and safety at the workplace.</p> <p>Total hours: 39 hours lecture.</p>	
37	Ph H3	Grouped Therapeutic Rehabilitation in Special Population	<ul style="list-style-type: none"> <li>- Introduction</li> <li>- Rehabilitation in children and adolescents</li> <li>- Rehabilitation in chronic cardio-pulmonary patients</li> <li>- Rehabilitation in metabolic disease patients</li> <li>- Rehabilitation in amputation patients</li> <li>- Rehabilitation in Obstetrics and Gynecology patients</li> <li>- Rehabilitation in burn patients</li> <li>- Exercise and psychological health</li> <li>- Rehabilitation in motor and sensory dysfunction patients</li> <li>- Rehabilitation in immune and blood deficient patient</li> <li>- Group therapy in chronic musculoskeletal dysfunctions</li> <li>- Rehabilitation in elderly</li> <li>- Multicultural principles in rehabilitation.</li> </ul> <p>Total hours: 26 hours lecture</p>	Lec: W  Lab: V
38	Ph H4	Bioethics & Ethics	<p>Introduction to philosophy of ethics and basic ethical principles.  Introduction and discussion on deontology, paternalism an utilitarianism. Discussion on the principles of Beneficence, Non-maleficence, Autonomy, Justice, Dignity and Truthfulness. Discussion of occurring problems and dilemmas in healthcare</p> <p>Total hours: 39h lecture</p>	Lec: W  Lab: V
39	Ph H5	Marketing	<p>Concept and basic principles of Marketing. Marketing functions. Research. Analysis of Market. Consumer's behaviour. Mix Marketing (Product, Price, Place, Promotion). Advertisement. Evaluation. Control of Marketing results. Marketing in Health Rendering services. The 4 Ps in the Greek Health Rendering Services.</p> <p>Total hours: 26h lecture</p>	Lec: W  Lab: V
40		GRADUATION PROJECT (Dissertation)	<p>The graduation project develops creative and critical thinking and guides the student towards reflective and innovative work. All students are required to submit a graduation project, which can either be a research review, a research project or a case study. Each project is supervised by a member of staff (supervisor). Dissertation topics are usually assigned by departmental staff according to the students'</p>	V,W

		<p>interests and are related to physiotherapy. The dissertation may be completed after the end of the last semester or in parallel with the practical placement, depending on the scope and demands of the particular topic. After the completion of the graduation project and its approval by the respective supervisor, the thesis is submitted to the department and evaluated by a panel of three members of the teaching staff. The paper's quality must be such that it could be submitted for publication in a peer reviewed journal. An oral viva is also compulsory. For all issues relating to the students' dissertations (i.e. choice of topics /supervisors /evaluation panel, progress, elaboration, various problems etc.) the Dissertation Committee (consisting of three members of the departmental staff) is responsible.</p> <p>Total hours: h lecture, h laboratory</p>	
41	PROFESSIONAL PLACEMENT (INTERNSHIP)	<p>A practical training period is a compulsory requirement to qualify with a Physiotherapy degree from the T.E.I, and to obtain a license to practice. Practical training follows the successful completion of coursework and consists of clinical placements mainly in the public sector (hospitals) and more rarely in the private sector or in public hospitals abroad. The Department of Physiotherapy together with the Professional Placement Committee arranges the students' professional placements. The duration of clinical placements is set at six months for all students and takes place during the 8th semester (provided that the whole curriculum has been successfully completed). During the training course the student's clinical supervisor, as determined by the Department, is responsible for evaluating the student's progress including treatment/management and clinical reasoning, professionalism and interpersonal skills. The clinical educator provides verbal feedback throughout the placement and writes comments on the assessment form located in the Student's Practical Training Book at the end of each rotation in specific departments. During the 6 months students are rotated to various departments which can include orthopaedics, musculo-skeletal outpatients, neurosurgery, neurorehabilitation gym, surgery (intensive care, high dependency, and/or ward setting), cardiorespiratory, paediatrics, community neurorehabilitation, primary care. Some facilities are also able to offer rotations in community care and in nursing homes. Rotations occur on a monthly basis. Students receive payment during their practical placement period and are obliged to conform to the rules concerning work ethic and health and safety issues like every other member of staff. Each student submits a Reflective Diary (Practical Training book). This is an individual account of the student's practical experiences during the placement and concentrates on the student's analysis and clinical reasoning skills. The student must complete sections relating to diagnosis, assessment, treatment, outcome measures used and the evidence-based findings surrounding the case. The practical training book also includes all employment details; hours completed and completed assessment forms. The Practical Training book as well as the student's social security card is submitted to the secretariat. All documents relevant to practical training are then forwarded to the Head of the Department, who decides whether they are to be accepted or rejected.</p> <p>Total Hours: 960h (40h weekly for 6 months).</p>	<p>Lab: W,V,P For the clinical placement students are evaluated throughout the placement as explained in column 2. All documents relevant to practical training are forwarded to the Head of the Department at the end of the placement, who decides whether they are to be accepted or rejected.</p>

**OPTIONAL COURSES TAKEN BY STUDENT:**

In each semester, except the last semester where students are on professional placement, all undergraduate students must attend and be examined in an optional subject aimed at complementing their knowledge for the present and/or subsequent semester. The term "optional" is used because students can chose between one of two courses offered for each semester. The following are the courses chosen and completed by ...

1	FIRST AID	Introduction to First Aid for Adults, infants, and children. Injury and hemorrhage. Foreign bodies. First aid for environmental and medical emergencies, Introduction to artificial respiration and cardiopulmonary resuscitation. First aid for soft tissue, bone, muscle, and joint injuries. Techniques for strapping and bandaging; splints. Casualty handling: e.g. stretcher transportation. Poisoning and antidotes. Medical kit for First Aid. Emergency tracheotomy. Understanding indicative danger signs. Principles of Hygiene. Total Hours: 30 hours lecture. During the "lecture" time students also practice first aid procedures. Total hours: 30 hours lecture	Lec: V,P
2	ORTHOSOMICS	Basic physical principles (mass, inertia, force, energy, levers, torque, moments, power etc.) governing the mechanics of posture and movement of the human body. Posture and body alignment, movement, body weight and exercise. Analysing and correcting posture, corrective exercises in adults and children Total hours: 30 hours lecture	Lec: W
3	SPEECH THERAPY	The development of speech and language in children (development of language perception and expression during the first five years) Classification of the speech and language disorders in children Articulation disorders in children (Normal development of articulation, aetiology, assessment and diagnosis, treatment) Communication disorders – Autism (Definition, aetiology, characteristics, warning signs, treatment) Mental retardation (Definition, aetiology, epidemiology, diagnosis, speech and language disorders, principles of education, prevention, treatment) Cleft palate – Rhinolalia (Aetiology, epidemiology, speech and language disorders, assessment, treatment) Dysarthria (Definition, aetiology, dysarthria types, assessment and diagnosis, principles of treatment) Feeding disorders in children (reflex activity during infancy, normal development of feeding, classification of feeding disorders, assessment, treatment) Stuttering (definition, epidemiology, symptoms, types of stuttering,	Lec: W

		assessment, treatment methods) Aphasia (definition, aetiology, types of aphasia, assessment and diagnosis, speech and language disorders, treatment) Dyslexia (definition, aetiology, epidemiology, assessment and diagnosis, treatment) Total hours: 30 hours lecture	
4	DEONTOLOGY	Introduction to philosophy of ethics and basic ethical principles. Introduction and discussion on deontology, paternalism and utilitarianism. Discussion on the principles of Beneficence, Non-maleficence, Autonomy, Justice, Dignity and Truthfulness. Discussion of occurring problems and dilemmas in healthcare Total hours: 30 hours lecture	Lec: W
5	PREVENTIVE MEDICINE	Introduction to various aspects of preventive care, health, fitness, wellness, and quality of life issues for individuals of all ages. Specific groups discussed include children, adolescents, the elderly, and women. Students learn about providing preventive care to healthy and at risk populations, the role of patient education in prevention and the implementation of prevention practice in clinical and community-based settings. Emphasis is also placed on the importance of performing a risk assessment of the task, environment, self capability and the patient's physical and cognitive state. Total Hours: 30 hours lecture	Lec: W
6	Bibliography & other information material	Basic principles of management information systems. Health information systems: protocols, classifications, coding, communication. Internet. Different databases used in physiotherapy. Total Hours: 30 hours lecture	Lec: W
7	MARKETING	Concept of marketing. Marketing functions. Research. Analysis of Market. Consumer's behavior Mix Marketing (Product, Price, Place, Promotion). Advertisement. Evaluation. Control of Marketing results. Marketing in Health Rendering services. The 4Ps in the Greek Health Rendering Services. Total hours: 30 hours lecture	Lec: W
8	GERIATRICS	Optional course: <ul style="list-style-type: none"> <li>• Introduction to old age medicine.</li> <li>• Sociology of old age.</li> <li>• Clinical gerontology.</li> <li>• By systems: specificities in ageing.</li> </ul> Total hours: 30h lecture	Lec: W
9	NUTRITION AND NUTRITIONAL VALUE OF FOODS	Optional course: This course introduces students to the basic elements of foods (Proteins, lipids, and carbohydrates) and how affect metabolism. Nutritional pyramid. Food and nutrition, human dietary needs,	Lec: W

		metabolism, the impact of different methods of processing food on their sustenance, nutrition and exercise, dietology.  Total Hours: 30 hours lecture	
10	PROFESIONAL RIGHTS – LABOR RELATIONS	Optional course: Professional Rights and Responsibilities, Prescribing rights for physiotherapists, Depended paid employment. Labor behavior. Trade unions. Individual and working environment. Working conditions. Labor relations,	Lec: W
11	BUSINESS IN PHYSIOTHERAPY	Optional course: Starting and Managing Your Own Physiotherapy Practice, banking relationships, securing advisors, costs, medicare, marketing, advertising and promotion, and coding. Sample financial statements, income statements, cash flow statements, fee schedules, and payment policies.  Total hours: 30h lecture	Lec: W
12	INTRODUCTION IN COMPUTER SCIENCE	Optional course: Basic concepts in computer science. History of Informatics. Arithmetic systems. Encoding of information. Introduction in Boolean algebra and basic logic circuits. PC elements, PC organization. Arithmetic in computers. Software (program language, systems, applications). Data (files and databases). Teleinformatics and telecommunications. Computer Networks. Office automation systems, Multimedia, Information Systems and applications. Computer Science and Education. Social impacts. Evolution in information field.  Total hours: 30h lecture	Lec: W
13	ALTERNATIVE TECHNIQUES OF THERAPEUTIC MASSAGE	Optional course: Students are trained to perform deep connective tissue and specific cross-fiber frictional massage, functional massage, lymphatic massage, reflexology, acupressure, and Shiatsu. Introduction to manual therapy. Total hours: 30h lecture	Lec: W
	(P75)ENGLISH I	Optional course: This course is the first of three English language courses. The course introduces students to the first level of grammar and usage of words. It aims at the facilitation of verbal communication, and the development of writing and reading abilities.  Total hours: 30h lecture	Lec: W
	(P76)ENGLISH II	Optional course: This course is the second of three English language courses. The course	Lec: W

		<p>introduces students to a more advanced level of grammar and usage of words. As with Foreign language I, it aims at the facilitation of verbal communication, and the development of writing and reading abilities.</p> <p>Total hours: 30h lecture</p>	
	(P77)ENGLISH III	<p>Optional course: This course is the last of three language courses. This course introduces students to an even more advanced level of grammar and usage of words. As with English I &amp; English II, it aims at the facilitation of verbal communication, and the development of writing and reading abilities.</p> <p>Total hours: 30h lecture</p>	Lec: W
14	ERGOTHERAPY (OCCUPATIONAL THERAPY)	<p>Optional course: Occupational Science and the Occupational Nature of Humans, Occupational therapy concepts and practice, Occupation and Health in Society, Profile of the Occupational Therapy Profession, Communication in Occupational Therapy, OT Evaluation and Intervention, Occupational and Physical Therapy Relationships</p> <p>Total hours: 30h lecture</p>	Lec: W