Course Units Offered by the Department

Bachelor of Science Honours in Physiotherapy

1000 LEVEL – SEMESTER I

Course Code	Course Title	No. of Credits	Prerequisites
EL 1101	Basic English for Allied Health Sciences 1	3*	None
AH 1101	Information Technology	2*	None
AH 1102	Human Physiology 1	3	None
AH 1103	Basic Human Anatomy	3	None
AH 1104	Introduction to Psychology	2	None
AH 1106	Basic Biochemistry	2	None
PT 1101	Physiotherapy Basics of Care and Wellness	1	None
PT 1102	Physiotherapy as a Profession	1	None
PT 1103	Sociology and Anthropology	1	None

1000 LEVEL – SEMESTER II

Course Code	Course Title	No. of Credits	Prerequisites
EL 1202	Basic English for Allied Health Sciences 2	3*	None
AH 1201	General Pathology	3	None
AH 1202	Human Physiology II	3	None
PT 1201	Applied Anatomy – I	3	None
PT 1202	General Microbiology	1	None
PT 1203	Exercise Science	2	None
PT 1204	Physiotherapy Clinical Skills	2	None

2000 LEVEL – SEMESTER I

Course Code	Course Title	No. of Credits	Prerequisites
EL 2103	Intermediate English for Allied Health Sciences 1	3*	None
PT 2101	Applied Anatomy – II	3	None
PT 2102	Biomechanics and Kinesiology I	2	None
PT 2103	Physiotherapy Assessment and Procedures	2	None
PT 2104	Therapeutic Exercise	3	None
PT 2105	Nutrition	1	None
PT 2106	Pathophysiology for Physiotherapy I	3	None
PT 2107	Physiotherapy Professional Communication	1	None
PT 2108	Clinical Practice I	1	None

2000 LEVEL – SEMESTER II

Course Code	Course Title	No. of Credits	Prerequisites
EL 2204	Intermediate English for Allied Health Sciences 2	3*	None
PT 2201	Biomechanics and Kinesiology II	2	None
PT 2202	Physiotherapy Modalities	3	None
PT 2203	Pathophysiology for Physiotherapy II	2	None
PT 2204	Neuropathology for Rehabilitation	3	None
PT 2205	General Medical and Surgical Conditions for Physiotherapists	3	None
PT 2206	Pharmacology for Physiotherapy	2	None
PT 2207	Women's Health Physiotherapy	1	None

3000 LEVEL – SEMESTER I

Course Code	Course Title	No. of Credits	Prerequisites
PT 3101	Musculoskeletal Physiotherapy - Upper Extremities	3	None
PT 3102	Neurological Physiotherapy I	3	None
PT 3103	Cardiopulmonary Physiotherapy	4	None

PT 3104	Research Project in Physiotherapy - Part I: Research Design and Methodology	2	None
PT 3105	Evidence-Based Practice in Physiotherapy	2	None
PT 3106	Biostatistics	2	None
PT 3107	Clinical Practice II	2	None

3000 LEVEL – SEMESTER II

Course Code	Course Title	No. of Credits	Prerequisites
PT 3201	Musculoskeletal Physiotherapy - Lower Extremities	3	None
PT 3202	Musculoskeletal Physiotherapy - Axial System	2	None
PT 3203	Neurological Physiotherapy II	3	None
PT 3204	Paediatric Physiotherapy	4	None
PT 3205	Assistive Technology and Environmental Adaptations	1	None
PT 3206	Community-Based Rehabilitation	2	None

4000 LEVEL – SEMESTER I

Course Code	Course Title	No. of Credits	Prerequisites
PT 4101	Geriatric Physiotherapy	3	None
PT 4102	Physiotherapy in Sports	2	None
PT 4103	Diagnostic Tests and Imaging for Physiotherapists	1	None
PT 4104	Differential Diagnosis for Physiotherapists	1	None
PT 4105	Patient Education and Prevention	1	None
PT 4106	Physiotherapy Professional Practice	1	None
PT 4107	Clinical Practice in Medical and Surgical conditions for Physiotherapists	3	None
PT 4108	Clinical Practice in Paediatric Physiotherapy	3	None
PT 4109	Research Project in Physiotherapy - Part II: Proposal formulation	2	None

4000 LEVEL – SEMESTER II

Course Code	Course Title	No. of Credits	Prerequisites
PT 4201	Research Project in Physiotherapy - Part III: Thesis Formulation and Presentation	4	None
PT 4202	Clinical Practice in Critical care Physiotherapy	2	None
PT 4203	Clinical Practice in Cardiopulmonary Physiotherapy	3	None
PT 4204	Clinical Practice in Musculoskeletal Physiotherapy	5	None
PT 4205	Clinical Practice in Neurological Physiotherapy	4	None

(*) Non-GPA courses

Total credits for Research Project in Physiotherapy – 8 credits (It comprises of the modules Research Project in Physiotherapy – Part I: PT 3104, Research Project in Physiotherapy - Part II: PT 3207, Research Project in Physiotherapy- Part III: PT 4201)

Synopses of Course Contents

Level 1000

EL 1101 Basic English for Allied Health Sciences 1 (3 Credits)

The aim of this course is to provide the students with the knowledge of basic grammar and language skills and enable students to read, understand and evaluate basic descriptive texts, and to write accurately at UTEL Band 4 Level of competence in the skill areas of Reading and Writing as they transit into a degree programme which is conducted in the English medium. English for General Purposes (EGP) and Allied Health Science-based English for Specific Purposes (ESP) are introduced in an attempt to improve the knowledge of the undergraduates and the course will provide them with an insight and the required knowledge of English in order to function within the academic milieu of a University.

Key Areas of Focus: Selected reading passages describing people, places, Allied Health Science disciplinary themes, texts with appropriate punctuation exercises, reading comprehension texts, and relevant passages with appropriate and sequenced vocabulary elements. Surveying a textbook, skimming and scanning text and processing information appropriately. Language Development and Writing, Formulating simple descriptions of general and scientific context and developing methods of note-taking, Writing short descriptions of self, immediate environment and current situations, formal and informal letters, email and similar communication. Mechanics of Writing: subject-verb agreement, use of connectives, spelling and punctuation. Introduction to dictionary skills for self-learning purposes, Pronunciation and phonetic symbols, Speech activities related to general and academic contexts.

Course assessment: In-course 40%, End semester 60%

AH 1101 Information Technology (2 Credits)

Basic concept of computers, Types of computers, Components of a computer, System analysis and design, Data processing, Web page development & languages, System analysis and design, Data processing, Computer networks, E-mail/Internet concepts.

Course assessment: In-course 30%, End semester 70%

AH 1102 Human Physiology I (3 Credits)

Introduction to basic organization of the human body, Integration & regulation of the human body functions organized around the homeostasis, Cell physiology, Nervous system, Cardiovascular system, Respiratory system, Lymphatic and Gastrointestinal systems.

Course assessment: In-course 30%, End semester 70%

AH 1103 Basic Human Anatomy (3 Credits)

The cell, Cell division, Basic tissue types, Functional organization of nervous system, Cardiovascular system, Bone cartilage and joints, Muscular system, Gastrointestinal system, Respiratory system, Lymphatic system, Urinary system, Reproductive system, Structure of special sensory organs.

Course assessment: In-course 30%, End semester 70%

AH 1104 Introduction to Psychology (2 Credits)

Introduction to Psychology with an emphasis on health-related issues, Major perspectives in psychology, Psychology applied to nursing and health care in general, Coping with stressful situations.

Course assessment: In-course 40%, End semester 60%

AH 1106 Basic Biochemistry (2 Credits)

Structure, Function and metabolism of carbohydrates, Proteins, Lipids and nucleic acids, Regulation and integration of metabolism, Introductory Medical Biochemistry.

Course assessment: In-course 30%, End semester 70%

PT 1101 Physiotherapy Basics of Care and Wellness (1 Credit)

Infection control; Body mechanics - Axes and planes, Fundamental positions, Derived positions; Basics of first aid - Medical emergencies, Cardiopulmonary resuscitation; Documentation overview - Medical abbreviations, Medical terminology, Basics of documentation (record keeping, maintain day-to-day documents); The eight dimensions of wellness – Types, Self-assessments of wellness, Goal setting of dimensions of wellness, Behavioral change theories, Relationship between wellness and leading causes of death; Lifestyle choices - Healthy lifestyles (PA, quit smoking, reduce alcohol consumption, good eating habits).

Course Assessment: In-course 40%, End-semester 60%

PT 1102 Physiotherapy as a Profession (1 Credit)

History of physiotherapy in Sri Lanka, Legislation pertaining to health care system focusing physiotherapy profession and its development, Type of physiotherapy practice settings; World Health Organization - The International Classification of Functioning, Disability and Health model (WHO ICF Model); Ethical principles (Code of Ethics) of World Confederation of Physical Therapy (WCPT), CSP and SLSP and cultural considerations; Standards of practice– Accountability, Altruism, Compassion / Caring, Cultural competence, Ethical behavior, Integrity, Personal / Professional development, Professional duty, Social responsibility and advocacy, Teamwork, Current Physiotherapy practice issues.

Course Assessment: In-course 40%, End-semester 60%

PT 1103 Sociology and Anthropology (1 Credit)

Introduction to Sociology, Social aspects of health and illness, Fundamental concepts, Social groups, Culture, Social control, Social problems, Anthropology.

Course Assessment: In-course 30%, End-semester 70%

EL 1202 Basic English for Allied Health Sciences (3 Credits)

The aim of this course is to enable students to understand simple instructions, statements, notices and questions, and to be able to formulate these themselves. This will place them at UTEL Band 4 Level of competence in the skill areas of Listening and Speaking.

Key Areas of Focus: Instructions and directions, announcements, basic questions and answers, sequence markers and conjunctions/connectives, short speeches and dialogues, professional instructions, creative expression, telephone conversations. Sharing personal information appropriately, using and explaining quantitative and qualitative data at a basic level, making short speeches, asking and answering questions, telephone and other conversations for social and information-gathering purposes. Vocabulary development and expansion, Group discussions, Presentations, Impromptu Speaking on general and general health topics, Speech related to formal and informal settings and identifying contextual references.

Course assessment: In-course 40%, End semester 60%

AH 1201 General Pathology (3 Credits)

Introduction to pathological mechanisms common to all tissue-cell pathology, Processes of cell injury, Cellular adaptations to injury, Inflammation and repair, Circulatory disturbances, Immunopathology, Neoplasia and genetic basis of diseases.

Course assessment: In-course 30%, End semester 70%

AH 1202 Human Physiology II (3 Credits)

Foundation on information of normal physiological functions of the nervous, endocrine, renal and reproductive systems, which will allow an increased understanding of the integration, regulation and homeostasis of the human body as well as changes seen in pathological states.

Course assessment: In-course 30%, End semester 70%

PT 1201 Applied Anatomy – I (3 Credits)

Core, back and spine - Osteology, Joints, Muscles, Attachments, Innervations, Movements, Spine curvatures, Surface anatomy, Applied anatomy, Radiological anatomy, Functions, Clinical relevance; Upper limb (In relation to pectoral, scapular, arm, forearm and hand regions) – Osteology, Joints, Muscles, Attachments, Innervations,

Movements, Blood supply and Lymphatic drainage, Surface anatomy, Applied anatomy, Radiological anatomy, Grip and functions of hand, palmar arches, Clinical relevance; Lower limb (In relation to gluteal, thigh, leg, ankle and foot regions) – Osteology, Joints, Muscles, Attachments, Innervations, Movements, Foot arches, Blood supply and Lymphatic drainage, Surface anatomy, Applied anatomy, Radiological anatomy, Functions of lower limb; Gait and weight bearing, Clinical relevance.

Course Assessment: In-course 40%, End-semester 60%

PT 1202 General Microbiology (1 Credit)

Introduction to Microbiology, Classification of microorganisms, Sterilization, Disinfection and Handling of infected material, Mode of transmission of diseases, Hospital acquired infections, Introduction to bacterial, viral and fungal diseases, Basic concepts of immunology.

Course Assessment: In-course 20%, End-semester 80%

PT 1203 Exercise Science (2 Credits)

Introduction - Basic definitions and terminology; Types of exercises - Aerobic exercise (cardiorespiratory and muscular endurance), Resistance exercise, Flexibility and stretching; Exercise physiology - Basic energy metabolism, Energy pathways , Oxygen uptake and lactate threshold, Energy expenditure with excise intensity and duration; Response to exercise and physical activity - Cardiorespiratory adaptation, Musculoskeletal adaptation, Metabolic adaptation, Hormonal response, Immune response; Exercise is medicine - Physical Activity as a Vital Sign, Benefits of exercise, Impact of physical activity and exercise on various diseases; Recommendations for exercise and physical activity - Recommendation from childhood to adulthood; Physical fitness assessment of healthy adult; Exercise prescription; Exercise in extreme environment.

Course Assessment: In-course 40%, End-semester 60%

PT 1204 Physiotherapy Clinical Skills (2 Credits)

Documentation, Patient history, Positioning and draping, Bed mobility, Transfers, Gait training, Wheelchair components and prescription, Assistive devices, Case studies.

Course Assessment: In-course 40%, End-semester 60%

Level 2000

EL 2103 Intermediate English for Allied Health Sciences 1 (3 Credits)

The second year courses are developed with the aim of introducing students to English for Academic Purposes (EAP). A higher level of competency is expected at this level as students will be introduced to technical and formal writing.

The aim of this course is to ensure that students are successful at UTEL Level 5 in the Reading and Writing examinations. More specifically, the course aims to familiarize students with academic texts of a descriptive and argumentative nature, including visuals such as graphs and tables, as well as to ensure that they can summarize, take notes, skim and scan effectively, and write narrative/descriptive/informative texts of approximately 500 words.

This module caters to the need of English competency for academic and professional purposes.

Students will also be familiarized with IELTS, and complex technical writing. Students are expected to undertake writing assignments of some complexity, identify the authorial voice in texts and to state and defend one's position on issues in an argument.

Key Areas of Focus: Academic and professional texts from the main field and sub-fields of Allied Health Sciences, reading comprehension passages of general and specific interest to undergraduates, reference and citation style guides. Academic and professional text writing, visuals (tables, charts, graphs) and data commentaries (qualitative and quantitative). Language Development and Writing, Cause-effect relationships, Process writing, Comparisons, Formal Letter writing, Direct-Indirect Speech, Vocabulary expansion, Thesis statements, Idioms and proverbs, Phrasal Verbs, Varieties of English, Exposure to different accents of English, Poster presentations, Debates, Group discussions and puzzles. Developing schemata and description, Transitional devices, Report writing, Conditionals, Preparation of a Curriculum Vitae, Application procedure, Reading and understanding Journal Articles, Précis Writing, IELTS Practice tests, How to face an Interview, How to make a presentation, Presentation of a report.

Course assessment: In-course 40%, End semester 60%

PT 2101 Applied Anatomy – II (3 Credits)

Neuroanatomy- General arrangement of the nervous system (central/peripheral), Name the components of central nervous system-(brain/spinal cord) and peripheral nervous system (somatic – sensory and motor / autonomic - sympathetic and parasympathetic), Cranial nerves, Spinal nerves; Head and neck (Skull, mandible, cervical vertebrae), Joints of head and neck, Movements of head (atlanto-occipital, atlanto-axial joint, cervical spine), Attachments, Innervations, Movements of facial muscles and muscles of neck, Surface anatomy, Applied anatomy, Radiological anatomy of head and neck; Thorax - Arrangement of organs in thoracic cavity, Thoracic wall; Skeletal framework (Thoracic vertebrae, ribs), Attachments, innervations, Movements of skeletal muscles in thoracic region, Diaphragm; Respiratory movements, Mediastinum, Heart; Cardiac orientation, Cardiac chambers, Coronary vasculature, Surface anatomy of thorax, Identify component parts of heart, Lungs and brain.; Abdomen

- Arrangement of abdominal viscera, Surface topography; Attachments, Innervations, movements of abdominal muscles, Changes in intra-abdominal pressure, Surface anatomy of abdominal region.; Pelvis and perineum

-pelvis, Skeletal muscles in pelvic wall; Attachments, Innervations, Movements, Arrangement of pelvic organs (Male, female), Surface anatomy of pelvic region.

Course Assessment: In-course 40%, End-semester 60%

PT 2102 Biomechanics and Kinesiology I (2 Credits)

Introduction, Biomechanical laws and movement, Forces and moments acting on the body, Joint structure and function, Muscle biomechanics, Biomechanics and kinesiology of shoulder / elbow & forearm / wrist & hand, Posture, Introduction to basic techniques and instrumentation used in assessment of human posture movement.

Course Assessment: In-course 40%, End-semester 60%

PT 2103 Physiotherapy Assessment and Procedures (2 Credits)

Introduction to physiotherapy assessment techniques (History taking and interview during the assessment).; Physiotherapy examination and evaluation of upper limb, lower limb and axial skeleton - Range of motion, planes, and axes (Motion barriers, bony, capsular, soft, pain, end feels), Principles and practice of goniometry, Principles and practice of manual muscle testing, Other alternatives to assess muscle strength (1RM, Multiple RM, Equipment based strength testing, Functional performance tests. Limb length and limb girth measurements, Chest expansion measurements, Neuro dynamic tests; Documentation and Case studies.

Course Assessment: In-course 40%, End-semester 60%

PT 2104 Therapeutic Exercises (3 Credits)

Foundational concepts - Therapeutic exercise: Impact on physical function, Classification of health status, Functioning, and disability—Evolution of models and related terminology, Principles of comprehensive patient management, Strategies for effective exercise and task-specific instruction.; Principles of range of motion (ROM), Types, Indications, Goals, and Limitations of ROM, Precautions and contraindications to ROM exercises, Principles and procedures for applying ROM techniques for upper extremity, Lower extremity, Cervical spine and lumbar spine, Self-assisted ROM, Reciprocal exercise unit, ROM through functional patterns.; Principles of stretching - Definition of terms associated with mobility and stretching, Indications, Contraindications, and Potential outcomes of stretching exercises, Properties of soft tissue: Response to immobilization and stretch, Determinants and types of stretching exercises, Procedural guidelines for application of stretching interventions, Precautions for stretching, Adjuncts to stretching interventions, Manual stretching, Mechanical stretching, PNF stretching, Neural stretching.; Principles of resistance exercise - Types, Indications, Goals, Limitations, Precautions and contraindications of resistance exercises Principles and procedures for applying resistance exercises techniques, Plyometric, Proprioceptive neuromuscular facilitation.; Exercise recommendations - Prescription and progression.; Principles of aerobic training, aerobic exercise prescription/progression.; Principles of balance training.; Principles of aquatic therapy - Definition of aquatic exercise, Goals, Indications, Precautions and contraindications, Properties of water , Aquatic temperature and Therapeutic exercise pools for aquatic exercise, Special equipment for aquatic exercise pool, Care and safety, Stretching exercises, Strengthening exercises, Aerobic conditioning.; Principles of intervention: Fatigue, Pain and other signs.

Course Assessment: In-course 40%, End-semester 60%

PT 2105 Nutrition (1 Credit)

Role of nutrition in Physiotherapy: Prevention of diseases, Recovery from injury or illness and physical function.; Dietary guidelines: Recommended dietary guidelines on: components, i.e., protein, fat, fruit, vegetables, carbohydrates; Requirements for different age groups, Comparison of self to recommendations and self- monitoring and assessment with an intake diary, Nutrition for weight control:- Trends in diets in Sri Lanka.; Case studies.

Course Assessment: In-course 40%, End-semester 60%

PT 2106 Pathophysiology for Physiotherapy I (3 Credits)

Introduction, Wound and ulcers, Infection, Stress, Temperature, Fluid, Electrolyte, pH balance, Etiology, Preventive measures and medical management of following disease states and disorders – Oncology, Integumentary Disorders (Leprosy, Psoriasis, Pigmentary anomalies, Dermatitis, Infections, Alopecia, Acne), Osteoarthritis, Rheumatological disorders, Hematologic disorders, Immune disorders, Lymphatic disorders, Musculoskeletal disorders (Structure and function of bone / cartilage / tendon / muscle; Bone, Joint and muscle pathologies).

Course Assessment: In-course 40%, End-semester 60%

PT 2107 Physiotherapy Professional Communication (1 Credit)

Communication in healthcare - Direct and indirect pathways through which communication influences health and well-being, Methods to enhance communication, Barriers to communication, Aims of medical communication, Communication style and personality.; Form of communication (Verbal, non-verbal, written, e-based) - Communication with patients, Communication with colleagues, and other health care professionals, Listening behaviors.; Strategies to enhance one-to-one communication with patients.; Small group communication.; Methods of communication: Guidelines for formal professional presentations.; Writing professional electronic messages and consultation letters, Role play.

Course Assessment: In-course 30%, End-semester 70%

PT 2108 Clinical Practice I (1 Credit)

Clinical observation in various practice settings, Discuss and reflection on: Practice settings, Roles of health care providers, Perspective of the patient / family members, Manifestations of disease, Application of basic physiotherapy clinical skills.

Course Assessment: In-course 40%, End-semester 60%

EL 2204 Intermediate English for Allied Health Sciences 1 (3 Credits)

This module The aim of this course is to ensure that students are successful at UTEL Level 5 in the Listening and Speaking examinations. They will, therefore, be able to listen to and grasp the main idea of a short speech, through an understanding of sequence markers and key vocabulary related to these spoken texts. This includes subject-related English for Academic Purposes (EAP). The aim is also to enable students to make short descriptive speeches about themselves, their surroundings and their basic substantive disciplines.

Key Areas of Focus: Short lectures and note-taking, discussions on subject- specific areas, answering listening comprehension exercises, identification of main ideas of verbal/visual texts and provide evidence. Understanding and following complex instructions within the field of AHS. Making impromptu speeches, conducting small- group discussions, role plays and simulations, and delivering short speeches on given topics.

Course assessment: In-course 40%, End semester 60%

PT 2201 Biomechanics and Kinesiology II (2Credits)

Biomechanics and kinesiology of hip, knee complex, foot & ankle, Chest wall & thorax, Spine and temporomandibular joint; Gait - Basic determinants of gait, Gait deviations and pathological gait.

Course Assessment: In-course 40%, End-semester 60%

PT 2202 Physiotherapy Modalities (3 Credits)

Science of therapeutic modalities - Fundamentals of electromagnetic modalities (Radiant energy, Electromagnetic radiations, Wavelength and frequency, Laws governing the effects of electromagnetic radiations, The application of the electromagnetic spectrum to therapeutic modalities).; Principals of electricity - Static electricity and Current electricity (Charge, Polarity and creation of electric force fields, Voltage, Conductors and insulators), Current, Ohm's Law: Resistance, Capacitance, and Impedance, Currents and waveforms, Valves, Transformers, Ionization, Magnetism, Thermionic valves, Semi-conductor devices, AC and DC meters.; Overview of therapeutic modalities and applications - Thermal modalities, Hydrotherapy, Electrical modalities, Electromagnetic modalities, Mechanical modalities.; Inflammatory process, and pain control.; Physiological effects, therapeutic effects, clinical indications, contraindications and precautions, instrumentation and safety measures, clinical applications of following therapeutic modalities - Cold therapies, Thermotherapy, Therapeutic ultrasound and phonophoresis, Hydrotherapy / whirl pool bath and contrast bath, Electrical modalities, Electro-diagnostic tests, Electromagnetic radiation, Mechanical modalities.; Case studies and evidence-based practice and therapeutic modalities.

Course Assessment: In-course 40%, End-semester 60%

PT 2203 Pathophysiology for Physiotherapy II (2 Credits)

Etiology, preventive measures and medical management of following disease states and disorders:-Diseases of ear / nose / throat and ophthalmology; Endocrine system disorders, Nutritional disorders; Genetics/congenital disorders; Hepatic, biliary, and splenic system disorders; Gastrointestinal system (Reflex esophagitis, Achalasia cardia, Carcinoma of the oesophagus, GI bleeding, Peptic ulcer diseases, Carcinoma of the stomach, Pancreatitis, Malabsorption syndrome, Inflammatory bowel diseases, Peritonitis, Infection of alimentary tract); Urinary and renal system disorders; Pain and headache; Psychiatric disorders (Schizophrenia, Depression, Bipolar Disorder, Hysterical conversion syndrome, Phobias, Anxiety, Obsessive compulsive disorder, Eating disorders, Sleep disorders), Poisoning.

Course Assessment: In-course 40%, End-semester 60%

PT 2204 Neuropathology for Rehabilitation (3 Credits)

Basic Neuroanatomy - Structures and functions of the nervous system including cerebrum, cerebellum, spinal cord, peripheral nervous system, synaptic transmission and nerve plexus, regeneration and repair of nervous system.; Basic neurophysiology - Somatosensory system, age related sensory changes, sensory examination, common sensory impairments.; Overview and examination of motor functions, reflex integrity, activity based task analysis - Bladder and bowel control.; Examination of higher functions, Upper motor and lower motor nerve lesions.; Introduction to electromyography and nerve conduction velocity tests.; Neuroplasticity, Motor learning and recovery.; Overview and physiology of the vestibular System, Vestibular system dysfunction and interventions.; Etiology, Pathophysiology, Clinical manifestation, Investigations of common neurological diseases and disorders affecting the cerebrum, cerebellum, spinal cord and peripheral nervous system/ neuro degenerative disorders/ neurobehavioral disorders/ disorders of neuromuscular junction/ muscle disorders/ polyneuropathies and multisystem lesions.; Common neuro surgeries: Introduction, Indication and complications.

Course Assessment: In-course 40%, End-semester 60%

PT 2205 General Medical and Surgical Conditions for Physiotherapists (3 Credits)

Introduction to surgical procedures - Types of anesthesia and its effects on the patients, Types of incisions (definitions, indications), Clips ligatures and sutures, General surgical procedures – Radiologic diagnostic procedures, Endoscopy, Biopsy, Overview of drainage systems and tubes used in surgery.; Definition, indication, incision, physiological changes, complications and overview of medical management of following common surgeries

: Cholecystectomy, Colectomy, Colostomy, Ileostomy, Gastrectomy, Appendicectomy, Hernias, Mastectomy, Nephrectomy, Prostatectomy, Laparoscopic surgeries, Transplant surgeries (kidney and liver).; Oncology - Types, Stages of cancer, Surgical procedures involved in the management of cancer, Medical management / palliative care, Physiotherapy interventions in the management of medical, surgical oncology.; Pre- and post- operative physiotherapy assessment and management for general surgeries.; Role of physiotherapist in wound care - Anatomy and physiology review of integumentary system, lymphatic system and peripheral circulation, Influencing factors, Wounds types, Wound physiology and healing, Norton scale and Braden scale.; Characteristics, complications, risk factors, overview of medical/surgical management, and physiotherapy assessment and management of common medical conditions including vascular, lymphatic and integumentary system disorders.; Diabetes and Hansen's disease considerations - Impact of diabetes on the development of neuropathic wounds, lower extremity amputation and prevention, Monofilament testing.; Burns – Types, Causes, Staging, Acute and chronic management, Examination, Physiotherapy treatment and rehabilitation.

Course Assessment: In-course 30%, End-semester 70%

PT 2206 Pharmacology for Physiotherapy (2 Credits)

General Pharmacology – Introduction, regulation and approval, drug classes and schedules, Administration, Pharmacokinetics, Pharmacodynamics.; Systemic pharmacology - Pain and analgesics, NSAIDs and opioids, Corticosteroids, Skeletal muscle relaxants, Cardiovascular pharmacology (Anticoagulants, Anti-hypertensives, Anti-hyperlipidemic drugs), Respiratory pharmacology, Anti-epileptic drugs, General and local anesthetics, Drug

interaction, Antimicrobial therapy, Drugs use in ICU setup, Drugs for psychiatric disorders. Course

Assessment: In-course 20%, End-semester 80%

PT 2207 Women's Health Physiotherapy (1 Credit)

Definition, etiology, pathophysiology, clinical features, signs and symptoms, complications, investigation, medical and physiotherapy management of following obstetrics and gynaecological conditions:-Gynaecological conditions
:- Introduction to pelvic floor anatomy and physiology, Menstrual cycle and its disorders, Menopause, Hormonal disorders of females, Subfertility, Cancer, Disorders of pelvic pain, Pelvic floor dysfunction, Common surgical procedures used in gynaecology.; Obstetrics conditions :- Anatomical and physiological changes in pregnancy, prenatal complications, Labour, Pain relief in labour, Surgical procedures involving childbirth, Puerperium and postnatal care, Lactation, Methods of birth control, Pregnancy-induced pathologies, Exercise prescription/ interventions for pregnancy.
Course Assessment: In-course 40%, End-semester 60%

Level 3000

PT 3101 Musculoskeletal Physiotherapy - Upper Extremities (3 Credits)

Anatomy review (Joint examination), Assessment (History, Systems review, Tests and measures including their psychometric properties, Evaluation, Differential diagnosis, Prognosis, Interventions, Re-examination, Documentation).; Interventions of musculoskeletal conditions will be based on evidence, psychometric properties, the disablement model and it will include: Conservative management (Therapeutic exercises and other interventions in rehabilitation, joint mobilization, soft tissue techniques and therapeutic modalities as an adjunct to treatment), Surgery, Post-surgical management and rehabilitation.; Joint Mobilization – Principles, Indications, Effects, Methods, Grades, Procedure, Precautions, Contraindications.; Soft tissue techniques: Principles, Indications, Effects, Methods, Grades, Procedure, Precautions, Contraindications.; Application of joint mobilization and soft tissue techniques to the following regions:- Scapulothoracic joint, Shoulder, Elbow, Forearm, Wrist and Hand.; Etiology, Risk factors, Pathology, Complications, Stages of healing, Joint examination, Intervention and return to activity for conditions of the: Scapulothoracic joint, Shoulder, Elbow, Forearm, Wrist and Hand, Deformities of the Upper Limb, Fractures of the scapulothoracic joint and upper limb.; Case studies.
Course Assessment: In-course 20%, End-semester 80%

PT 3102 Neurological Physiotherapy I (3 Credits)

Overview of neuromuscular physiotherapy, Physiotherapy assessment for neurological conditions, Introduction to functioning and disability models.; Neuromuscular tests and measures – Higher functions, Cranial nerves, Motor functions, Reflexes, Coordination, Balance, Posture and gait .; Common interventions to address - Functional mobility, Bed mobility, Transfers, Locomotor, Balance and neuroplasticity (Motor learning integration to practice).; Risk factors, co-morbidities, presentation, acute medical management, physiotherapy assessment, physiotherapy management and evidence based practice of, - Cerebrovascular accident, Head Injury, Meningitis and encephalitis and Brain Tumors.; Case studies.
Course Assessment: In-course 20%, End-semester 80%

PT 3103 Cardiopulmonary Physiotherapy (4 Credits)

Review of anatomy, Exercise physiology, Overview of cardiopulmonary practice.; Assessment of the patient with cardiopulmonary dysfunction and documentations: Medical and physiotherapy assessment, Monitoring and interpretation of test, measures and investigations used in cardiopulmonary assessment.; Physiotherapy techniques used in cardiopulmonary dysfunctions.; Medical and physiotherapy management and outcomes of problems and impairments related to respiratory dysfunctions - Dyspnoea, Decreased exercise tolerance, Impaired airway clearance, Airflow limitation, Respiratory muscle dysfunction, Reduced lung volume, Impaired gas exchange, Abnormal breathing pattern, Pain, Musculoskeletal dysfunction.; Acute medical and surgical conditions and its' clinical implication for physical therapy for respiratory conditions, Common cardio-thoracic surgical conditions, Tracheostomy & ICD tube management, Cardiac conditions , Multisystem dysfunction.; Pulmonary rehabilitation and cardiac rehabilitation.; Oxygen delivery systems and oxygen as a medication (Mechanical support and non-invasive ventilation), The effects of positioning and mobilization on oxygen transport.; Intensive care units - Lines/tubes/drains, Equipment and mobilization, Physiotherapy assessment and management in ICU, Hyperinflation techniques and suctioning, Physiotherapist role in weaning from ventilators, Pediatric and neonatal ICU physiotherapy management.; Interpersonal aspects of care: communication, Counselling and health promotion and education.

Course Assessment: In-course 20%, End-semester 80%

PT 3104 Research Project in Physiotherapy - Part I: Research Design and Methodology(2 Credits)

Overview of research methodology, The selection of a research design (Types of research designs- quantitative methods, qualitative methods and mixed methods), Review of the literature (gap spotting and developing research questions, and developing hypothesis and research objectives), Research questions and hypothesis, Sampling methods and sample size estimation, Data collection tools and methods, Data analysis plan (quantitative analysis and qualitative analysis), Clinical trials and randomized controlled trials (RCT), Ethical considerations, Research funding, Referencing (styles and tools), Publication of a research work.

Course Assessment: In-course 40%, End-semester 60%

PT 3105 Evidence - Based Practice in Physiotherapy (2 Credits)

Introduction to evidence - based practice, Practice of evidence-based physiotherapy, Clinical decision-making and importance of evidence - based practice in physiotherapy, Developing a clinical question, Sources of information of evidence, Quality of evidence and level of evidence, Finding the evidence (Search strategy and database search), Critical appraisal of evidence, Introduction to systematic review and meta - analysis, Steps and writing protocols for systematic review, Clinical guidelines as a resource for evidence - based physiotherapy, Implementation of Evidence - based practice, Evaluation of evidence-based practice (Assessing patient outcome, Assessing the process of care).

Course Assessment: In-course 40%, End-semester 60%

PT 3106 Biostatistics (2 Credits)

Overview to statistics, Data presentation and preliminary analysis (Types of numerical data, descriptive analysis, using tables), Numerical summary measures, confidence interval, probability and hypothesis testing, Introduction to SPSS.; Statistical techniques to compare groups (One sample test, T-tests, One-way analysis of variance (ANOVA), Two-way between-groups ANOVA, Introduction to multivariate analysis of variance (MANOVA) and Analysis of covariance (ANCOVA)).; Statistical techniques to explore relationships among variables (Correlation, partial correlation, introduction to linear regression, multiple regression, logistic regression and factor analysis).; Non-parametric statistics (Chi-square, Mann-Whitney U Test, Wilcoxon Signed Rank Test, Kruskal-Wallis Test, Friedman Test, Spearman's Rank Order Correlation).

Course Assessment: In-course 40%, End-semester 60%

PT 3107 Clinical Practice II (2 Credits)

Clinical observation in various practice settings; Discuss and reflection on: Practice settings, Manifestations of disease, Role of physiotherapy in various disease conditions, Application of basic physiotherapy clinical skills including physiotherapy assessment techniques, exercises, therapeutic modalities (identifying the appropriate therapeutic modalities and parameters, planning the treatment and application).

Course Assessment: In-course 40%, End-semester 60%

PT 3201 Musculoskeletal Physiotherapy - Lower Extremities (3 Credits)

Anatomy review (Joint examination),; Application of joint mobilization to the following regions: Pelvis, Hip, Knee, Foot and ankle.; Application of soft tissue techniques to the following regions: Pelvis, Hip, Knee, Foot and ankle.; Etiology, risk factors, pathology, complications, stages of healing, joint examination, intervention and return to activity for conditions of the following: Pelvis and hip, Knee, Foot and ankle, Deformities of the lower limb, Fractures of the pelvis and lower limb.; Orthotics, Prostheses and amputation – Overview, Examination, Handling skills, Post amputation rehabilitation, Orthotic including- shoes, shoe insert, lower limb orthotics, spinal orthotics, upper limb orthotics, ace wrapping as a temporary orthotic, Prosthetics including- donning / doffing, skin inspection, wearing schedule, wear and tear, prosthetic types, prosthetic components.; Case studies.

Course Assessment: In-course 20%, End-semester 80%

PT 3202 Musculoskeletal Physiotherapy - Axial System (2 Credits)

Anatomy review, Spine examination.; Application of joint mobilization to the following regions: Spine, Sacroiliac joint, Temporomandibular joint.; Application of soft tissue techniques to the following regions: Spine, Sacroiliac joint, Temporomandibular joint.; Etiology, risk factors, pathology, complications, stages of healing, joint examination, intervention and return to activity for conditions of the following : Spine and sacroiliac joint, Temporomandibular joint, Deformities of the spine, Fractures of the spine.; Case studies.

Course Assessment: In-course 20%, End -semester 80%

PT 3203 Neurological Physiotherapy II (3 Credits)

Physiotherapy assessment, special tests, specific physiotherapy interventions and evidence based practice to neuromuscular conditions including but not limited to: Multiple sclerosis, Amyotrophic lateral sclerosis, Cerebellar dysfunctions, Movement disorders, Cranial nerve disorders, Spinal cord injury, Tumors and inflammation, Bladder and bowel dysfunctions, Polyneuropathies, Differentiation of central and peripheral vestibular dysfunction, Parkinson's disease, Alzheimer's disease, Disorders of muscle and neuromuscular junction, Hereditary motor sensory neuropathy, Peripheral neuropathies and peripheral nerve injuries, Reflex sympathetic dystrophy, Neural tension disorders.

Course Assessment: In-course 20%, End-semester 80%

PT 3204 Paediatric Physiotherapy (4 Credits)

Overview of paediatric physiotherapy, Service delivery settings (early intervention, hospital based, outpatient, inpatient rehabilitation, school settings, family-centered care), Overview of interactions and handling, Delivery models and approaches.; Normal growth and development of child (Motor, mental, language and social), Developmental milestones, Reflexes.; Child and nutrition - Nutritional requirements, Malnutrition syndrome, Nutritional deficiencies in children - Clinical presentation, Complications and management in brief, Childhood obesity.; Clinical Presentation, Complications, Overview of medical management, Prevention, Physiotherapy assessment and management in common paediatric conditions: Neurological and neuromuscular conditions, Musculoskeletal conditions, Respiratory disorders, Cardiac conditions, Haemophilia, Common infectious diseases and Child psychiatric conditions.; Applying motor control principles and sensory integration to paediatric physiotherapy.; Paediatric orthotics.; Paediatric emergencies (Basic life support, common paediatric emergencies).; Paediatric surgical conditions - Types, complications, management, Pre and Post-operative physiotherapy assessment and management in common paediatric surgeries.; Physiotherapy in Intensive neonatological care.

Course Assessment: In-course 20%, End-semester 80%

PT 3205 Assistive Technology and Environmental Adaptations (1 Credit)

Role of physiotherapist in environmental assessments, assistive technology, and adaptive equipment.; Ergonomics – Sitting posture, Standing posture, Ergonomic analysis of workstations, Proposed recommendations.; Work injury prevention and management, Assistive technology and adaptive equipment - Assistive technology and adaptive equipment for ADLs, Types of assistive technology devices (TADs) including but not limited to environmental control, powered mobility, and augmentative communication, TADs – historical and current perspective, Roles and responsibilities of technology team, Assessment of clients, Environmental controls (telephones, monitoring systems).; Environmental accessibility adaptations at home, school, work, and community - Common terms, Purpose, Examination Strategies, Patient-home environment relationship, Exterior and interior accessibility, Workplace examination, Community access, Transportation options in community, Documentation, Funding and legislation if applicable.

Course Assessment: In-course 40%, End-semester 60%

PT 3206 Community-Based Rehabilitation (2 Credits)

Introduction to community-based rehabilitation, Principles of community-based rehabilitation, Disability - Medical and social models, CBR system in Sri Lanka - National CBR programme, Role of physiotherapy in CBR, Role of social workers / Role of government / Role of voluntary organizations in CBR, Planning and management of CBR programme, Mobile rehabilitation units, Vocational training in rehabilitation, Assessment and rehabilitation of people with disabilities (including pediatric disorders) in the community, CBR – Field visits, Clinical training.

Course Assessment: In-course 20%, End-semester 80%

Level 4000

PT 4101 Geriatric Physiotherapy (3 Credits)

Role of physiotherapist and older adults.; Introduction - Demographic trends, Graying of world, Life expectancies, Aging / immobility vs. activity / wellness, primary, secondary, tertiary prevention, Changes with aging.; Examination – History, Systems review using comprehensive geriatric assessment, Tests and measures including their psychometric properties.; Etiology, Risk factors, Pathology, Complications, Stages of healing, Examination and intervention of diseases associated with ageing in the following :- Musculoskeletal disorders, Neuromuscular and neurological disorders, Cardiopulmonary diseases.; Specific topics related to aging - The insensitive foot, Elder abuse and neglect, social problems related to ageing, Restraints, Balance and falls, Dementia, Delirium, Depression, NPH (Normal Pressure Hydrocephalus), Incontinence, Vision, Hearing and communication with aging, Geriatric syndrome, Sarcopenia, Frailty, Dysphagia, dizziness, fatigue, pain in older persons, Exercise consideration and prescription for older adults, Gait training.; Case Studies.

Course Assessment: In-course 30%, End-semester 70%

PT 4102 Physiotherapy in Sports (2 Credits)

Fundamental principles - Introduction to sports physiotherapy, Sports biomechanics - Biomechanics of common sports activities – Running, Jumping, Throwing.; Principles of sports injury prevention.; Introduction to common sports injuries - Clinical presentation, mechanism of injury and pathophysiology of acute and overuse sports injuries.; General principles of clinical assessment, Diagnosis, Medical management and physiotherapy management in sports injuries and prevention.; Warm up, Cool down and recovery strategies, Stretching.;

Physiotherapy interventions for sports injuries and athletic training, Exercise prescription and return to sports, Sports massage, Taping.; Sports injuries and management for regional problems (Overview of anatomy, physical examination, common injuries and management for : Head and neck, Shoulder, Elbow, Wrist and hand, Spine, Hip and pelvis, Knee, Foot and ankle).; Sports specific injuries and prevention (Running, Cricket, Football, Rugby, Racket sports).; Enhancing sport performance - Sports nutrition, Obesity and sports, Sports psychology/ motivation.; Considerations in specific populations in sports- Younger athletes (school level), Gender and sports, Disability and sports.; Practical sports medicine- Physical fitness and sports, Physical fitness assessment (ACSM), Screening the elite athlete, Role of a coach, Traveling with a sport team, Doping and banned substances, Ethics in sports, Management in sports.
Course Assessment: In-course 20%, End-semester 80%

PT 4103 Diagnostic tests and Imaging for Physiotherapists (1 Credit)

Principles of radiology, Role of physiotherapy in imaging and diagnostic tests, Role of imaging in clinical decision making, Types of imaging, Interpreting radiographic images related to physiotherapy (Common conditions in the fields of orthopaedic, neurology, cardiorespiratory and paediatrics), Electro diagnostic testing (Electromyography -EMG, Nerve conduction velocity -NCV), Other common tests related to physiotherapy.
Course Assessment: In-course 40%, End-semester 60%

PT 4104 Differential Diagnosis for Physiotherapists (1 Credit)

Overview of physiotherapy diagnosis and medical diagnosis, Examination, Documentation (of examination, of communication with physician and other health care providers, of education/explanation to patient).; Examine patients/clients by performing systems reviews that may include – Interview, inspection, screens, special tests in following areas: Cardiovascular /pulmonary system, Musculoskeletal system, Neuromuscular system, Integumentary system.; Communication, Emotional state, Cognition, Language and learning style.; Case studies and Clinical decision making.
Course Assessment: In-course 30%, End-semester 70%

PT 4105 Patient Education and Prevention (1 Credit)

Prevention (Wellness aging model, Illness, Injury, and Immobility - WAMI-3).; Role of the physiotherapist as an educator (Literacy, Developing patient education materials, Learning styles), Educational theories (Domains of learning – Cognitive / Psychomotor / Affective, Types of learner – Andragogy/Pedagogy), Behavioral change
theories and patient behaviors.; Immune system and stress- Mindfulness.; physiotherapy role in education and prevention in Cancer, Diabetes, Obesity, Addictive behaviors: Smoking, Alcohol, Drugs.; Health care disparities related to culture.; Adherence.

Course Assessment: In-course 40%, End-semester 60%

PT 4106 Physiotherapy Professional Practice (1 Credit)

Overview of physiotherapist in professional practice as a new graduate vs. a clinic manager / administrator.; Documentation / Charging for PT services – Reimbursement (Fiscal considerations).; Business practice essentials - Regulatory and/or legal requirements, Fraud, Abuse, Risk assessment and safety, Quality improvement, Corporate compliance, Leadership skills, Risk management, Marketing and public relations, SWOT analysis, Human resources, Organizational structures – flat vs. vertical, Marketing / Public relations, Policies that impact health and social care.; Preparing for job market (resume, interview), Transitioning from student to alumna, PT practice settings and management responsibilities, Validating resource needs.; Development of a business plan on a programmatic level, Feasibility, Health informatics, Marketing, Budgeting, Quality improvement, Evaluating effectiveness, Cost/ benefit analysis.; Physiotherapy professional associations in Sri Lanka, Clinical internship discussion, Preparation for comprehensive barrier examination, Case studies, Life-long learning, Professional representation.

Course Assessment: In-course 30%, End-semester 70%

PT 4107 Clinical Practice in Medical and Surgical conditions for Physiotherapists (3 Credits)

Physiotherapy examination and interventions related to common medical, integumentary, vascular and lymphatic dysfunction including, (but not limited to): Lymphoedema, Edema, Vericose veins, Deep vein thrombosis, Arterial / venous insufficiency, Cellulitis, Psoriasis.; Physiotherapy examination and interventions in relation to Gynecological and obstetric conditions including : Disorders of pelvic pain (Pelvic pain, Dyspareunia, Vestibulitis, Vulvodynia), Pelvic floor dysfunction (Prolapse, Incontinence), Pregnancy-induced pathology (Diastasis Recti, Postural back pain, Symphysis pubis pain, Circulatory complications [Varicose veins, Edema, Deep vein thrombosis], Nerve compression syndromes, Joint laxity, Cramps), Exercise prescription/interventions for pregnancy, common surgical conditions used in gynecology.; Pre- and Post-surgical physiotherapy assessment and management for general surgeries.

Course Assessment: End-semester 100%

PT 4108 Clinical Practice in Paediatric Physiotherapy (3 Credits)

Physiotherapy assessment and management based on the current evidence for general paediatric conditions including : Neurological disorders (Cerebral palsy, Developmental delay, Spina bifida, Hydrocephalus), Down's syndrome, Neuromuscluar disorders (Spinal muscular atrophy, Poliomyelitis, Muscle disorders, Peripheral nerve disorders), Respiratory disorders in children, Orthopaedic conditions (Juvenile arthritis, Fractures, Scoliosis, Connective tissue disorders, Deformities - Congenital talipes equino varus / valgus, Congenital dislocation of hip, Flatfoot, Genu varum/ Genu valgum), Congenital heart diseases, Haemophilia, Child psychiatry, Paeditric Surgeries – Pre- and Post-operative physiotherapy management.

Course Assessment: End-semester 100%

PT 4109 Research Project in Physiotherapy - Part II: Proposal formulation (2 Credits)

Frequency measuring techniques in health and medicine, Introduction to research methods in health and medical sciences, Descriptive studies, Observational analytical studies. Experimental study designs, Introduction to errors in health / medical research, Validity of results of a research, Reliability of results of a research, Causation in clinical and epidemiological research, Data collection techniques.

Course Assessment: In-course 40%, End-semester 60%

PT 4201 Research Project in Physiotherapy - Part III: Thesis Formulation and Presentation (4 Credits)

Formulating a research question or testable hypothesis, study and analyze the data that has been collected, synthesize information based on the analyzed data, writing the research thesis, article to be published in a journal. Course Assessment: In-course 40%, End-semester 60%

PT 4202 Clinical Practice in Critical care Physiotherapy (2 Credits)

Identification of common equipment used in the ICU - Patient monitoring equipment (bedside monitors, pulse oximeter, intracranial pressure monitor, ECG readings, BHT readings), Life support and emergency resuscitative equipment (Mechanical ventilators, Infusion pump, Defibrillator, MHI unit, Resuscitation bag/ mask, Intra-aortic balloon pump, Other equipment (IV catheters, Arterial lines, Pacemakers, Chest tubes, Airways, Endotracheal tubes, Tracheostomy tubes, Humidifiers, Suction catheters, Suction machines ,oxygen mask).; Physiotherapy assessment of ICU patients (Including Auscultation, bed side monitor, ventilator setting reading and adjustments).; Evaluation, Principles and techniques of physiotherapy management in ICU - Special consideration in application

of various manual therapy techniques during physiotherapy interventions, based on the current evidence (Manual hyperinflation, Suctioning (closed/ open), Manual / mechanical techniques of chest clearance, Limb physiotherapy, Positioning).; Infection control in ICU/ Wards.; Health care team roles in ICU.
Course Assessment: End-semester 100%

PT 4203 Clinical Practice Cardiopulmonary Physiotherapy (3 Credits)

Cardio - Respiratory assessment (Physiotherapy examination, auscultation, chest X-rays and imaging).; Physiotherapy management in cardiac and respiratory conditions including: Obstructive pulmonary diseases (Bronchial Asthma, Bronchiectasis, Cystic fibrosis, Bronchopulmonary dysplasia, Chronic obstructive pulmonary disease), Restrictive pulmonary diseases (Interstitial pulmonary fibrosis, Pneumonia, Tuberculosis, Asbestosis, Atelectasis and tumors), Pleural disease (Pleural effusion, Empyema, Pneumothorax, Hydropneumothorax, Haemothorax), Lung abscess, Lung tumors, Respiratory failure, Pulmonary edema, Pulmonary embolism, Inadequate or abnormal pulmonary development (Bronchopulmonary dysplasia), Chest wall stiffness associated with extrapulmonary disease (scleroderma, ankylosing spondylitis), Postural deformities (scoliosis, kyphosis), Ventilatory muscle weakness of neuropathic or myopathic origin.; Management of tracheostomy, ICD tubes, Pre- and post-operative physiotherapy in thoracic surgeries (Lobectomy, Pneumonectomy, Segmental resection, wedge resection, Pleurectomy, Decortication).; Pre- and post-operative physiotherapy in cardiac surgeries (Coronary artery bypass grafting, Valve repair (open and closed surgeries), Valve replacement, Surgeries on the great vessels, Cardiac transplantation, Intra-aortic balloon counter pulsation, Pre- and post-operative physiotherapy in vascular surgeries.; Cardiac rehabilitation and Pulmonary rehabilitation.
Course Assessment: End-semester 100%

PT 4204 Clinical Practice in Musculoskeletal Physiotherapy (5 Credits)

Physiotherapy examination and interventions for musculoskeletal disorders including : Fractures and dislocations, Deformities in upper and lower extremities and spine, Soft tissue injuries, Regional musculoskeletal conditions (Shoulder, Elbow, Wrist and hand, Spine, Hip, Knee, Ankle and foot), Inflammatory and degenerative conditions (Osteoarthritis, Septic arthritis, Rheumatoid arthritis, Ankylosing spondylitis, Cervical spondylosis, Juvenile chronic arthritis, Reiter's disease, Psoriatic arthritis), Other diseases of bones and joints (Bone tumors, Osteomyelitis, Skeletal Tuberculosis, Periostitis), Amputation, Sport injuries, Pre- and post-surgical rehabilitation for orthopaedic surgeries including arthroplasty (Shoulder, TKR, THR).
Course Assessment: End-semester 100%

PT 4205 Clinical Practice in Neurological Physiotherapy (4 Credits)

Physiotherapy examination and management for brain and spinal cord disorders including: Cerebro-vascular accident, Meningitis, Encephalitis, Head injury, Brain tumors, Multiple sclerosis, Motor neuron diseases, Cerebellar ataxia, Friedreich's ataxia, Sensory ataxia, Spinal muscular atrophies, Movement disorders, Parkinson's disease, Traumatic spinal cord injury (Cervical, Thoracic, Lumbar, Sacral), Non - traumatic spinal cord injury, Transeverse myelitis, Tuberculosis, Spine.; Physiotherapy examination and management for nerve plexus/ roots / peripheral nerve disorders including; GBS, Brachial plexus injury, Lumbosacral plexus lesions, Thoracic outlet syndrome, Phrenic and intercostals nerve lesions , Bell's palsy, Musculocutaneous nerve palsy, Radial nerve palsy, Ulnar nerve palsy, Median nerve palsy, Axillary nerve palsy, Obturator nerve palsy, Femoral nerve palsy, Pudendal nerve palsy, Common peroneal nerve palsy, Tibial nerve palsy.; Pre and Post-surgical physiotherapy management in neurosurgeries including; Spinal disc herniation, spinal stenosis, Hydrocephalus, Head injuries (brain hemorrhages, skull fractures, etc.), Spinal cord injuries, Traumatic injuries of peripheral nerves, Tumors of the Spine.

Course Assessment: End-semester 100%