

COURSES OFFERED BY THE DEPARTMENT OF PHYSIOTHERAPY

FIRST YEAR FIRST SEMESTER

AH 1101 - English & Communication Skills I (Non-credit)

Language Development and Writing (English for Academic Purposes-EAP): Parts of speech, Use of parts of speech in medical context, The main sentence structures in English, Different kinds of phrases, Developing writing skills: schemata and static description. Listening: Introduction to basic listening skills: brain storming, identifying key words, note taking: pattern notes, linear notes, practicing note taking- flow charts, tree diagrams, labeling diagrams, tables, etc. Reading: Surveying a text book, Skimming and scanning an article, Previewing an article, Identifying the main idea and the topic of a paragraph. Vocabulary: introducing dictionary skills, Phonetic symbols, Pronunciation, etc., Punctuations of sentences (using of capital letters). Speech: Greeting and introducing (self and others), Making requests, Asking for and giving permission, Offering help, Giving instructions and directions, Telephone skills. (Note: All four language skills: Reading, Writing, Listening and Speaking, are incorporated in teaching)

Assignments – 40% End semester -60%

AH 1102 - Information Technology (Non-credit)

Fundamentals basic concept of computers, System Analysis and Design , Data Processing, Data Communication, Practical-Internet and E-mail, Web Page Development, Languages.

End semester: Theory – 50%, Practical – 50%

AH 1103 - Basic Human Anatomy (Credits -02)

Organization of the human body, embryology, cardiovascular system, lymphatic system, respiratory system, digestive system, genitor- urinary system, endocrine system, musculoskeletal system, nervous system, sensory organs.

Assignments – 25% End semester: Theory – 50%, Practical – 25%

AH 1104 – Human Physiology I (Credits – 02)

Organization of the body for function, homeostasis, body fluids, blood, temperature regulation, growth and development, ageing, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary system, reproductive system, pregnancy and lactation, endocrine system, muscular-skeletal system, nervous system, sensory organs.

Assignments – 25% End semester: Theory – 50%, Practical – 25%

AH 1105 – Sociology and Anthropology (Credits – 01)

Introduction to Sociology, health and nursing, Fundamental concepts, social groups, Culture, Social control, Social problems, Anthropology.

Continuous Assessments 25%, End semester 75%.

AH 1106 – Introduction to Psychology (Credits – 02)

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, promotion of attachment and bonding between infant and care giver.

Continuous assessments 10%, Mid semester 30%, End semester 60%.

AH 1108 – Basic Biochemistry (Credits – 01)

Structure and function of cell organelles, structure and function of carbohydrates, lipids, amino acids, proteins and nucleic acids, biochemical tests for identification of carbohydrates, lipids & proteins, pH and buffers, enzyme properties and kinetics, chemistry & function of hemoglobin, chemistry and functions of vitamins, plasma protein and their functions, metabolism of carbohydrates, lipids, proteins and amino acids, integration and regulation of metabolic pathways.

Mid semester -30%, End semesters -70%

AH 1109 – General Microbiology (Credits – 01)

Introduction to Microbiology; Growth and inhibition of growth of microorganisms; Growth and inhibition of growth of microorganisms; Gram positive cocci; Gram negative cocci / Gram positive bacilli; Gram negative cocco bacilli / curved rods; Mycobacterium; Anaerobic bacteria; Gram negative bacilli; Chlamydia, mycoplasma, rickettsia; Introduction to virology; DNA viruses, RNA viruses; Fungi, parasites of importance in human health.

Mid semester 20%, End semester 80%.

PT1101 – Human Anatomy for Physiotherapists (Credits – 03)

Theory: Musculoskeletal Anatomy (including surface anatomy) - All muscles, bones and joints in detail (Upper Extremity, Lower Extremity, Trunk and Pelvis and Head/Neck), Neuro-anatomy, Basic applied anatomy.

Practical: Surface anatomy of Head, neck, thorax, abdomen, back, upper limb and lower limb, Joints and muscles (including surface Anatomy), Spinal cord and Brain .

Mid semester 20%, End semester 80%.

PT1102 – Physiotherapy as a profession (Credits – 01)

Introduction to Physiotherapy, Basic definitions and terms related to Physiotherapy , History of Physiotherapy, Identification the ethical and legal aspects of Physiotherapy services, Organize and provide the ways & means of moving physiotherapy forward at the local & global level, Device strategies to continue Professional Development, Describe the role of Physiotherapy in health care, Recognize & appreciate the values of Physiotherapy.

Mid semester 30%, End semester 70%.

FIRST YEAR SECOND SEMESTER

AH 1201 – English & Communication Skills II (Non-credit)

Language Development and Writing (English for Academic Purposes-EAP):Study of the use of verbs in detail (transitive/ intransitive, active/passive, types of verbs), Introduction to relative clauses, Laboratory report writing: present/past tense, active/passive voice, present perfect tense, modal auxiliary verbs, Dictation. Listening: Improving listening skills through subject based and general talks/mini-lectures/speeches, etc., Activities and exercises based on the above. Reading: Note making while reading, Reading comprehension-general and academic, Identifying contextual references, Rephrasing, Vocabulary development, and Individual loud reading. Prefixes and suffixes, Root words (Latin/Greek) related to medical terminology, Activities incorporated with reading lessons. Speech: Activities consolidated with parallel Grammar, Reading and Listening lessons. (Note: All four language skills: Reading, Writing, Listening and Speaking, are incorporated)

Assignments – 40%, End semester -60%

AH 1202 – Basic Statistics (Credits – 02)

Description of statistics, organizing and displaying data ,summarizing data and variation, curve fitting, probability, simple regression and correlation, test of hypothesis and significance, student “t”, “F” and chi-square distributions, analysis of variance.

Assignments – 10%, Mid semester -30%, End semester -60%

AH 1203 – General Pathology (Credits – 02)

Introduction to general pathology, acute inflammation, chronic inflammation, cell damage, apoptosis , necrosis , gangrene, principles of fracture healing and complications, wound healing and complications, calcifications / degenerations, hypertrophy /atrophy / hyperplasia /metaplasia /dysplasia, immunology, neoplasia, tumour markers /molecular basis of tumours, ischaemia and infarction, thrombosis /embolism /atherosclerosis /oedema/ congestion and heart failure, pigmentation, genetic basis of disease.

Mid semester -25%, End semesters -75%

AH 1204 – Human Physiology II (Credits – 02)

Body fluids, blood, heart and circulatory system, respiratory system, digestive system, urinary system, reproductive system, endocrine system, musculo-skeletal system, nervous system, special senses.

Mid semester -20%, End semesters -80%

PT1201 – Biomechanics & Kinesiology I (Credits – 02)

Introduction to Biomechanics and Kinesiology, Mechanics and mechanical principles of Force, momentum, action and reaction, friction, Angle of pull, Newton's Laws, Springs & elasticity, Posture, activities of daily living, Starting & derived positions, Therapeutic Gymnasium, Mechanics of peripheral Joints (Shoulder, Elbow, Wrist & Hand), Prehension & precision handling.

Mid semester 20%, End semester 80%.

PT1202 – Physiotherapy skills I (Credits – 02)

Introduction to Physiotherapy Skills, Mechanics of muscles, Types of muscles, Types of muscle contraction, Goniometry, Suspension Therapy, Walking aids and Wheel Chair, Hydrotherapy.

Mid semester 20%, End semester 80%.

PT1203 – Electro Physical Agents in Physiotherapy I (Credits 02)

Electricity, Static electricity, Current Electricity, Valves, transformers, types, principles, construction and working, Ionization, Magnetism, Thermionic valves, Semi-conductor devices, AC and DC Meters.

Mid semester 20%, End semester 80%.

PT1204 – Pharmacology for Physiotherapists (Credits – 02)

General Pharmacology (Introduction, regulation & approval, drug classes & schedules, Administration, Pharmacokinetics, Pharmacodynamics) and Systemic Pharmacology (Drugs acting on CNS, PNS, CVS, drugs influencing myocardial contractility & heart rate, Bronchodilators, Anti-microbial drugs, Endocrine Pharmacology, Immunological agents & Vaccines) .

Mid semester 20%, End semester 80%.

PT1205 – Evidence Based Practice in Physiotherapy (Credits – 02)

Introduction to Evidence Based Practice, Concepts of Evidence based Physiotherapy, Development of Evidence based knowledge, The Individual Professional, Professionals within a discipline, Professionals across disciplines, Evidence Based Practitioner, Finding the Evidence, Searching for the Evidence, Assessing the Evidence, Systematically reviewing the evidence,

Economic evaluation of the evidence, Using the evidence, Practice guidelines, algorithms, and clinical pathways, Communicating evidence to clients, managers and funders, Research dissemination and transfer of knowledge.

Mid semester 20%, End semester 80%.

PT1206 – Basic Biochemistry II (Credit – 01)

Propagation of genetic material – DNA replication , Gene expression – Transcription and reverse transcription, Gene expression – Translation and effect of antibiotics, Post translational modifications, Haemoglobin formation and catabolism, Mechanisms of hormone action, Biochemistry of neurotransmitters, Biochemistry of water soluble vitamins, Biochemistry of fat soluble vitamins, , Biochemistry of the extra-cellular matrix , Detoxification and excretion.

Mid semester 20%, End semester 80%.