Curriculum: Bachelors of Physiotherapy (BPTh)

Curriculum Objectives

At the end of BPTh program, the graduate will be able to;

1. Examine and evaluate the individual and the community to derive functional diagnosis.
2. Plan and execute effective treatment strategies with rationale use of therapeutic and electrical modalities.
3. To make clinical judgements about physiotherapy services, use critical thinking and evidence-based practice.
4. Develop and implement evidence-based a care plan in collaboration with patients, caregivers and other health care profession streamlined with available human and financial resources.
5. Ability to effectively communicate about various ailments and conditions that physiotherapists treat, comprehend and compose reports and design documentation, make effective presentations and offer precise guidelines to patients and fellow colleagues.
6. Improve quality of life and promote health awareness by engaging in programs that are socially acceptable and ethical.

Program: First BPTh

Program Objectives for First BPTh

At the end of First BPTh, the student will be able to;

PO1. Understand the development of the human body, concepts of genetics, and gross and microscopic anatomy to offer a foundation for understanding the clinical correlation of the organ or structure involved and a capacity to identify bone, surface, and radiographic markers.

PO2. Understand how each organ system works, the principles responsible for maintaining the equilibrium and composition of the body, and the manner in which various environmental influences, including one's own internal stressors like exercise, impact the organ systems.

PO3. Understand human biochemistry in order to lay down the basis for clinical correlation and the diagnosis of biochemical ailments.

PO4. Understand and learn the fundamental concepts and effects of exercise as a means of treatment, as well as the methods for restoring physical functions.

PO5. Understand and learn about the theories, methods, outcomes, precautions, and contraindications of the various electrotherapeutic modalities used to restore physical function.

COURSES OFFERED UNDER FIRST BPTH

1. Professional practice and ethics (college examination in final year)
2. Human Anatomy
3. Human Physiology
4. Biochemistry
5. Fundamentals of Kinesiology and Kinesiotherapy
6. Fundamentals of Electrotherapy

Course 1: PROFESSIONAL PRACTICE AND ETHICS

(COLLEGE EXAMINATION IN FINAL YEAR)

TOTAL -15 HRS

OBJECTIVES:

Cognitive: The student will

CO1. Be able to understand the moral values and meaning of ethics.

CO2. Acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor:

CO3. The student will be able to: Develop psychomotor skills for physiotherapist-patient relationship.

Course 2: HUMAN ANATOMY

Didactic –150hrs

Practical / Laboratory –60hrs)

TOTAL -210 HRS

OBJECTIVES:

CO1: MUSCULOSKELETAL ANATOMY

i. The student should be able to identify & describe Anatomical aspects of muscles, bones, joints, their attachments & to understand and analyze movements.
ii. Application of knowledge of anatomy on the living (living anatomy).
iii. To understand the Anatomical basis of various clinical conditions.

CO2: NEURO ANATOMY

i. To identify & describe various parts of nervous system.
ii. To describe blood circulation of C.N.S. & spinal cord.
iii. Be able to identify the Structures of various C.N.S Trans-sections.

iv. To identify and describe the course of peripheral nerves. v. To understand anatomical basis of clinical conditions of nervous system.

CO3: CARDIOVASCULAR & RESPIRATORY ANATOMY

i. To identify & describe various structures of the Cardio Vascular &Respiratory system and the course of blood vessels
ii. Identify and describe various structures of Thoracic cage and mechanisms of Respiration
iii. Be able to apply knowledge of Living anatomy with respect to Cardio Vascular &Respiratory system.
iv. To understand anatomical basis of clinical conditions of cardiovascular &Respiratory system

CO4: To Obtain Knowledge of OTHER SYSTEMS & SENSORY ORGANS

Course 3: HUMAN PHYSIOLOGY

Theory -150 hrs

Practical / Laboratory -50 hrs)

TOTAL 200 hrs

OBJECTIVES: At the end of the course, the candidate will:

CO1. Acquire the knowledge of the relative contribution of each organ system in maintenance of the Milieu Interior (Homeostasis)
CO2. Be able to describe physiological functions of various systems, with special reference to Musculo-skeletal, Neuro-motor, Cardio-respiratory, Endocrine, Uro-genital function, & alterations in function with aging
CO3. Analyze physiological response & adaptation to environmental stresses-with special emphasis on physical activity, altitude, temperature
CO4. Acquire the skill of basic clinical examination, with special emphasis to Peripheral & Central Nervous system, Cardiovascular & Respiratory system, & Exercise tolerance / Ergography

Course 4: BIOCHEMISTRY

Didactic 46hrs

Demonstrations 4hrs

TOTAL 50 HRS

OBJECTIVES: The student would know:

CO1. Various biomolecules which are present in the body and functions
CO2. The formation and fate of these biomolecules
CO3. Their normal levels in body fluids required for functioning and their abnormal levels to understand the disease process

Course 5: FUNDAMENTALS OF KINESIOLOGY & KINESIOTHERAPY

Didactic – 100 Hrs

Practical / Laboratory – 150 Hrs)

TOTAL 250 HRS

OBJECTIVES:

Cognitive:

At the end of the course, the candidate will be able to:

CO1. Define the various terms used in relation to Mechanics, Biomechanics & Kinesiology
CO2. Recall the basic principles of Biophysics related to mechanics of movement / motion & understand the application of these principles to the simple equipment designs along with their efficacy in Therapeutic Gymnasium & various starting positions used in therapeutics.

Psychomotor:

At the end of the course, the candidate will be able to

CO3. Describe & also acquire the skills of use of various tools of the Therapeutic Gymnasium.
CO4. Demonstrate the movements in terms of various anatomical planes and axes.
CO5. Demonstrate various starting & derived positions used in therapeutics.
CO6. Describe physiological principles & acquire the skills of application of therapeutic massage.
CO7. Acquire the skills of assessment of basic evaluation like sensations, reflexes &vital parameters.
CO8. Acquire the skill of objective assessment of Range of Motion of the joints by Goniometry.
CO9. Describe physiological basis and principle of relaxation and acquire the skills of relaxation methods.

CO10. Describe physiological responses and principles of aerobic exercises for general fitness & demonstrate fitness skills on self & group.

CO11. Describe physiological principles and acquire the skill of performing Pranayama & Yogasanas.

Course 6: FUNDAMENTALS OF ELECTROTHERAPY

Didactic 95 hrs

Practical 105hrs

TOTAL-200HRS

OBJECTIVES:

Cognitive:

At the end of the course, the candidate will be able to:

CO1. Recall the physics principles & Laws of Electricity, Electromagnetic spectrum, & ultra sound

CO2. Describe effects of environmental & man made electromagnetic field at the cellular level & risk factors on prolonged exposure.

CO3. Describe the Main electrical supply, Electric shock, precautions d) Enumerate Types & Production of various Therapeutic electrical currents & describe the panel diagrams of the machines

Psychomotor:

At the end of the course the candidate will be able to –

CO4. Test the working of the various electrotherapeutic equipments

CO5. Describe in brief, certain common electrical components such as transistors, valves, capacitors, transformers etc & the simple instruments used to test / calibrate these components [such as potentiometer, oscilloscope, multimeter] of the circuit; & will be able to identify such components.

CO6. Describe & identify various types of electrodes used in therapeutics, describe electrical skin resistance & significance of various media used to reduce skin resistance.

CO7. Acquire knowledge of various superficial thermal agents such as Paraffin wax bath, Cryotherapy, Hydrocollator packs, home remedies, their physiological & therapeutic effects, Merits / demerits & acquire the skill of application.

Program: Second BPTh

Program Objectives for Second BPTh

At the end of Second BPTh program, the student will be able to;

PO1. Understand the altered physiology of various diseases using the knowledge of pathology & Microbiology.

PO2. Get familiar with various Pharmacotherapeutic agents used along with their effects.

PO3. Differentiate normal and altered human mind & behavior. They will also acquire abilities necessary for effective communication with the patients and care givers.

PO4. Understand the normal and altered Biomechanics as related to human body in the context of Kinetics & kinematics of Joints, Movements & Daily activities.

PO5. Apply various physiotherapeutic skills effectively on models.

PO6. Gain knowledge and practice application of various electrotherapeutic modalities on models.

COURSES OFFERED UNDER SECOND BPTh

1. Professional practice and ethics (college examination in final year)
2. Pathology
3. Microbiology
4. Pharmacology
5. Psychiatry (Including Psychology)
6. Kinesiology
7. Kinesiotherapy
8. Electrotherapy

Course 1: PROFESSIONAL PRACTICE AND ETHICS

(COLLEGE EXAMINATION IN FINAL YEAR)

TOTAL -15 HRS

OBJECTIVES:

Cognitive:

CO1. Be able to understand the moral values and meaning of ethics

CO2. Will acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor:

CO3. Be able to develop psychomotor skills for physiotherapist-patient relationship.

CO4. Skill to evaluate and make decision for plan of management based on socio-cultural values and referral practice.

Affective:

CO5. Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals.

CO6. Be able to develop bed side behavior, respect & maintain patients' confidentiality.

Course 2: PATHOLOGY

DIDACTIC –50 HRS

OBJECTIVES:

At the end of the course, the candidate:

Cognitive:

CO1. Will have sound knowledge of concepts of cell injury & changes produced by different tissues, organs and capacity of the body in healing process.

CO2. Acquire the knowledge of general concepts of neoplasia with reference to the Etiology, gross & microscopic features, & diagnosis, in different tissues, & organs of the body.

CO3. Acquire knowledge of common immunological disorders & their resultant effects on the human body.

Psychomotor:

CO4. Recall the Etiology–pathogenesis, the pathological effects & the clinico–pathological correlation of common infections & non-infectious diseases.

CO5. Understand in brief, about the common haematological disorders & investigations necessary to diagnose them.

CO6. Correlate normal & altered morphology of different organ systems in different diseases needed for understanding disease process & their clinical significance

Course 3: MICROBIOLOGY

Didactic-31hrs + Demonstration -4hrs

TOTAL 35 HRS

OBJECTIVES:

At the end of the course, the candidate will

CO1. Have sound knowledge of prevalent communicable diseases and the agents responsible for causing clinical infections, pertaining to C.N.S, C.V.S, Musculoskeletal system, Respiratory system, Genitourinary system, wound infections and of newer emerging pathogens

CO2. Know the importance and practices of best methods to prevent the development of infections in self and patients (universal safety precautions)

Course 4: PHARMACOLOGY

DIDACTIC – 50 hrs

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

CO1. Describe Pharmacological effects of commonly used drugs by patients referred for Physiotherapy; list their adverse reactions, precautions, contraindications, formulation & route of administration.

CO2. Identify whether the pharmacological effect of the drug interferes with the Therapeutic response of Physiotherapy & vice versa

CO3. Indicate the use of analgesics & anti-inflammatory agents with movement disorders with consideration of cost, efficiency, & safety for individual needs.

Psychomotor:

CO4. Get the awareness of other essential & commonly used drugs by patients- The bases for their use & common as well as serious adverse reactions.

Course 5: PSYCHIATRY (INCLUDING PSYCHOLOGY)

Didactic 30hrs

Clinical 20hrs

TOTAL 50HRS

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

CO1. Define the term Psychology & its importance in the Health delivery system, & will gain knowledge of Psychological maturation during human development & growth & alterations during aging process.

CO2. Understand the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality.

CO3. Have the knowledge and skills required for good interpersonal communication.

Psychomotor:

CO4. Enumerate various Psychiatric disorders with special emphasis to movement / Pain & ADLs

CO5. Acquire the knowledge in brief, about the pathological & etiological factors, signs / symptoms & management of various Psychiatric conditions.

CO6. Understand the patient more empathetically

Course 6: KINESIOLOGY

DIDACTIC- 80 HRS

OBJECTIVES:

At the end of the course, the candidate will be able to –

CO1. Understand the principles of Biomechanics.
CO2. Acquire the knowledge of kinetics and kinematics of Spine, Extremities, TemporoMandibular joint, Thoracic cage
CO3. Acquire the knowledge of Musculo skeletal movements during normal Gait and Activities of Daily Living

Course 7: KINESIOTHERAPY

Didactic-80 Hrs

Practical/ Laboratory-160 HRS

TOTAL - 240 HRS

OBJECTIVES:

At the end of the course, the candidate will be able to

Cognitive:

CO1. Describe the Biophysical properties of connective tissue, & effect of mechanical loading, & factors which influence the muscle strength, & mobility of articular & periarticular soft tissues.

Psychomotor:

CO2. Apply the biomechanical principles for the efficacy in the assessment methods for mobility, muscle strength
CO3. Acquire the skill of subjective and objective assessment of individual & group muscle strength
CO4. Acquire the skills of subjective and objective methods of muscle strengthening
CO5. Describe the physiological effects, therapeutic uses, merits / demerits of various exercise modes including Hydrotherapy
CO6. Demonstrate various therapeutic exercises on self; & acquire the skill of application on models with Home Programs
CO7. Analyze normal Human Posture [static & dynamic].
CO8. Acquire the skill of functional re-education techniques on models
CO9. Acquire the skill of Balance and Coordination Exercises
CO10. Acquire the skill of using various walking aids for Gait Training
CO11. Acquire the skill of demonstrating breathing exercises and retraining on self and others

CO12. Acquire the skill of demonstrating Postural Drainage on models

Course 8: ELECTROTHERAPY

Didactic –100 hrs

Practical / Laboratory –200 hrs

TOTAL - 300 HRS

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

CO1. Acquire the knowledge about the physiology of pain, Pain pathways & Methods of pain modulation, selection of appropriate modality for Pain modulations.

CO2. Describe the Physiological effects, Therapeutic uses, indication & contraindications of various Low/ Medium & High Frequency modes / Actinotherapy

CO3. Describe the Physiological Effects & therapeutic uses of various therapeutic ions & topical pharmaco -therapeutic agents to be used for the application of iontophoresis & sono/ phonophoresis

Psychomotor:

CO4. Acquire the skills of application of the Electro therapy modes on models, for the purpose of Assessment & Treatment.

CO5. Acquire an ability to select the appropriate mode as per the tissue specific &area specific application.

Program: Third BPTh

Program Objectives for Third BPTh

At the end of Third BPTh program, the student will be able to;

PO1. Acquire knowledge of all the clinical subjects like Orthopedics, General Surgery, Medicine, Neurology, Pediatrics, Dermatology & Gynecology & Obstetrics, Community Medicine and Sociology.

PO2. Acquire knowledge about the principles of International Classification of Functioning (I.C.F.) and its applicability in context to movement dysfunctions.

PO3. Acquire knowledge about the physiotherapeutic evaluation skills including electrodiagnosis on patients to arrive at a Functional/ Physical Diagnosis in Neuromuscular, Cardiovascular & Respiratory dysfunction.

PO4. Acquire knowledge of various specialized manual therapy and neurodevelopmental techniques and demonstrate these skills effectively on models.

COURSES OFFERED UNDER THIRD BPTH

1. Professional Practice and Ethics (College Examination in Final Year)
2. SURGERY-I (General Surgery, Cardiovascular & Thoracic Surgery & Plastic/ Reconstructive Surgery)
3. SURGERY-II (ORTHOPAEDICS)
4. MEDICINE-I (Cardiovascular Respiratory Medicine, General Medicine & Gerontology)
5. MEDICINE-II (Neurology & Paediatrics)
6. COMMUNITY HEALTH & SOCIOLOGY
7. GYNAECOLOGY & OBSTETRICS
8. DERMATOLOGY
9. FUNCTIONAL DIAGNOSIS & PHYSIOTHERAPEUTIC SKILLS

Course 1: PROFESSIONAL PRACTICE AND ETHICS (COLLEGE EXAMINATION IN FINAL YEAR)

TOTAL =15HRS

OBJECTIVES:

Cognitive:

CO1. Be able to understand the moral values and meaning of ethics.

CO2. Will acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor:

CO3. Be able to develop psychomotor skills for physiotherapist-patient relationship.

CO4. Skill to evaluate and make decision for plan of management based on sociocultural values and referral practice.

Affective:

CO5. Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals

CO6. Be able to develop bed side behavior, respect & maintain patients' confidentiality

Course 2: SURGERY-I (General Surgery, Cardiovascular & Thoracic Surgery & Plastic/ Reconstructive Surgery)

Didactic-35hrs

Clinical -20 hrs

TOTAL =55HRS

OBJECTIVES:

At the end of the course, the candidate will be able to:

CO1. Describe the effects of surgical trauma & Anaesthesia in general

CO2. Clinically evaluate & describe the surgical management in brief of

a) General Surgery

b) Neuro Surgery

c) Cardiovascular and Thoracic Surgery

d) ENT &Ophthalmic Surgery

e) Plastic & Reconstructive Surgery

CO3. Describe pre-operative evaluation, surgical indications in various surgical approaches, management and post operative care in above mentioned areas with possible complications.

CO4. Be able to read & interpret findings of the relevant investigations.

Course 3: SURGERY-II (ORTHOPAEDICS)

Didactic-40hrs

Clinical -20hrs

TOTAL =60 HRS

OBJECTIVES:

At the end of the course, the candidate will –

CO1. Be able to discuss the, aetiology, Pathophysiology, clinical manifestations & conservative / surgical management of various traumatic & cold cases of the Musculoskeletal Conditions.

CO2. Gain the skill of clinical examination; apply special tests & interpretation of the preoperative old cases & all the post-operative cases.

CO3. Be able to read & interpret salient features of the X-ray of the Spine & Extremities and correlate the radiological findings with the clinical findings.

CO4. Be able to interpret Pathological / Biochemical studies pertaining to Orthopaedic conditions

Course 4: MEDICINE-I (Cardiovascular Respiratory Medicine, General Medicine & Gerontology)

Didactic-45 hrs

Clinical-10 hrs

TOTAL-55 HRS

OBJECTIVES:

At the end of the course, the candidate will:

CO1. Be able to describe Etiology, Pathophysiology, Signs & Symptoms & Management of the various Endocrinal, Metabolic, Geriatric & Nutrition Deficiency conditions.

CO2. Be able to describe Etiology, Pathophysiology, Signs & Symptoms, Clinical Evaluation & Management of the various Rheumatologic Cardiovascular & Respiratory Conditions.

CO3. Acquire skill of history taking and clinical examination of Musculoskeletal, Respiratory, Cardio-vascular & Neurological System as a part of clinical teaching.

CO4. Be able to interpret auscultation findings with special emphasis to pulmonary system.

CO5. Study Chest X-ray, Blood gas analysis, P.F.T. findings & Haematological studies, for Cardiovascular, Respiratory, Neurological & Rheumatological conditions.

CO6. Be able to describe the principles of Management at the Intensive Care Unit.

CO7. Be able to acquire the skills of Basic Life Support.

CO8. Acquire knowledge of various drugs used for each medical condition to understand its effects and its use during therapy

Course 5: MEDICINE-II (Neurology & Paediatrics)

Didactic – 45 hrs

Clinical – 20 hrs

TOTAL – 65 HRS

OBJECTIVES:

At the end of the course, the candidate will:

CO1. Be able to describe Aetiology, Pathophysiology, signs & Symptoms & Management of the various Neurological &Paediatric conditions.

CO2. Acquire skill of history taking and clinical examination of Neurological &Paediatric conditions as a part of clinical teaching.

CO3. Acquire knowledge of various drugs used for each medical condition to understand its effects and its use during therapy.

CO4. Acquire knowledge in brief about intra-uterine development of the foetus.

CO5. Be able to describe normal development & growth of a child, importance of Immunization, breast-feeding & psychological aspect of development.

CO6. Be able to describe neuromuscular, musculoskeletal, cardio-vascular & respiratory conditions related to immunological conditions, nutritional deficiencies, infectious diseases, & genetically transmitted conditions.

CO7. Acquire skill of clinical examination of a neonate / child with respect to neurological, musculoskeletal & respiratory function.

Course 6: COMMUNITY HEALTH & SOCIOLOGY

TOTAL 60 HRS

A-COMMUNITY HEALTH

Didactic- 30 Hours + Visits -10 Hours

Total 40hrs

OBJECTIVES

CO1. At the end of the course, the candidate shall be able to understand the contents given in the syllabus.

B- SOCIOLOGY

Total 20 hr

OBJECTIVES:

CO2. At the end of the course, the candidate shall be able to understand the contents given in the syllabus.

Course 7: GYNAECOLOGY & OBSTETRICS (COLLEGE EXAMINATION)

Didactic - 20 hrs

Clinical – 10 hrs

TOTAL 30 HRS

OBJECTIVES:

At the end of the course, student will be able to describe:

CO1. Normal & abnormal physiological events, complications and management during Puberty.

CO2. Normal and abnormal physiological events, complications and management of pregnancy (Pregnancy, Labour, Puerperium)

CO3. Normal and abnormal physiological events, complications and management of menopause.

CO4. Normal and abnormal physiological events, complications and management of urogenital dysfunction. (Antenatal, Postnatal, during menopause)

CO5. The student will be able to acquire the cognitive skill of clinical examination of the pelvic floor

Course 8: DERMATOLOGY (COLLEGE EXAMINATION)

TOTAL - 10 HRS

OBJECTIVES:

CO1. At the end of the course, the student will be able to describe the Pathophysiology, Signs & Symptoms, Clinical Features, Examination & Management of Common Skin Conditions like Leprosy, Psoriasis, Bacterial & Fungal Infections of the skin, connective tissue disorder, hand eczema, drug reaction, cutaneous manifestation of HIV, & Sexually Transmitted Diseases

Course 9: FUNCTIONAL DIAGNOSIS & PHYSIOTHERAPEUTIC SKILLS

Didactic - 135 hrs

Clinical – 325 hrs

TOTAL 460 HRS

OBJECTIVES:

Cognitive:

At the end of the course, student will be able to:

Understand the use of ICF.

CO1. Acquire the knowledge of human growth and development from new life to birth and adulthood

CO2. Understand structure and function of nerve and muscle as a base for understanding the electro-diagnostic assessment.

CO3. Understand the use of appropriate tools or instruments of assessment in Musculoskeletal, Neurological and Cardio-vascular conditions.

CO4. Understand the theoretical basis and principles of manipulative skills, neurotherapeutic skills and skills of cardiopulmonary care and resuscitation

CO5. Document results of assessment to evaluate the patient from time to time.

Psychomotor:

Student will be able to:

CO6. Perform assessment of measures of body structures and functions related to tissue mechanics.

CO7. Perform assessment of measures of body structures and functions related to motor control affecting activity and participation, quality of life and independence.

CO8. Perform the skill of electro-diagnosis (SD Curve) and observe skills of EMG and NCV studies, to understand the documentation of finding of these studies.

CO9. Interpretation and analysis of assessment and findings.

CO10. Demonstrate skills of manual therapy musculoskeletal, neurotherapeutics and cardiovascular and respiratory skills on models (Laboratory work).

Affective:

CO11. Student will be able to:

CO12. Select appropriate assessment techniques to facilitate safety, sensitive practices in patient comfort and effectiveness.

CO13. Demonstrate safe, respectful and effective performance of physical therapy handling techniques taking into account patient's clinical condition, need for privacy, resources available and the environment.

CO14. Follow the principles of appropriate handling technique that is draping, hand placement, body part positioning, manual techniques, lifting and transfer techniques.

CO15. Communicate with patients and their families/caregivers regarding the need and uses of various assessment techniques

Program: Fourth BPTh

Program Objectives for Fourth BPTh

At the end of Fourth BPTh program, the graduate will be able to;

PO1. Revise, recall and integrate the knowledge of previous years to evaluate, functionally diagnose, plan and execute short-term and long-term management of various musculoskeletal, neurological and cardiovascular- respiratory dysfunctions in hospital and community settings.

PO2. Acquire knowledge pertaining to health promotion and disease prevention throughout lifespan in the community.

PO3. Analyze, prevent and treat problems associated with various industries in community physiotherapy.

PO4. Acquire knowledge about biomechanical principles and application of variety of aids and appliances used for ambulation, protection & prevention.

PO5. Acquire the knowledge of ethical code of professional practice, as well as its moral and legal aspects. They will also gain knowledge about the principles of Hospital Administration, Management & Marketing.

PO6. Acquire knowledge of Research Methodology and Biostatistics and apply the knowledge in project work in community physiotherapy.

COURSES OFFERED UNDER FOURTH BPTH

1. Professional Practice and ethics (college examination in final year)
2. Administration, Management & Marketing
3. Musculoskeletal Physiotherapy
4. Neurophysiotherapy
5. Cardio-Vascular & Respiratory Physiotherapy (Including Critical Care)
6. Community Physiotherapy
7. Principles Of Bioengineering (College Examination)
8. Research Methodology and Biostatistics (College Examination)

Course 1: PROFESSIONAL PRACTICE AND ETHICS

TOTAL: 15 HOURS

OBJECTIVES: At the end of the course, student will be able to:

Cognitive:

CO1. Be able to understand the moral values and meaning of ethics

CO2. Be able to learn and apply ethical code of conduct in fields of clinical practice, learning, teaching, research and physiotherapist-patient relationship

CO3. Acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals

CO4. Will acquire the knowledge of the basics in Managerial & Management skills, & use of information technology in professional Practice

Psychomotor:

CO5. Develop psychomotor skills for physiotherapist-patient relationship

CO6. Develop the skill to evaluate and make decisions for plan of management based on sociocultural values and referral practice

Affective:

CO7. Develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals

CO8. Develop bedside behavior, respect & maintain patients' confidentiality

Course 2: ADMINISTRATION, MANAGEMENT & MARKETING (COLLEGE EXAMINATION)

Total – 20 HRS

OBJECTIVES: At the end of the course the student will be compliant in following domains:
Cognitive:

CO1. Learn the management basics in fields of clinical practice, teaching, research and physiotherapy practice in the community.

CO2. Acquire communication skills in relation with patients, peers, seniors and other professionals & the community.

CO3. Acquire the knowledge of the basics in Managerial & Management skills, & use of Information technology in professional Practice

Psychomotor:

CO4. Develop psychomotor skills for physiotherapy practice.

CO5. Develop skill to evaluate and make decision for plan of management based on socio-cultural values and referral practice.

Affective:

CO6. Develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals.

Course 3: MUSCULOSKELETAL PHYSIOTHERAPY

Didactic - 60 hours

Practical-140 hours

TOTAL: 200 HOURS

OBJECTIVES:

At the end of the course, student will be able to:

Cognitive:

CO1. Identify, evaluate, analyze & discuss primary and secondary musculo-skeletal dysfunction, based on biomechanical, kinesiological & patho-physiological principles.

CO2. Correlate the same with radiological, electrophysiological, biochemical/ haematological investigations as applicable & arrive at the appropriate Physiotherapy diagnosis with skillful evaluation of structure and function with clinical reasoning.

CO3. Understand the pharmaco-therapeutics, its interaction with physiotherapeutic measures and modify physiotherapeutic intervention appropriately.

CO4. Apply knowledge of psychosocial factors (personal and environmental factors in the context of disability associated with the musculo-skeletal system or multiple body systems) for behavioral and lifestyle modification and use appropriate training and coping strategies.

Psychomotor:

CO5. Apply theoretical basis of physiological effects, indications, contraindications; and best available evidence on the effectiveness, efficacy and safe application guidelines for a full range of physiotherapeutic strategies and interventions, including appropriate modes of soft tissue & joint mobilization, electrotherapy, therapeutic exercise, and appropriate ergonomic advise that can be employed to manage problems of the individual's structures, functions, activities and participation, capacity and performance levels associated with the musculo-skeletal system, for relief of pain & prevention, restoration and rehabilitation measures for maximum possible functional independence at home, workplace and in community.

CO6. Prescribe and train for appropriate orthoses, prostheses and walking aids based on musculoskeletal dysfunction.

Affective:

CO7. Acquire ethical skills by demonstrating safe, respectful and effective performance of physical handling techniques taking into account the patient's clinical condition, the need for privacy, the physiotherapist, the resources available and the environment.

Course 4: NEUROPHYSIOTHERAPY

Didactic 60 hrs

Clinical 140 hrs

TOTAL 200 HRS

OBJECTIVES:

At the end of the course, student will

Cognitive:

CO1. Be able to identify and analyze movement dysfunction due to neuromuscular skeletal disorders in terms of biomechanical and biophysical basis, correlate the same with the health condition, routine electrophysiological, radiological and biochemical investigations, and arrive at appropriate physical therapy diagnosis using WHO-ICF with clinical reasoning.

CO2. Be able to plan realistic goals based on the knowledge of prognosis of the disease of the nervous system and prescribe appropriate, safe evidence-based physiotherapy interventions with clinical reasoning.

CO3. Understand infection control principles, best practices and techniques applicable to a range of setting where clients with neurological conditions would receive physiotherapy services

CO4. Know determinacy of health (environmental, nutritional, self-management/ behavioral factors) and chronic disease management principles related to neurological health.

Psychomotor:

CO5. Be able to develop psychomotor skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to patient evaluation in order to prioritize patient's problems.

CO6. Be able to select timely physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on the best available evidence.

CO7. Implement appropriate neuro-physiotherapeutic approaches, electrotherapeutic modalities, joint and soft tissue mobilizations and ergonomic advice for neuromuscular

skeletal systems, contextual factors to enhance performance of activities and participation in society.

Affective:

CO8. Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.

Course 5: CARDIO-VASCULAR & RESPIRATORY PHYSIOTHERAPY (INCLUDING CRITICAL CARE)

Didactic–60HRS

Clinical 140HRS

TOTAL 200 HRS

OBJECTIVES:

At the end of the course, the student will be able to:

Cognitive:

CO1. Identify and analyze cardio-vascular & pulmonary dysfunction in terms of biomechanical, and Bio-physical basis and correlate the same with the Health condition, routine electrophysiological, radiological, and biochemical investigations and arrive at appropriate Physical therapy diagnosis using WHO-ICF tool (Disability, Functioning and contextual factors) with clinical reasoning.

CO2. Plan, prescribe appropriate, safe physiotherapy interventions with clinical reasoning for and prevention of impairments, activity limitations, participation restrictions and environmental barriers related to cardio-vascular & pulmonary dysfunction in acute care settings, at home , work place, in society & in leisure activities.

Psychomotor:

CO3. Utilize skills such as executing exercise tests, PFT, Ankle brachial index, arterial & venous insufficiency tests

CO4. Utilize psychomotor skills to implement appropriate bronchial hygiene therapy, therapeutic exercise, electrotherapeutic modalities, CPCR, Intensive (critical) care, joint and soft tissue mobilizations, offering ergonomic & energy conservation advice for patients with cardio-vascular & pulmonary dysfunction.

CO5. Utilize the knowledge about contextual factors to enhance capacity and performance of activities and participation in society

CO6. Utilize the skill to deliver cardiac, pulmonary & vascular rehabilitation

Affective:

CO7. Develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals b. Develop bed side behavior, respect & maintain patients' confidentiality

Course 6: COMMUNITY PHYSIOTHERAPY

Didactic 85 hrs

Clinical 115 hrs

TOTAL 200 HRS

OBJECTIVES:

At the end of the course the student shall:

Cognitive: Be able to describe:

CO1. The general concepts about health, disease and physical fitness.

CO2. Physiology of aging process and its influence on physical fitness.

CO3. National policies for the rehabilitation of disabled – role of PT.

CO4. The strategies to access prevalence and incidence of various conditions responsible for increasing morbidity in the specific community – role of PT in reducing morbidity, expected clinical and functional recovery, reasons for non-compliance in specific community environment & solution for the same.

CO5. The evaluation of disability and planning for prevention and rehabilitation.

CO6. Rehabilitation in urban and rural set up.

CO7. Able to be a part of decision making team regarding the policies for the welfare of special communities & on issues of disability 169

Psychomotor:

CO8. Be able to identify with clinical reasoning the prevailing contextual {e.g. environmental and psycho-social cultural} factors, causing high risk responsible for various dysfunctions and morbidity related to sedentary life style and specific community like women, children, aged as well as industrial workers and describe planning strategies of interventional policies to combat such problems at community level.

CO9. Be able to gain the ability to collaborate with other health professionals for effective service delivery & community satisfaction c) Utilize the research methodology knowledge for formulation of a research question (synopsis)

Affective:

CO10. Be an empathetic health professional, especially for those in the community, who is away from the health institutions and having difficulty in healthcare access

Course 7: PRINCIPLES OF BIOENGINEERING (COLLEGE EXAMINATION)

Didactic 27 hrs

Practical /Laboratory-03 hrs

TOTAL 30 HRS

OBJECTIVES:

At the end of the course, the candidate shall

Cognitive:

CO1. Acquire knowledge about biomechanical principles of application of variety of aids & appliances used for ambulation, protection & prevention.

CO2. Acquire in brief knowledge about various material used for splints/ Orthoses & prostheses and their selection criteria Psychomotor: Acquire the skill of fabrication of simple splints made out of low cost material

Course 8: RESEARCH METHODOLOGY AND BIOSTATISTICS (COLLEGE EXAMINATION)

DIDACTIC: 30 HRS

OBJECTIVES:

At the end of the study of this subject the student should be able to:

CO1. Enumerate the steps in Physiotherapy research process.

CO2. Describe the importance & use of biostatistics for research work.

CO3. Acquire skills of reviewing literature, formulating a hypothesis, collecting data, writing research proposal etc.