

Course outcome (I- IV B.P.Th)

I BPTH Course outcome

A. PROFESSIONAL PRACTICE AND ETHICS

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

Cognitive: The student will

- a) Be able to understand the moral values and meaning of ethics.
- b) Acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor: The student will be able to:

- a. Develop psychomotor skills for physiotherapist-patient relationship.

- **Method of assessment:** Theory Examination (College exam in final year)

B. HUMAN ANATOMY

1] 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.

2] NEURO ANATOMY

- i. To identify & describe various parts of the 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 the anatomical basis of clinical conditions of the nervous system.



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3] CARDIOVASCULAR & RESPIRATORY ANATOMY

- i. To identify & describe various structures of the Cardiovascular & 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 Cardiovascular respiratory system.
- iv. To understand anatomical basis of clinical conditions of cardiovascular & Respiratory system

4] To Obtain Knowledge of OTHER SYSTEMS & SENSORY ORGANS

❖ **Method of assessment: Theory and Practical Examination**

C. HUMAN PHYSIOLOGY

At the end of the course, the candidate will:

1. Acquire the knowledge of the relative contribution of each organ system in maintenance of the Milieu Interior (Homeostasis)
2. 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
3. Analyze physiological response & adaptation to environmental stresses-with special emphasis on physical activity, altitude, temperature
4. Acquire the skill of basic clinical examination, with special emphasis to Peripheral & Central Nervous system, Cardiovascular & Respiratory system, & Exercise tolerance / Ergography

❖ **Method of assessment: Theory and Practical Examination**

D. BIOCHEMISTRY

The student would know:

1. Various biomolecules which are present in the body and functions
2. The formation and fate of these biomolecules

3. Their normal levels in body fluids required for functioning and their abnormal levels to understand the disease process.

❖ **Method of assessment: Theory Examination**

E. FUNDAMENTALS OF KINESIOLOGY & KINESIOTHERAPY

Cognitive:

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

- a) Define the various terms used in relation to Mechanics, Biomechanics & Kinesiology
- b) 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:

- a) Describe & also acquire the skills of use of various tools of the Therapeutic Gymnasium
- b) Demonstrate the movements in terms of various anatomical planes and axes.
- c) Demonstrate various starting & derived positions used in therapeutics.
- d) Describe physiological principles & acquire the skills of application of therapeutic massage
- e) Acquire the skills of assessment of basic evaluation like sensations, reflexes & vital parameters
- f) Acquire the skill of objective assessment of Range of Motion of the joints by Goniometry
- g) Describe physiological basis and principle of relaxation and acquire the skills of relaxation methods
- h) Describe physiological responses and principles of aerobic exercises for general fitness & demonstrate fitness skills on self & group.
- i) Describe physiological principles and acquire the skill of performing Pranayama & Yogasanas

❖ **Method of assessment: Theory and Practical Examination**

F. FUNDAMENTALS OF ELECTROTHERAPY

Cognitive:

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

- a) Recall the physics principles & Laws of Electricity, Electromagnetic spectrum, & ultrasound
- b) Describe effects of environmental & man made electromagnetic field at the cellular level & risk factors on prolonged exposure.
- c) 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 –

- a) Test the working of the various electrotherapeutic equipments
- b) 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.
- c) Describe & identify various types of electrodes used in therapeutics, describe electrical skin resistance & significance of various media used to reduce skin resistance.
- d) 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.

❖ **Method of assessment: Theory and Practical Examination**

II BPTb

A. PROFESSIONAL PRACTICE AND ETHICS

Course description:

This subject would be taught in continuum from first year to final year. An exam in theory would be conducted only in the final year. Professional and ethical practice curriculum content addresses the Knowledge, Skills and Behaviors required of the physiotherapist in a range of practice relationships and roles. The course will discuss the role, responsibility, ethics administration issues and accountability of the physical therapists. The course will also cover the history and change in the profession, responsibilities of the professional to the profession, the public and to the health care team. This includes the application of professional and ethical reasoning and decision-making strategies, professional communication.

OBJECTIVES:

At the end of the course the candidate will be compliant in following domains:

Cognitive:

- a) Be able to understand the moral values and meaning of ethics
- b) Will acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor:

- a) Be able to develop psychomotor skills for physiotherapist-patient relationship.
- b) Skill to evaluate and make decisions for plan of management based on sociocultural values and referral practice.

Affective:

- a) Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals.
- b) Be able to develop bedside behavior, respect & maintain patients' confidentiality.

B. PATHOLOGY & MICROBIOLOGY

- Learn the pathological changes in various conditions, diseases and disorders, which are commonly treated by physiotherapy.

- Demonstrate an understanding of the pathology and microbiology of common diseases that therapists would encounter in their daily practice.
- Understand how to protect themselves and their patients from infections during their interactions.

❖ **Method of assessment: Theory Examination**

C. PHARMACOLOGY

On completion of this subject, the students will be able to:

- Possess a relevant knowledge in basic principles of pharmacology and its recent advances
- Understand the basic pharmacology of common drugs used, their importance in the overall treatment including Physiotherapy
- Understand the general principles of drug action and the handling of drugs by the body.
- Understand the contribution of both drug and physiotherapy factors in the outcome of treatment.

❖ **Method of assessment: Theory Examination**

D. PSYCHIATRY INCLUDING PSYCHOLOGY

I) PSYCHOLOGY

On completion of this subject, the student will be able to

- Recognize and help with the psychological factors involved in disability, pain, disfigurement, unconscious patients, chronic illness, death, bereavement and medical-surgical patients/conditions.
- Understand the elementary principles of behaviour for applying in the therapeutic environment.
- Perform psychosocial assessment of patients in various developmental stages.
- Understand the concept of stress and its relationship to health, sickness and one's profession.

- Understand Ego defense mechanisms and learn counseling techniques to help those in need.
- Find reasons for non-compliance among patients and improving compliance behaviour

II) PSYCHIATRY

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

- 1] Enumerate various Psychiatric disorders with special emphasis to movement / Pain & ADL – describe the various causative factors & methods of assessment & management
- 2] Acquire the knowledge in brief, about the pathological & etiological factors, signs / symptoms & management of various Psychiatric conditions
- 3] Describe in brief the various treatment modalities commonly used.

❖ Method of assessment: Theory Examination

E. KINESIOTHERAPY

On completion of this subject, the students will be able to

- Learn the principles, technique and effects of exercise as a therapeutic modality in the restoration of physical function.
- Analyse the various types of therapeutic exercises, movements and demonstrate different techniques and describe their effects.
- Practice different exercise therapy techniques and gain confidence in performing these skills before implementing the same on the patients so that high quality patient care is ensured.
- Provide high quality, ethical, effective, and cost efficient practices by students and gain expertise in the exercise prescription to patients.
- Practice various assessment strategies like Muscle power assessment etc for detailed learning.
- Understand principles and procedures, indications, contraindications and precautions, appropriate methods of application of each of the assessment strategy and treatment techniques hands on and on models.

- Communicate with the patient in a professional and ethical manner.

❖ **Method of assessment: Theory and Practical Examination**

F. KINESIOLOGY

On completion of this subject, the students will be able to

- Analyze normal human movement from a global perspective, integrating biomechanics, muscle mechanics and motor control theory.
- Experience quantitative methods of movement analysis using various methods.
- Apply the analytic methods to specific examples of normal human motor performance.
- Use these methods for evaluation and treatment of disorders of the musculoskeletal system.

❖ **Method of assessment: Theory Examination**

G. ELECTROTHERAPY

On completion of this subject, the students will be able to

- Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions like nerve injuries .
- List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
- Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients.
- Aware of the construction, Biophysical principles and effects , dangers, safety measures, judicious use, appropriate methods of application ,contraindications of the various equipment. Practice evidence based physiotherapy

❖ **Method of assessment: Theory and Practical Examination**

III BPTb

1. Professional Practice & Ethics

This subject would be taught in continuum from first year to final year. An exam in theory would be conducted only in the final year. Professional and ethical practice curriculum content addresses the Knowledge, Skills and Behaviors required of the physiotherapist in a range of practice relationships and roles. The course will discuss the role, responsibility, ethics administration issues and accountability of the physical therapists. The course will also cover the history and change in the profession, responsibilities of the professional to the profession, the public and to the health care team. This includes the application of professional and ethical reasoning and decision-making strategies, professional communication.

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

Cognitive: a) Be able to understand the moral values and meaning of ethics. b) Will acquire bedside manners and communication skills in relation with patients, peers, seniors and other professionals.

Psychomotor: a) Be able to develop psychomotor skills for physiotherapist-patient relationship. b) Skill to evaluate and make decisions for plan of management based on socio cultural values and referral practice.

Affective: a) Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals b) Be able to develop bedside behavior, respect & maintain patients' confidentiality.

❖ **Method of assessment:** Theory Examination (College exam in final year)

2. Surgery-1 (General Surgery, Cardiovascular & Thoracic Surgery & Plastic/ Reconstructive Surgery)

This course intends to familiarize students with principles of General surgery including various specialties like cardiovascular, thoracic, neurology and plastic surgery. It also familiarizes the students with terminology and abbreviations for efficient and effective chart reviewing and documentation. It explores various conditions needing attention, focusing on epidemiology, pathology, as well as primary and secondary clinical characteristics and their surgical and medical management. The purpose of this course is to make physiotherapy students aware

of various surgical conditions, general surgery and specialty surgeries so these can be physically managed effectively both pre as well as postoperatively.

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

1. Describe the effects of surgical trauma & Anaesthesia in general
2. 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
3. Describe preoperative evaluation, surgical indications in various surgical approaches, management and post operative care in above mentioned areas with possible complications.
4. Be able to read & interpret findings of the relevant investigations.

❖ **Method of assessment: Theory Examination**

3. Surgery-2 (Orthopedics)

This course intends to familiarize students with principles of orthopaedic surgery along with familiarization with terminology and abbreviations for efficient and effective chart reviewing and documentation. It also explores various orthopaedic conditions needing attention, focusing on epidemiology, pathology, as well as primary and secondary clinical characteristics and their surgical and medical management. The purpose of this course is to make physiotherapy students aware of various orthopaedic surgical conditions so these can be physically managed effectively both pre as well as postoperatively.

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

1. Be able to discuss the aetiology, Pathophysiology, clinical manifestations & conservative/ surgical management of various traumatic & cold cases of the Musculoskeletal Conditions.
2. Gain the skill of clinical examination; apply special tests & interpretation of the preoperative old cases & all the post-operative cases.
3. Be able to read & interpret salient features of the X-ray of the Spine & Extremities and correlate the radiological findings with the clinical findings.

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

❖ **Method of assessment: Theory Examination**

4. Medicine -1 (Cardiovascular Respiratory Medicine, General Medicine & Gerontology)

This course intends to familiarize students with medical terminology & abbreviations for efficient & effective chart reviewing & documentation. It also explores selected systemic diseases, focusing on epidemiology, pathology, histology, etiology as well as primary & secondary clinical characteristics & their management. Discusses & integrates subsequent medical management of General, Rheumatology, Gerontology, Cardio-vascular & Respiratory systems, to formulate appropriate intervention, indications, precautions & contraindications.

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

1. Be able to describe Etiology, Pathophysiology, Signs & Symptoms & Management of the various Endocrine, Metabolic, Geriatric & Nutrition Deficiency conditions.
2. Be able to describe Etiology, Pathophysiology, Signs & Symptoms, Clinical Evaluation & Management of the various Rheumatologic Cardiovascular & Respiratory Conditions.
3. Acquire skill of history taking and clinical examination of Musculoskeletal, Respiratory, Cardio-vascular & Neurological System as a part of clinical teaching.
4. Be able to interpret auscultation findings with special emphasis on the pulmonary system.
5. Study Chest X-ray, Blood gas analysis, P.F.T. findings & Haematological studies, for Cardiovascular, Respiratory, Neurological & Rheumatological conditions.
6. Be able to describe the principles of Management at the Intensive Care Unit.
7. Be able to acquire the skills of Basic Life Support.
8. Acquire knowledge of various drugs used for each medical condition to understand its effects and its use during therapy.

❖ **Method of assessment: Theory Examination**

5. Medicine-2 (Neurology & Paediatrics)

This course intends to familiarize students with medical terminology & abbreviations for efficient & effective chart reviewing & documentation, It also explores select systemic diseases, focusing on epidemiology, etiology, pathology, histology as well as primary & secondary clinical characteristics & their management. It discusses & integrates subsequent medical management of Neurological & Paediatric conditions to formulate appropriate intervention, indications, precautions & contraindications.

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

1. Be able to describe Aetiology, Pathophysiology, signs & Symptoms & Management of the various Neurological Paediatric conditions.
2. Acquire skill of history taking and clinical examination of Neurological Paediatric conditions as a part of clinical teaching.
3. Acquire knowledge of various drugs used for each medical condition to understand its effects and its use during therapy.
4. Acquire knowledge in brief about intrauterine development of the foetus.
5. Be able to describe normal development & growth of a child, importance of Immunization, breast-feeding & psychological aspect of development.
6. Be able to describe neuromuscular, musculoskeletal, cardio-vascular & respiratory conditions related to immunological conditions, nutritional deficiencies, infectious diseases, & genetically transmitted conditions.
7. Acquire skill of clinical examination of a neonate / child with respect to neurological, musculoskeletal & respiratory function.

❖ **Method of assessment: Theory Examination**

6. Community Health & Sociology: Community Health

The course is organized to introduce the concept of health care and management issues in Health Services. It will help them in assuming a leadership role in their profession and assume the responsibility of guidance. It will help them assume wider responsibilities at all

levels of health services. It will help them in improving their performance through better understanding of the health services at all the levels of community.

At the end of the course, the candidate shall be able to understand the concept of:

1. General Concepts & determinants of health and diseases: National & International Definition of Health, Role of Socio-Economic & Cultural Environment in Health & Disease. b. Epidemiology – Definition & scope, uses with relevance to physiotherapy c. Environmental Hygiene including man & his surrounding, Occupational & Industrial hygiene, Village & Town Sanitation, Bacteriology of Water, Milk, & Food Hygiene.
2. National public health administration
3. Healthcare delivery system: a. Healthcare Delivery System of India b. National Health Programmes c. Role of W.H.O. d. Millennium Development Goals for All
4. Primary Health Care: Definition, Principles, Elements & its application
5. Epidemiology of socio economic & cultural issues: related to morbidity in relation to the following vulnerable groups: a. Women: i. Pregnant and lactating women, maternal health (ANC, PNC, INC) ii. Perimenopausal women's health: physical & psychological 1 108 b. Infants: (Low Birth Weight, Breast feeding, Complementary feeding, YCN, IMNCI Vaccine preventable diseases, Immunization programmes, Infant and childhood mortality) 2 c. Children: Child health, Growth monitoring under five clinics, ICDS, PEM 2 d. School aged population health: Early detection and prevention of disabilities, behavioral problems.
6. Demography and objectives of national family welfare programmes and national population policy.
7. Communicable diseases: An overview [including prevention & control] T.B., H.I.V., Leprosy, Vector borne diseases- Malaria / Filariasis / Dengue/ Chikungunya/ Japanese encephalitis.
8. Non communicable diseases: Diabetes Mellitus, Hypertension, Coronary Heart Disease / Obesity / Blindness/ Accidents / Stroke/ Cancer.
9. Nutritional diseases: Malnutrition, Nutritional disorders and National nutrition programmes, Osteomalacia, Rickets, Neuropathies due to Vitamin - deficiency, Skeletal Deformities.
10. Mental health: Socio-economic & cultural aspects b. Substance abuse and addiction – tobacco, alcohol and others.

11. Occupational health: Occupational diseases & hazards - definition, scope, prevention & legislations, Occupational lung diseases & Physical injuries/ pains.
12. Geriatric health: Physical, social, economical aspects b. Osteoporosis, Malnutrition, Alzheimer's disease, Parkinson's disease .
13. Hospital waste management: Universal Safety Precautions, Immunization of healthcare providers including their vaccination.
14. Functioning of community health centers: urban & rural through visits.

7. Community Health & Sociology : Sociology

This course covers the basic knowledge and concepts of sociology with the aim to help them understand the impact of group, culture and environment on the behavior and health of the patients. Make them realize the importance of the relationship of the physical therapist and the patient and the environment around them.

At the end of the course; the candidate will be able to understand the following concepts:

1. Introduction: Definition & Relevance with Physiotherapy and social factors affecting Health status, Decision Making in taking treatment.
2. Socialization: Definition, Influence of Social Factors on Personality, Socialization in the Hospital & Rehabilitation of the patients.
3. Social groups: Concepts, Influence of formal & informal groups of Health & Diseases, Role of Primary & Secondary Groups in the Hospital & Rehabilitation Setting.
4. Family: Influence on human personality, Role of family in health and disease.
5. Community role: Rural & Urban communities in Public Health, Role of community in determining Beliefs, Practices & Home Remedies in Treatment.
6. Culture: Component's impact on human behavior, Role of community in determining beliefs, practices and health seeking behavior and home remedies.
7. Social change factors: Human Adaptation, Stress, Deviance, Health Programme Role of Social Planning in the improvement of Health & in Rehabilitation.
8. Social control: Definition, Role of norms, Folkways, Customs, Morals, Religion, Law & other means of social controls in the regulation of Human Behavior, Social Deviance & Disease

9. Population groups: Children: Street children, Child labour, Juvenile delinquency b. Women's: Victims of domestic violence and addiction, C.S.W., physically and /or mentally challenged c. Role of NGOs, Social support systems.
10. Social Security & Social Legislation in relation to the Disabled.
11. Role of a Medical Social Worker.
12. Sociology of Brain Death and/ or Organ donation.
13. Social problems: Population explosion, Poverty, Dowry, Illiteracy- Causes, prevention & Control measures.

❖ **Method of assessment: Theory Examination**

8. Gynaecology & Obstetrics

This course intends to provide introduction to women's health which includes problems related to pregnancy, osteoporosis, and other disorders specific to women. Topics will focus on medical terminology, clinical examination, evaluation, comparing contemporary, traditional interventions and the impact of evolving technology in this area. It also emphasizes on evaluation & medical treatment of pelvic floor dysfunctions.

At the end of the course; candidate will be able to describe:

1. Normal & abnormal physiological events, complications and management during Puberty.
2. Normal and abnormal physiological events, complications and management of pregnancy (Pregnancy, Labour, Puerperium).
3. Normal and abnormal physiological events, complications and management of menopause.
4. Normal and abnormal physiological events, complications and management of urogenital dysfunction. (Antenatal, Postnatal, during menopause)
5. The student will be able to acquire the cognitive skill of clinical examination of the pelvic floor.

❖ **Method of assessment: Theory Examination (College Exam)**

9. Dermatology

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.

❖ **Method of assessment: Theory Examination (College Exam)**

10. Functional Diagnosis and Physiotherapeutic Skills

Functional Diagnosis & Physiotherapeutic Skills is a stepping stone to introduce students to actual concepts of PT assessment and later to the treatment concepts. 2. Functional Diagnosis focuses on the assessment of all the body systems i.e. Musculoskeletal, Neurological and Cardiovascular-Respiratory in order to study the various impairments and their impact on activity and participation of the individual taking into consideration the contextual factors as well. It also emphasizes on the clinical reasoning of the underlying components of a universal evaluation tool (ICF) for a better understanding of the patient in a holistic manner. The student is also subjected to learn basics of manipulative, cardiovascular-respiratory and neuro-therapeutic skills on models so that he/she will be able to apply these principles eventually on patients. 3. The student will also gain a sound knowledge of electro-diagnosis, which is an integral part of Functional Diagnosis.

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

Cognitive:

1. Understand the use of ICF.
2. Acquire the knowledge of human growth and development from new life to birth and adulthood
3. Understand structure and function of nerve and muscle as a base for understanding the electro-diagnostic assessment.
4. Understand the use of appropriate tools or instruments of assessment in Musculoskeletal, Neurological and Cardio-vascular conditions.
5. Understand the theoretical basis and principles of manipulative skills, neurotherapeutic skills and skills of cardiopulmonary care and resuscitation
6. Document results of assessment to evaluate the patient from time to time.

Psychomotor:

1. Perform assessment of measures of body structures and functions related to tissue mechanics.
2. Perform assessment of measures of body structures and functions related to motor control affecting activity and participation, quality of life and independence.
3. 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.
4. Interpretation and analysis of assessment and findings.
5. Demonstrate skills of manual therapy musculoskeletal, neurotherapeutics and cardiovascular and respiratory skills on models (Laboratory work).

Affective:

1. Select appropriate assessment techniques to facilitate safety, sensitive practices in patient comfort and effectiveness.
2. Demonstrate safe, respectful and effective performance of physical therapy handling techniques taking into account the patient's clinical condition, need for privacy, resources available and the environment.
3. Follow the principles of appropriate handling technique that is draping, hand placement, body part positioning, manual techniques, lifting and transfer techniques.
4. Communicate with patients and their families/caregivers regarding the need and uses of various assessment techniques.

❖ **Method of assessment:** Theory and Practical Examination

IV BPTH

A. MUSCULOSKELETAL PHYSIOTHERAPY

This course is formulated on the " Problem based" method. At the end of the course, the candidate will;

- 1) Be able to identify, discuss & analyze, the Musculoskeletal Dysfunction in terms of Biomechanical, Kinesiology & Biophysical bases & correlate the same with the provisional

diagnosis, routine radiological & Electrophysiological Investigations & arrive at appropriate Functional diagnosis with clinical reasoning.

2) Be able to plan & Prescribe as well as acquire the skill of executing short & long term Physiotherapy treatment by selecting appropriate modes of Mobilisation /manipulations, Electrotherapy, Therapeutic exercise & appropriate ergonomic advise for the relief of pain, restoration/Maintenance of function, &/ or rehabilitation for maximum functional independence in A.D.L. at home & work place

❖ **Method of assessment: Theory and Practical Examination**

B. NEUROPHYSIOTHERAPY

At the end of the course, the candidate will:

- 1) Acquire the knowledge of normal neurodevelopment, with specific reference to locomotion
- 2) Be able to assess, identify & analyze neuro-motor & psychosomatic dysfunction in terms of alteration in the muscle tone, power, coordination, involuntary movements sensations/perception etc, E.M.G. / N.C. Studies & arrive at functional diagnosis with clinical reasoning.
- 3) Acquire the skill of application of P.N.F. technique on patients.
- 4) Be able to plan, prescribe & execute short term & long term treatment, with special reference to relief of Neuropathic & psycho-somatic pain, mat exercises, functional re-education, gait training, postural & functional training for A.D.L., ergonomic advise, & parents education in neuro- pediatric care.
- 5) Be able to prescribe appropriate Orthosis / splints & will be able to fabricate temporary protective & functional splints.

❖ **Method of assessment: Theory and Practical Examination**

C. CARDIO-VASCULAR & RESPIRATORY PHYSIOTHERAPY

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

- 1) Identify, discuss & analyze cardio-vascular & pulmonary dysfunction, based on patho-physiological principles, & arrive at the appropriate functional diagnosis,

- 2) Acquire knowledge of the rationale of basic investigative approaches in the medical system & surgical intervention regimes related to cardio-vascular & pulmonary impairment.
- 3) Acquire the skill of evaluation & interpretation of functional capacity, using simple exercise tolerance tests, such as 6 minutes walk test, symptom limited test.
- 4) Be able to select strategies for cure care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, workplace & in community.
- 5) Be able to execute the effective Physio Therapeutic measures (with appropriate clinical reasoning) with special emphasis to Breathing retraining, nebulization humidification, bronchial hygiene, General Mobilisation & Exercise conditioning.
- 6) Acquire Knowledge of the overview of patients care at the Intensive care area, artificial ventilation suctioning, positioning for bronchial hygiene & continuous monitoring of the patient at the Intensive care area.
- 7) Acquire the skill of basic Cardio-pulmonary resuscitation.
- 8) Be able to execute the effective physiotherapeutic measures with appropriate clinical reasoning to improve general surgical and medical conditions.

❖ **Method of assessment: Theory and Practical Examination**

D. COMMUNITY PHYSIOTHERAPY

At the end of the course the candidate will:

A. Be able to describe:

- i. The general concepts about health, disease and physical fitness. ii. Physiology of aging process and its influence on physical fitness. iii. National policies for the rehabilitation of disabled – role of PT.
- iv. The strategies to access prevalence and incidence of various conditions responsible for increasing morbidity in the specific community – role of PT in improving morbidity, expected clinical and functional recovery, reasons for non-compliance in specific community environment solution for the same.
- v. The evaluation of disability and planning for prevention and rehabilitation.
- vi. CBR in urban and rural settings.

B. 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 lifestyle and specific community like women, children, aged as well as industrial workers and describe planning strategies of interventional policies to combat such problems.

C. Be able to conduct a small project {cross sectional study / survey} to assess the prevalence of specific physical health problems and / or morbidity in specific communities – which may be based at the institutional level or in the field.

❖ **Method of assessment:** Theory and Practical Examination

E. PRINCIPLES OF BIOENGINEERING

At the end of the course, the candidate shall:

- 1) Acquire knowledge about biomechanical principles, of application of variety of aids & appliances used for ambulation, protection & prevention
- 2) Acquire in brief knowledge about various material used for splints/Orthosis & prostheses--selection criteria
- 3) Acquire the skill of fabrication of simple splints made out of low cost material

❖ **Method of assessment:** Theory Examination (College Level)

F. PROFESSIONAL ISSUES / ADMINISTRATION / MANAGEMENT & MARKETING

This course is aimed to enable the candidate to acquire the knowledge of ethical code of professional practice, as well as its moral & legal aspects; & role of W.H.O. & W.C.P.T.

❖ **Method of assessment:** Theory Examination (College Level)