

# NANDHA COLLEGE OF PHYSIOTHERAPY PROGRAMME NAME

## **BACHELOR OF PHYSIOTHERAPY**

#### **PROGRAM OUTCOMES:**

The aim of the course is to provide comprehensive, individually focused training that prepares the students for providing a quality physiotherapy care to the patients so that at the end of the course he/she will be able to perform the following

**PO1 KNOWLEDGE:** Graduates will adopt of physical therapy services using theoretical and practical knowledge with consideration for patients in clinical judgment.

**PO2 LEARNING SKILLS**: Ability to reflect theortical and practical knowledge on assessment planning, implementation in physiotherapy practice requiring for individual rehabilitation.

**PO3 PROFESSIONAL ETHICS**: Graduate will achieve moral principles and values that out to guide the professional ethical rules and legislation.

**PO4 ANALYTIC SKILLS**: Ability to consider new ideas, and uses the knowledge to collect data and analyze accurately to complete research project.

**PO5 SOCIAL AWARENESS**: The graduate will demonstrate the impact of physiotherapy knowledge on the society.

**PO6 LIFE LONG LEARNING:** Develop educational experience for proficiency in profession and promote preventive and rehabilitative aspects of healthy individual.

**PO7 PRACTICAL SKILLS** : Ability to analyze and interpret physical assessment and diagnosis and set appropriate short and long term goals and to work independently or collaboratively as a part of rehabilitation team.

**PO8 IMPACT ON COMMUNITY :** Ability to acquire knowledge on Basic Medical sciences, Human Movement Sciences, Various Medical Conditions and Surgical Treatments to identify Psychological, Social, Economical, Cultural aspects of diseases and its impact on community. **PO9 THE PHYSIOTHERAPY AND SOCIETY :** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional physiotherapy practice.

**P10 CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS :** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

#### **PROGRAM SPECIFIC OUTCOMES**

- Demonstrate sufficient understanding of knowledge in Physiotherapy
- Able to integrate theoretical knowledge with clinical assessment.
- Develop the ability to collect history, perform relevant clinical assessment and frame

• appropriate electrotherapeutic and exercise therapy management for the patients. Demonstrate clinical decision making ability and provide appropriate patient care.

- Develop effective communication with patients, family, colleagues and students.
- Promote health education and improved quality of life through the practice of the profession.
- To carry out research and publications towards upliftment of the field of Physiotherapy.
- Actively engage in lifelong learning activities.
- Work effectively in various inter professional collaborative settings like hospitals,

• Rehabilitation Centres, Special Schools, Educational Institutions, Health and Fitness Centers, Geriatric Centers, Ergonomic Consultant in Corporate Sectors, Private Consultation, Home Care Services, Industrial Sectors, Sports Management, Fitness Consultant

## **BPT 1 ST YEAR**

#### **HUMAN ANATOMY**

**COURSE OUTCOMES**: At the end of the course, a student would be able to:

**CO1**- Identify & describe various parts of Nervous system, structures of the cardio vascular & Respiratory system & musculoskeletal system.

**CO2**- Understand the Anatomical basis of clinical conditions of Nervous system, Musculoskeletal system & cardiovascular & Respiratory system.

**CO3**- Analyze the movements, structures of various CNS trans – sections, course of peripheral nerves & mechanism of Respiration.

**CO4**- Application of knowledge of anatomy on the living.

#### **HUMAN PHYSIOLOGY**

COURSE OUTCOMES: At the end of the course, a student would be able to :

**CO1**- Describe physiological functions of various systems like – Musculo-skeletal, Neuro-motor, cardio-respiratory, endocrine & Uro-genital function.

**CO2**- Acquire the knowledge of the relative contribution of each organ system in maintenance of Homeostasis.

**CO3**- Acquire the skill of basic clinical examination of PNS, CNS, CVS & Respiratory system.

### PSYCHOLOGY GENERAL AND HEALTH PSYCHOLOGY

#### **COURSE OUTCOMES** :

**CO1**- Recognize and help with the psychological factors involved in disability, pain, disfigurement, unconscious patients, chronic illness, death, bereavement and medical-surgical patients/conditions.

**CO2**-Understand the elementary principles of behaviour for applying in the therapeutic environment.

**CO3**-Perform psychosocial assessment of patients in various developmental stages.

**C04**- Understand the concept of stress and its relationship to health, sickness and one's profession.

**C05**- Find reasons for non-compliance among patients and improving compliance behavior

#### SOCIOLOGY

#### COURSE OUTCOMES:

**CO1**-Demonstrate an understanding of the role of socio-cultural factors as determinants of health• and behaviour in health and sickness.

**CO2**- Relate to therapeutic situations in the practice of physiotherapy.

**CO3**- Understand the role of family and community in the development of behaviours.

CO4- Develop a holistic outlook toward the structure of society and community resources

**CO5**-Understand the social and economical aspects of community that influence the health of the people.

**CO6**- Appreciate the role of therapist as a member of society and the interdependence between individuals and society.

### **PHYSICS** :

### COURSE OUTCOMES:

**CO1:** Providing a foundation for understanding various principles that underpin the human body's function and the techniques used in rehabilitation.

**CO2:** Apply principles of physics to evaluate and modify the ergonomic environment for patients, ensuring optimal body mechanics and preventing injuries in various settings such as workplaces, homes, and sports arenas.

**CO3:** Physiotherapists employ various physical modalities such as ultrasound, electrical stimulation, and thermotherapy in rehabilitation.

## **BPT II YEAR**

## **GENERAL MEDICINE, GENERAL SURGERY, PAEDIATRICS AND GERIATRICS**

#### **COURSE OUTCOMES**

**CO1**- Demonstrate a general understanding of the diseases that therapists would encounter in their practice.

**CO2**- Understand the etiology and pathology, the patient's symptoms and the resultant functional disability.

**CO3**- Understand the limitations imposed by the diseases on any therapy. Elaborate broad outline of goals of pharmacological and surgical therapy imparted in those diseases in which physical therapy will be an important component of overall management.

## **EXERCISE THERAPY I**

#### **COURSE OUTCOMES**

**CO1**- To Learn the principles, technique and effects of exercise as a therapeutic modality in the restoration of physical function.

**CO2**- Analyse the various types of therapeutic exercises, movements and demonstrate different techniques and describe their effects.

**CO3**- 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.

## **EXERCISE THERAPY II**

### **COURSE OUTCOMES:**

**CO1**- Recall the basic principles of Physics related to mechanics of movement /motion & will be able to understand the application of such principles to the simple equipment designs, and their efficacy in therapeutic gymnasium and various starting positions used in therapeutics.

CO2- To demonstrate passive movements in terms of various Anatomical planes

**CO3**- Acquire the skill of application of various massage manipulations and describe the Physiological effects, therapeutic use, merits /demerits of the same

**CO4**- To describe types of Goniometer, merits and demerits of goniometry and to demonstrate and acquire the skill of measuring ROM with Goniometer

#### BIOMECHANICS

#### **COURSE OUTCOMES:**

- CO1- Acquire the knowledge of axis and planes
- **CO2** Acquire the knowledge of forces acting at various joints.
- **CO3** Acquire the knowledge of muscle and joint work in activities of daily living.

**CO4**- Acquire the knowledge of kinetics and kinematics of Spine, Extremities, Temporo-Mandibular joint, Thoracic cage

**CO5**- Acquire the knowledge of Musculo skeletal movements during normal Gait and Activities of Daily Living

### PATHOLOGY

#### **COURSE OUTCOMES:**

**CO1**- Acquire the knowledge of concepts of cell injury & changes produced thereby in different tissues & organs - capacity of the body in healing process

**CO2**- Recall the Etio – pathogenesis, the pathological effects & the clinico – pathological correlation of common infections &non-infectious diseases.

## MICROBIOLOGY

### COURSE OUTCOMES:

**CO1**- Acquire knowledge of common Immunological disorders & their resultant effects on the human body.

**CO2**- Understand in brief, about the Hematological diseases & investigations necessary to diagnose them & determine their prognosis.

**CO3**- At the end of the Microbiology course, the candidate will have sound knowledge of the agents responsible for causing human infections, pertaining to C.N.S., C.V.S. Musculoskeletal & Respiratory system.

## **BPT III YEAR**

## **ELECTROTHERAPY – I (LOW & MEDIUM FREQUENCY)**

## **COURSE OUTCOMES**

**CO1**- To Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in condition like nerve injuries .

**CO2**- List the indications and conraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.

**CO3** - Aware of the construction, Biophysical principles and effects , dangers, safety measures, judicial use, appropriate methods of application ,contraindications of the various low frequency equipments.

## ELECTRO THERAPY – II (HIGH FREQUENCY)

## **COURSE OUTCOMES**

**CO1**- Know the principles, technique and effects of electrotherapy as a therapeutic modality in the restoration of physical function in conditions.

**CO2**- List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.

**CO3-** Utilize Contemporary and recent methods and to select the most appropriate method to moderate and alleviate pain for patients.

**CO4**- Aware of the construction, Biophysical principles and effects , dangers, appropriate methods of application ,contraindications of the various High frequency equipments.

## **COMMUNITY MEDICINE**

## **COURSE OUTCOMES**

**CO1**- Understand the effects of the environment and the community dynamics on the health of the individual.

**CO2**- Demonstrate an understanding of the influence of social and environmental factors on the health of the individual and society.

**CO3**- Be aware of the physical, social, psychological, economic, and environmental health determinants of health and disease.

**CO4**- Apply the clinical skills to recognize and manage common health problems including their physical, emotional and social aspects at the individual, family and community levels and deal with public health emergencies.

#### **CLINICAL NEUROLOGY**

#### COURSE OUTCOMES

**CO1**- To Understand the basic neurological conditions which commonly cause disability and their management.

**CO2**-To Know the aetiology, Classification, Pathology, Clinical Features, Relevant Investigations, Complications, Surgical & Non Surgical Management of various Neurological Conditions.

#### **CLINICAL ORTHOPAEDICS**

#### **COURSE OUTCOMES**

**CO1**- To Understand the basic orthopaedic conditions which commonly cause disability and their management. Know the aetiology, Classification, Pathology, Clinical Features, Relevant Investigations, Complications, Surgical & Non Surgical Management of various Orthopaedic Conditions.

#### CLINICAL CARDIO – RESPIRATORY DISEASES

#### **COURSE OUTCOMES**

**CO1**- To Understand the basic cardiorespiratory conditions which commonly cause disability and their management. Know the aetiology, Classification, Pathology, Clinical Features, Relevant Investigations, Complications, Surgical & Non Surgical Management of various cardiorespiratory Conditions.

## **BPT 4 TH YEAR**

#### **REHABILITATION MEDICINE**

#### **COURSE OUTCOMES**

**CO1**- To Understand their role in the management of the disability within the rehabilitation team.

CO2- Understand the concept of team approach in rehabilitation.

**CO3**- Observe and identify the diagnostic features in physical conditions.

CO4- To Understand the medical and surgical aspects of disabling conditions

#### ORTHOPHYSIOTHERAPY

**COURSE OUTCOMES** 

**CO1**- Identify, discuss & analyze, the Musculoskeletal Dysfunction in terms of Biomechanical, Kinesiology & Biophysical basis & correlate the same with the provisional diagnosis, routine radiological & Electrophysiological investigations & arrive at appropriate Functional diagnosis with clinical reasoning.

**CO2**- Plan & Prescribe as well as acquire the skill of executing short & long term Physiotherapy treatment by selecting appropriate modes of Mobilization / Manipulations, Electro-Therapy, Therapeutic exercise & appropriate Ergonomic advise for the relief of pain, restoration / Maintenance of function & rehabilitation for maximum functional independence in A.D.L. at home & work place.

#### NEUROPHYSIOTHERAPY

#### COURSE OUTCOMES:

**CO1**- Acquire the knowledge of normal neurodevelopment, with specific reference to locomotion

**CO2**- Assess, identify & analyze Neuro-motor & psychosomatic dysfunction in terms of alteration in the muscle tone, power, coordination, involuntary movements

**CO3-** 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.

#### CARDIO-VASCULAR & RESPIRATORY PHYSIOTHERAPY

#### COURSE OUTCOMES:

**CO1**- Identify, discuss & analyze cardio-vascular & pulmonary dysfunction, based on Pathophysiological principles, & arrive at the appropriate functional diagnosis.

**CO2**- Acquire the skill of evaluation & interpretation of functional capacity, using simple exercise tolerance tests, such as 6 minutes walk test, symptom limited test.

**CO3-** Be able to execute the effective Physio Therapeutic measures [with appropriate clinical reasoning] with special emphasis to Breathing retraining, nebulization, humidification, bronchial hygiene, General mobilization, & Exercise conditioning

**CO4-** Be able to execute the effective Physio therapeutic measures with appropriate clinical reasoning to improve general surgical & medical condition.