



YENEPOYA

(DEEMED TO BE UNIVERSITY)

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Accredited by NAAC with 'A' Grade

YENEPOYA PHYSIOTHERAPY COLLEGE

PROGRAM OUTCOMES AND COURSE OUTCOMES

UNDERGRADUATE PROGRAM

BACHELOR OF PHYSIOTHERAPY

ATTESTED

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PROGRAM OUTCOMES
UNDERGRADUATE PROGRAM
BACHELOR OF PHYSIOTHERAPY

(K=Knowledge, S=Skill, A=Attitude)

- PO 1** Understands the structure, function, and dysfunction of various body organs and movement (K)
- PO 2** Competent to examine, evaluate, diagnose, plan, execute and document physiotherapy treatment independently or along with the multidisciplinary team in movement impairments and functional limitations as per red and yellow flags in any healthcare delivery setting (K,S)
- PO 3** Operate, maintain and document physiotherapy equipment used in treatment of patient, physiotherapy treatment planning and procedures independently. (K,S)
- PO 4** Be able to appreciate adverse effects associated with physical therapy modalities and procedures, their safety procedures and management strategies (K)
- PO 5** Be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and promote health, wellness and fitness in community. (S,A)
- PO 6** Competent and reflective physiotherapy practitioner who can function safely and effectively while adhering to legal, ethical and professional standards of practice in a multitude of physiotherapy settings for patients and clients across the lifespan and along the continuum of care from wellness and prevention to rehabilitation of dysfunction. (S,A)
- PO 7** Utilize critical inquiry and evidence-based practice to make clinical decisions essential for autonomous practice. (S,A)
- PO 8** Function as an active member of professional and community organizations; service-oriented advocate dedicated to the promotion and improvement of community health. (S,A)
- PO 9** Acquire effective communication and leadership skills to work as member of multidisciplinary team and provide patient education about various physiotherapeutic interventions to the patient and care givers (S,A)
- PO 10** Appreciates the necessity for lifelong commitment to learning and continuous professional development and understand basic research process to conduct scientific studies and disseminate new knowledge. (S,A)
- PO 11** Acquire basic management skills in the area of human resources, materials and resource management related to health care delivery, hospital management, inventory skills and counselling. (S,A)

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COURSE OUTCOME
UNDERGRADUATE PROGRAM
BACHELOR OF PHYSIOTHERAPY

PSYCHOLOGY

- CO 1 Understand the concept and the importance Psychology in the health delivery system, also gain knowledge on physical and psychological development during human development. Enumerate the role of hereditary and environment in the physical and psychological development
- CO 2 Describe the types of sensation, attention & its determinants, principles and the factors influencing perception
- CO 3 Explain motivation, frustration & conflict, emotions & stress management.
- CO 4 Explain the theories, distribution and assessment of intelligence. Demonstrate the knowledge of creative thinking and be a effective learner
- CO 5 Acquire knowledge and approaches to personality, attitude and develop leadership qualities
- CO 6 Understand the importance of psychological status of the person in Health & disease, environmental & emotional influence on the mind & personality and acquire the knowledge to deal with the patients. Also knows the therapies used by clinical psychologists

PHYSIOLOGY-I

- CO 1 Acquire the knowledge of the relative contribution of each organ system in maintenance of the Homeostasis with special reference to Musculo-skeletal, Cardio-respiratory, and alterations in function with aging.
- CO 2 Analyze physiological responses & adaptation to environmental stresses- with special emphasis on physical activity & temperature
- CO 3 Acquire the skill of basic clinical examination (CVS and RS) and hematological investigations relevant to physiotherapy

HUMAN ANATOMY-I

- CO 1 Understanding of the gross and microscopic structure and development of human body,
- CO 2 Comprehension of the normal regulation and integration of the functions of the organs and systems on basis of the structure
- CO 3 Understanding of the clinical correlation of the organs and structures involved and interpret the anatomical basis of the disease presentations.

II SEMESTER

BASIC PRINCIPLES OF BIOMECHANICS

- CO 1 Review basic anatomy and define the various terminologies of biomechanics and forces systems acting on the human body
- CO 2 Identify the various joints and the general properties of the tissues of the body
- CO 3 Understand the muscle structure and function
- CO 4 Understand the mechanics of the chest wall
- CO 5 Apply kinetics and kinematics to the temporomandibular joint

BIOCHEMISTRY

- CO 1 Understanding of biochemical and molecular processes involved in health and disease
- CO 2 Understanding of importance of nutrition in health and disease from physiotherapy perspective
- CO 3 Understanding of biochemical basis and rationale of clinical laboratory tests, and demonstrate the ability to interpret these in clinical context from physiotherapy perspective

HUMAN ANATOMY-II

- CO 1 Understanding the gross structure of human body,

CO 2 Comprehension of the normal regulation and integration of the functions of the organs and systems on basis of the structure

CO 3 Understanding of the clinical correlation of the organs and structures involved and interpret the anatomical basis of the disease presentations.

PHYSIOLOGY-II

CO 1 Acquire the knowledge of the relative contribution of each organ system in maintenance of the Homeostasis with special reference to Neuro-motor, Female Uro-genital function, and alterations in function with aging.

CO 2 Analyze physiological responses & adaptation to environmental stresses- with special emphasis on physical activity & temperature

CO 3 Acquire the skill of basic clinical examination with special emphasis to Peripheral and Central Nervous system.

III SEMESTER

PATHOLOGY

CO 1 Comprehension of the causes, evolution and mechanisms of diseases

CO 2 Knowledge of alterations in gross and cellular morphology of organs in disease states

CO 3 Ability to correlate the natural history, structural and functional changes with the clinical manifestations of diseases, their diagnosis and their diagnosis and therapy

MICROBIOLOGY

CO 1 Understanding of role of microbial agents in health and disease

CO 2 Understand and practice various methods of Sterilisation and disinfection

CO 3 "Understanding the immune system in health and disease"

CO 4 Ability to understand the etiology, pathogenesis, laboratory diagnosis & prevention of common infections.

BIOMECHANICS AND KINESIOLOGY

CO 1 Review the anatomy and learn about movements occurring at each joint using basic concepts of biomechanics

CO 2 Acquire the knowledge of forces acting at various joints.

CO 3 Understand the analysis of posture and its deviations.

CO 4 Acquire knowledge about the gait and its biomechanical principles.

EXERCISE THERAPY-I

CO 1 Describe the terminologies ,concepts, physiological and therapeutic effects of exercise therapy techniques

CO 2 Demonstrate the ability to perform basic physical examination necessary for exercise prescription

CO 3 Demonstrate the ability to perform various forms of exercise techniques ,relaxation techniques, Aquatic therapy ,massage and yoga techniques.

CO 4 Demonstrate the knowledge to choose suitable exercise programme indicated for exercise therapy.

CO 5 Perform techniques with necessary precautions and privacy measures while practicing exercise therapy techniques

IV SEMESTER

EXERCISE THERAPY II

CO 1 Demonstrate the ability to perform PNF techniques , Co-ordination exercises, Individual and group exercises and Aerobic exercise, Functional re education techniques and techniques of suspension therapy for mobilizing upper limb and lower limb.

CO 2 Demonstrate the ability to perform Basic manual mobilization techniques with clinical reasoning.

CO 3 Demonstrate ability to perform basic stretching and strengthening techniques with proper care and clinical reasoning.

CO 4 Assess and evaluate balance posture and gait and demonstrate ambulation with different types walking aids.

COMMUNITY MEDICINE

- CO 1 Demonstrate ability to understand the concepts of health and disease
- CO 2 Explain the methods of health administration, health education and disease preventive measures.
- CO 3 Understand the epidemiological principles and methods
- CO 4 Discuss various health programmes in India and explain the types, advantages and disadvantages of family planning
- CO 5 Discuss the nutritional problems and the community nutrition program
- CO 6 Discuss the social and preventive measures to reduce the maternal and infant mortality in India
- CO 7 Describe the geriatric health problems and measures to address the problems
- CO 8 Discuss the hospital waste management
- CO 9 Discuss the steps in disaster management
- CO 10 Discuss the occupational diseases and its preventive measures
- CO 11 Discuss the characteristics of mentally healthy person, types of mental illness and aetiology of mental illness and the initiatives under district mental health programs for prevention and control of mental health problems
- CO 12 Demonstrate the ability to select appropriate health education methods and models in planning health education as per the need.

ELECTROTHERAPY- I

- CO 1 Explain the physical principles of electricity and magnetism, components of an electric circuit, supply of mains current and the safety precautions and first-aid associated with dangers of electric currents.
- CO 2 Explain the physical principles of ultrasound, heat, cold, electromagnetic radiations, electricity and their relevance to physiotherapy practice.
- CO 3 Explain the nerve and muscle physiology, physiology and pathway of pain, and theories of pain modulation

CO 4 Explain the construction and working of neuromuscular electrical stimulators and EMG.

CO 5 Describe the current parameters, physiological effects, indications, contraindications, technique of treatment, dangers and safety precautions of the various currents used in electrotherapy and electrodiagnosis.

PHARMACOLOGY

CO 1 Understand the general principles of drug action and the handling of drugs by the body.

CO 2 Describe Pharmacological effects of commonly used drugs by patients referred for Physiotherapy; list their adverse reactions, precautions to be taken & contraindications, formulation & route of administration.

CO 3 Identify whether the pharmacological effect of the drug interferes with the Therapeutic response of Physiotherapy & vice-versa

V SEMESTER

CLINICAL ORTHOPAEDICS & TRAUMATOLOGY

CO 1 Understand orthopaedic conditions causing disability, list the etiology, clinical features and methods of investigations and management.

CO 2 Discuss the Patho-physiology, clinical manifestations & conservative/Surgical management of various traumatic & cold cases of the Musculo-skeletal Conditions

CO 3 Gain the skill of clinical examination & interpretation of the preoperative cold cases & all the post- operative cases

CO 4 Apply the knowledge and skill gained in this course to understand the course on Physiotherapy in Orthopaedics and Sports in Semester VI.

GENERAL SURGERY INCLUDING BURNS, PLASTIC SURGERY

CO 1 Describe pre operative evaluation of various surgical indications in abdominal thoracic, Neuro Surgical & Peripheral vascular conditions. Understand the common surgical conditions in ENT & Ophthalmology.

CO 2 Describe the surgical steps & approaches in brief & should be able to describe components of soft tissues cut to reach target tissue & the complications.

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CO 3 Assess post-operative complications & its implications in the treatment. Describe effects of surgical trauma & Anaesthesia in post-operative course.

CO 4 Classify burns, and briefly explain the evaluation & describe surgical management in wounds, ulcers and burns

OBSTETRICS AND GYNAECOLOGY

CO 1 Describe the normal and abnormal physiological events during the puberty, labour, puerperium, post – natal stage and menopause.

CO 2 Discuss the various complications during pregnancy, labour, puerperium and post – natal stage, pre and post-menopausal stage and various aspects of urogenital dysfunction and their management in brief.

CO 3 Describe clinical examination of pelvic floor

CO 4 Describe clinical examination of pregnant woman.

GENERAL MEDICINE INCLUDING PAEDIATRICS AND PSYCHIATRY

CO 1 Describe Etiology, Pathophysiology, Signs &Symptoms &Management of the various Endocrinal, Metabolic, and Geriatric &Nutrition Deficiency conditions.

CO 2 Describe Etiology, Pathophysiology, Signs & Symptoms, Clinical Evaluation & Management of the various Rheumatological, Cardiovascular and Respiratory Conditions.

CO 3 Interpret Chest X-ray, Blood gas analysis, P.F.T. findings, and Blood investigations done for various medical and Rheumatological conditions

CO 4 Describe the principles of Management at the Medical Intensive Care Unit.

CO 5 Describe Etiology, Pathophysiology, Signs &Symptoms &Management of the various Paediatric conditions

CO 6 Acquire skill of clinical examination of a neonate /child with respect to neurological, Musculoskeletal, Respiratory & Cardiovascular conditions

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Electrotherapy II (MF, HF, and Equipment care)

- CO 1 Explain the physical basis, principles and physiological effects of Short wave diathermy, laser, IFT, Ultrasound and other electrotherapy modalities commonly applied in physiotherapy clinical practice
- CO 2 Analyse the process associated with electrotherapy modalities
- CO 3 Perform and manage electrotherapy treatments for relevant conditions
- CO 4 Comprehend the indications and contraindications of electrotherapy treatment and formulate the appropriate treatment protocol with appropriate assessment
- CO 5 To understand the safety measures and dangers

VI SEMESTER

Physiotherapy in Orthopaedics & Sports

- CO 1 To Follow the SOAP format for orthopaedic physiotherapy assessment, determine the physical and functional diagnosis of the patient, prepare the problem list, plan the goals & management for the most common diseases of the musculoskeletal system
- CO 2 To Know the standard treatment protocols to treat fractures, soft tissue injuries and post operative conditions.
- CO 3 Know the definitions, clinical features, mechanism of injury, pathologies and investigations and orthopaedic problems associated with common musculoskeletal and orthopaedic conditions.
- CO 4 Understand the selection of appropriate treatment techniques including Electrotherapy, Exercise therapy, and manual mobilization techniques for the improvement of pain. Joint mobility, strengthening of muscles, stretching and other related musculoskeletal problems

PHYSIOTHERAPY IN GENERAL MEDICINE AND GENERAL SURGERY

- CO 1 Explain techniques of evaluation, assessment and physical and functional diagnosis in pre and post-natal women, children, geriatric population, dentistry, abdominal surgeries, burns, ulcers, oncology, dermatology and ENT.

CO 2 Explain techniques of treatment and rehabilitation in pre and post-natal women, children, geriatric population, dentistry, abdominal surgeries, burns, ulcers, oncology,

CO 3 Explain the role of Yoga in the management of general medical and surgical conditions.

CLINICAL NEUROLOGY & NEUROSURGERY

CO 1 Acquire the basic knowledge of neurology and neuro-surgery

CO 2 Describe Etiology, Pathophysiology, Signs &Symptoms &Management of the various Neurological conditions

CO 3 Acquire skill of clinical examination of Neurological System.

CO 4 Gain knowledge on common neurosurgical procedures and its indications

CO 5 Apply the basic knowledge while learning Neuro physiotherapy course in 7th semester

SOCIOLOGY

CO 1 Describe social institutions in relation to the individual, family and community

CO 2 Describe social institutions in relation to the individual, family and community

CO 3 Explain the social factors affecting the family in rural and urban communities in India

CO 4 Apply the knowledge for patient assessment, communication with patient and family members, designing home program involving family members and to understand the background of the patient.

VII SEMESTER

HEALTH PROMOTION, FITNESS AND WELLNESS

CO 1 Explain the concepts and domains of health, wellness and physical fitness, principles of holistic health care and types of prevention practice

CO 2 Describe the strategies of improving individual and community health and the methods of measuring stress, mental fitness, physical activity and physical fitness

CO 3 Describe a comprehensive program for improving physical fitness

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CO 4 Describe health and wellness risks, preventive strategies and exercise prescription in children, adolescence, adults, older adults and pregnant women

CO 5 Describe preventive strategies in musculoskeletal, cardiorespiratory, neuromuscular, and integumentary conditions and developmental disabilities

CO 6 Explain the concept of health protection and health protection tools, resources to optimize health and wellness and strategies of marketing health and wellness

BIostatISTICS

CO 1 Understand the basic principles and the application of Biostatistics in research.

CO 2 Understand and give examples of different types of data arising in public health and clinical studies

CO 3 Understand and select appropriate statistical methods.

CO 4 Understand the format of scientific documents and interpret results

RESEARCH METHODOLOGY

CO 1 Understand research methodology, including theory of science and qualitative and quantitative methods.

CO 2 The Gain skills for critical reading of research literature and for developing a research proposal for a master's thesis project.

CO 3 Become competent in planning, conducting, evaluating and presenting a research project.

CLINICAL CARDIOVASCULAR AND PULMONARY CONDITIONS

CO 1 Explain the anatomy and physiology of cardiovascular and respiratory system

CO 2 Explain the physical examinations techniques and investigations used in cardiovascular and respiratory systems diseases and disorders

CO 3 Describe the definition, etiology, pathogenesis, clinical features, complications, diagnosis and medical and surgical management of cardiovascular and respiratory systems' diseases and disorders

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PHYSIOTHERAPY IN NEUROLOGY & PSYCHOSOMATIC DISORDER

CO 1 Detect abnormalities in neurodevelopment.

CO 2 Assess, Identify & Analyse neuro-motor & Psychosomatic dysfunction in adult & paediatric, & co-relate the finding with provisional diagnosis, interpretation of routine neurological investigations & arrive at functional diagnosis with clinical reasoning

CO 3 Understand the principles & acquire Neuro therapeutics skills

CO 4 Plan, prescribe & execute short term & long term goals with appropriate therapeutic interventions & be able to modify treatment techniques according to stage of disease.

VIII SEMESTER

CLINICAL REASONING AND EVIDENCE BASED PHYSIOTHERAPY PRACTICE

CO 1 Understand clinical reasoning and practice in patient care

CO 2 Understand the importance of evidence based practice

CO 3 Understand the levels of evidence

CO 4 Understand the source of evidences

CO 5 Understand and communicate evidence in clinical and research practice.

PHYSIOTHERAPY IN CARDIOVASCULAR PULMONARY AND INTENSIVE CARE

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

CO 2 Acquire knowledge of rationale of basic investigative approaches in the medical system, & surgical intervention regimes related to cardio-vascular & pulmonary impairment

CO 3 Acquire the skill of evaluation & interpretation of functional capacity, using simple exercise tolerance tests, such as 6 minutes walk test, symptom limited test.

CO 4 Be able to select strategies for cure, care & prevention; adopt restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place & in community

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CO 5 Be able to execute the effective Physio Therapeutic measures [with appropriate clinical reasoning] with special emphasis to Breathing retraining, nebulisation, humidification, bronchial hygiene, General mobilization, & Exercise conditioning

CO 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

CO 7 Acquire knowledge about the Drugs used in cardiorespiratory conditions,its uses,adverse effects and mechanism of action

CO 8 Acquire the skill of basic Cardio – pulmonary resuscitation. ,and in managing the common conditions like diabetes, hypertension, renal disease and obesity

CO 9 Be able to execute the effective Physio therapeutic measures with appropriate clinical reasoning to improve general surgical & medical condition.

CO 10 Be able to execute the effective Physio Therapeutic measures in adult & paediatric condition with appropriate clinical reasoning.

COMMUNITY PHYSIOTHERAPY

CO 1 Understand and assist in the planning and implementation of community based rehabilitation programs with physiotherapeutic approach.

CO 2 Acquire the knowledge of the health information systems and the health care delivery system including rehabilitation of the disabled in the country.

CO 3 Enunciate the principles and components of primary health care and the national health policies to achieve the goal of 'Health for All' through appropriate agencies.

CO 4 Identify the hazards related to the environment and occupation and describe the importance of ergonomics.

CO 5 Be aware of legislations on disability and developmental schemes and concessions to persons with disabilities.

ADMINISTRATION AND TEACHING SKILLS

CO 1 Understand the concept of administration and be a part of effective administrator in the health care program.

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CO 2 Gain knowledge about the concept of the budget, financial planning and income generation

CO 3 Understand the teaching learning and evaluation methods including curriculum development, and administration in clinical setting.

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