

# **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

1. Recognize the role of Physiotherapy in the context of the health needs of the community and National priorities in the health sector.
2. Demonstrate professional and ethical behaviour appropriate to atleast the minimum standard expected for a Physiotherapy Graduate.
3. 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.
4. Ability to perform a safe, systematic and appropriate physiotherapy assessment for various conditions.
5. Identify, Define and Deal with problems of professional practice through logical, analytical and critical thinking.
6. Ability to analyze and interpret physical assessment and diagnosis and set appropriate short and long term goals.
7. Ability to choose, demonstrate intervention safely and document the progression appropriately.
8. Communicate effectively across wide range of professional and personal contexts.
9. An ability to work independently or collaboratively as a part of rehabilitation team.
10. Ability to understand and conduct research activities.
11. Engage in activities that contribute to the betterment of society and behave ethically and responsible in social environment.

## **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

# **COURSE OUTCOMES**

## **BPT I YEAR**

### **BPT101A PSYCHOLOGY GENERAL AND HEALTH PSYCHOLOGY**

#### **COURSE OUTCOMES**

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 counselling techniques to help those in need.
- Find reasons for non-compliance among patients and improving compliance behaviour.

### **BPT101A SOCIOLOGY**

#### **COURSE OUTCOMES**

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

- Demonstrate an understanding of the role of socio-cultural factors as determinants of health and behaviour in health and sickness.
- Relate to therapeutic situations in the practice of physiotherapy.
- Understand the role of family and community in the development of behaviours.
- Develop a holistic outlook toward the structure of society and community resources.
- Identify the subtle influence of culture in the development of human personality, the role of beliefs and values as determinants of individual and group behaviours.
- Understand the social and economical aspects of community that influence the health of the people.
- Learn to assess the social problems and participate in social planning.
- Identify social institutions and resources.

- Understand the significance of social interactions in the process of rehabilitation.
- Appreciate the role of therapist as a member of society and the interdependence between individuals and society.

## **NURSING AND FIRST AID**

### **COURSE OUTCOMES**

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

- Demonstrate an understanding of the principles of first aid and demonstrate skill in giving first aid treatment in emergencies that may be met in the community and in their practice as therapists.

## **ENGLISH**

### **COURSE OUTCOMES**

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

- The course is designed to enable students to enhance ability to comprehend spoken and written English, required for effective communication in their professional work.
- To speak and write grammatically correct English, to develop writing skills, to understand and express meaningfully the prescribed text, to develop spoken English.

## **BPT101A BASIC COMPUTER SCIENCE**

### **COURSE OUTCOMES**

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

- Appreciate the role of computer technology.
- Focus on computer organization, computer operating system and software, and MS windows, Word processing, Excel data worksheet and PowerPoint presentation.

## **BPT102A ANATOMY**

### **COURSE OUTCOMES**

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

- Identify all gross anatomical structures, particular emphasis will be placed on description of bones, joints, muscles, brain, cardio-pulmonary and nervous systems as these relate to the application of Physiotherapy.
- Demonstrate knowledge in human anatomy as in necessary for the study and practice of physiotherapy.

## **BPT103A PHYSIOLOGY**

### **COURSE OUTCOMES**

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

- Understand the basis of normal human physiology with special emphasis on the functioning of the cardiovascular, musculo-skeletal and nervous systems.
- Demonstrate an understanding of elementary human physiology and Bio-Chemistry.
- Understand how abnormal Physiology affects human function and dysfunction of the human body.

## **BPT II YEAR**

### **BPT201A PATHOLOGY & MICROBIOLOGY**

#### **COURSE OUTCOMES**

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

- 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.

### **BPT202A GENERAL MEDICINE, GENERAL SURGERY, PAEDIATRICS AND CLINICAL NUTRITION**

#### **COURSE OUTCOMES**

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

- Demonstrate a general understanding of the diseases that therapists would encounter in their practice.
- Understand the etiology and pathology, the patient's symptoms and the resultant functional disability.
- 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.

### **BPT202A BIOCHEMISTRY**

#### **COURSE OUTCOMES**

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

- Demonstrate comprehensive understanding of biochemistry.

- Acquire the knowledge in biochemistry that are required to be practiced in community and at all levels of health care system.
- Understand relevant investigations which will help to know about the important medical conditions.
- Demonstrate empathy and have a human approach towards patients & respect their sensibilities.

## **BPT202A PHARMACOLOGY**

### **COURSE OUTCOMES**

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.

## **BPT203A EXERCISE THERAPY**

### **COURSE OUTCOMES**

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 Goniometer, Tone assessment, 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.

## **BPT204A MASSAGE**

### **COURSE OUTCOMES**

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

- Provide high quality, cost-effective soft tissue mobilizations in order to promote health.
- Manage patients with proper ethical codes and respect when treating with soft tissue mobilizations.
- Expertise in Proper positioning and contact and continuity principles
- Explore advanced methods in massage to improve health outcomes.
- Maintain professional manners and communication with the patient throughout the treatment session.

## **BPT205A BIOMECHANICS**

### **COURSE OUTCOMES**

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 example of normal human motor performance.
- Use these methods for evaluation and treatment of disorders of the musculoskeletal system.



## **BPT III YEAR**

### **BPT301A ELECTROTHERAPY – I (LOW & MEDIUM FREQUENCY)**

#### **COURSE OUTCOMES**

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 condition like nerve injuries .
- List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
- Utilize 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, judicial use, appropriate methods of application ,contraindications of the various low frequency equipments.
- Practice evidence based physiotherapy

### **BPT302A ELECTRO THERAPY – II (HIGH FREQUENCY)**

#### **COURSE OUTCOMES**

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.
- List the indications and contraindications of various types of electrotherapy, demonstrate different techniques and describe their effects.
- Utilize 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, judicial use, appropriate methods of application ,contraindications of the various High frequency equipments.
- Practice towards Scientific excellence.

## **BPT302A EMG / BIOFEED BACK**

### **COURSE OUTCOMES**

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

- Possess knowledge of all the commonly used electro diagnostic tests like Electromyograph, nerve conduction study in relevant conditions.
- Appreciate the use of the tests in research work.

## **BPT303A COMMUNITY MEDICINE**

### **COURSE OUTCOMES**

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

- Understand the effects of the environment and the community dynamics on the health of the individual.
- Demonstrate an understanding of the influence of social and environmental factors on the health of the individual and society.
- Be aware of the physical, social, psychological, economic, and environmental health determinants of health and disease.
- 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.

## **BPT304A CLINICAL NEUROLOGY**

### **COURSE OUTCOMES**

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

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

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

## **BPT305A CLINICAL ORTHOPAEDICS**

### **COURSE OUTCOMES**

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

## **BPT306A CLINICAL CARDIO – RESPIRATORY DISEASES**

### **COURSE OUTCOMES**

On completion of this subject, the students will be able 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 IV YEAR**

### **BPT401A COMMUNITY BASED PHYSIOTHERAPY**

#### **COURSE OUTCOMES**

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

- Have a community based perspective with physiotherapeutic approach.
- Describe the health care delivery system including rehabilitation of the disabled in the country.
- Describe the health information systems.
- Enunciate the principles and components of primary health care and the national health policies to achieve the goal of 'Health for All'.
- Identify the environmental and occupational hazards and their control.
- Describe the importance of ergonomics in human health.

### **BPT402A REHABILITATION MEDICINE**

#### **COURSE OUTCOMES**

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

- Understand their role in the management of the disability within the rehabilitation team.
- Understand the concept of team approach in rehabilitation.
- Observe and identify the diagnostic features in physical conditions.
- Understand the medical and surgical aspects of disabling conditions
- Identify the residual potentials in patients with partial or total disability (temporary or permanent).
- Formulate appropriate goals (long & short term) in treatment & rehabilitation
- Prescribe, check - out and train the uses of various rehabilitation aids.

## **BPT402A RESEARCH METHODOLOGY AND BIO-STATISTICS**

### **COURSE OUTCOMES**

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

- Apply the principles of research and biostatistics to health practice including the design and implementation of health related research studies.
- Plan and execute a research study, including clinical trials.
- Use / organize bio-statistical analysis using computers and software and prepare reports / papers.
- Critically evaluate research activities.
- Make recommendations on policy and procedures.
- Plan and conduct an educational session / programme.

## **BPT403A ETHICS AND MANAGEMENT STUDIES**

### **COURSE OUTCOMES**

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

- Understand the ethical principles of physiotherapy profession.
- Understand principles of management in personal management, time management and administration including budgeting.

## **BPT 404A PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS**

### **COURSE OUTCOMES**

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

- Integrate the knowledge gained by the students in Clinical Neurology, with the skills gained in exercise therapy, electrotherapy and massage.
- Apply these in clinical situations of dysfunction due to pathology in the nervous system.

- Identify disability due to neurological dysfunction, set treatment goals and apply their skills in exercise therapy, electrotherapy and massage in clinical situation to restore neurological function.

## **BPT 405A PHYSIOTHERAPY IN ORTHOPAEDIC CONDITIONS**

### **COURSE OUTCOMES**

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

- Integrate the knowledge gained by the students in clinical orthopaedics with skills gained to apply these in clinical situation of dysfunction and musculo - skeletal pathology.
- Identify disability due to musculo skeletal dysfunction, set treatment goals and apply their skills gained in exercise therapy, electrotherapy and massage in clinical situations to restore musculoskeletal function.

## **BPT406A PHYSIOTHERAPY IN CARDIORESPIRATORY CONDITIONS**

### **COURSE OUTCOMES**

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

- Integrate the knowledge gained by the students in clinical cardio respiratory conditions with skills gained in exercise therapy electrotherapy and massage, thus enabling them to apply these in clinical situations of dysfunction due to cardio respiratory pathology.
- Use physiotherapeutic measures as preventive / restorative Rehabilitative purposes for pulmonary / cardiac patients.
- Identify cardio-respiratory dysfunction, set treatment goals and apply their skills in exercise therapy, electrotherapy and massage in clinical situation to restore cardio-respiratory function.

## **BPT407A PHYSIOTHERAPY IN OBSTETRICS AND GYNAECOLOGY**

### **COURSE OUTCOMES**

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

- Understand the anatomy, physiology and various conditions in Obstetrics and Gynaecological conditions relevant to Physiotherapy.

- Assess and provide physiotherapeutic techniques in Obstetrics and Gynaecological conditions for relief of pain, relaxation, conditioning and posture.

## **BPT408A PROJECT WORK/ CASE STUDY**

### **COURSE OUTCOMES**

The student will collect review of literature, design a research methodology, perform data collection, statistical analysis and present a written dissertation. The student will submit to the University a written dissertation / case study report through institution of study. The student will be expected to submit above project work / case study report at the commencement of Fourth year of the four and half years B.P.T. degree course.

## **YOGA, HEALTH PROMOTION AND SPORTS PHYSIOTHERAPY**

### **COURSE OUTCOMES**

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

- Gain knowledge on basic yogasanna postures and their benefits.
- Acquire knowledge on prevention and health promotion.
- Assess and provide physiotherapeutic techniques in Sports conditions for relief of pain, relaxation, conditioning and posture.

## **RADIOLOGY**

### **COURSE OUTCOMES**

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

- To orient and train student in different aspects of principles, diagnosis and interpretation in radiology.

# **MEDICAL ELECTRONICS**

## **COURSE OUTCOMES**

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

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