



### **1.1.1 Curriculum development and implementation**

The learning goals and objectives of the undergraduate and graduate physiotherapy education program will be based on the performance expectations. They will be articulated as learning objectives (why we teach this) and learning outcome (what the students will learn). Using the framework, students will learn to integrate their knowledge, skills and abilities in a hands-on manner in a professional healthcare setting. In this regard different key areas may be identified. (This section has reference to "MODEL CURRICULUM HANDBOOK OF PHYSIOTHERAPY, Ministry of Health and Family Welfare)

#### **1. Clinical Care**

Using a patient/family-centered approach and best evidence, each student will organize and implement the preventive, investigative and management plans; and will offer appropriate follow-up services. Program objectives should enable the students to:

- ✓ Apply the principles of basic science and evidence-based practice
- ✓ Use relevant investigations as needed
- ✓ Identify the indications for basic medical procedures and perform them in an appropriate manner
- ✓ Provide care to patients – efficiently and in a cost-effective way – in a range of settings, and maintain foremost the interests of individual patients
- ✓ Identify the influence of biological, psychosocial, economic, and spiritual factors on patients' well-being and act in an appropriate manner
- ✓ Incorporate strategies for certain emergency care, health promotion and disease prevention with their patients

#### **2. Communication**

The student will learn how to communicate with patients/clients, care-givers, other health professionals and other members of the community effectively and appropriately. Program objectives should enable the students to:

- ✓ Provide sufficient information to ensure that the patient/client can participate as actively as possible and respond appropriately to the information
- ✓ Clearly discuss the diagnosis with the patient, and decide appropriate treatment plans in a sensitive manner that is in the patient's and society's best interests
- ✓ Explain the proposed healthcare service – its nature, purpose, possible positive and adverse consequences, its limitations, and reasonable alternatives wherever they exist



- ✓ Use effective communication skills to gather data and share information including attentive listening, open-ended inquiry, empathy and clarification to ensure understanding
- ✓ Appropriately communicate with, and provide relevant information to, other stakeholders including members of the healthcare team
- ✓ Use communication effectively and flexibly in a manner that is appropriate for the reader or listener
- ✓ Explore and consider the patient's ideas, beliefs and expectations during interactions with them, along with varying factors such as age, ethnicity, culture and socioeconomic background

### **3. Membership of a multidisciplinary health team**

The student will put a high value on effective communication within the team, including transparency about aims, decisions, uncertainty and mistakes. Team-based health care is the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively to accomplish shared goals within and across settings to achieve coordinated, high quality care. Program objectives will aim at making the students being able to:

- ✓ Recognize, clearly articulate, understand and support shared goals in the team that reflect patient and family priorities
- ✓ Possess distinct roles within the team; to have clear expectations for each member's functions, responsibilities, and accountabilities, which in turn optimizes the team's efficiency and makes it possible for them to use division of labor advantageously, and accomplish more than the sum of its parts
- ✓ Develop mutual trust within the team to create strong norms of reciprocity and greater opportunities for shared achievement

### **4. Ethics and accountability**

Students will understand core concepts of clinical ethics and law so that they may apply these to their practice as physicians. Program objectives should enable the students to:

- ✓ Describe and apply the basic concepts of clinical ethics to actual cases and situations
- ✓ Recognize the need to make health care resources available to patients fairly, equitably and without bias, discrimination or undue influence
- ✓ Demonstrate an understanding and application of basic legal concepts to the practice of physiotherapy



- ✓ Demonstrate respect for each patient's individual rights of autonomy, privacy, and confidentiality

### **5. Commitment to professional excellence**

The student will execute professionalism to reflect in his/her thought and action a range of attributes and characteristics that include technical competence, appearance, image, confidence level, empathy, compassion, understanding, patience, manners, verbal and non-verbal communication, an anti-discriminatory and non-judgmental attitude, and appropriate physical contact to ensure safe, effective and expected delivery of healthcare. Program objectives will aim at making the students being able to:

- ✓ Demonstrate distinctive, meritorious and high quality practice that leads to excellence and that depicts commitment to competence, standards, ethical principles and values, within the legal boundaries of practice
- ✓ Demonstrate the quality of being answerable for all actions and omissions to all, including service users, peers, employers, standard-setting/regulatory bodies or oneself
- ✓ Demonstrate humanity in the course of everyday practice by virtue of having respect (and dignity), compassion, empathy, honour and integrity
- ✓ Ensure that self-interest does not influence actions or omissions, and demonstrate regards for service-users and colleagues

### **6. Leadership**

The student must take on a leadership role where needed in order to ensure clinical productivity and patient satisfaction. They must be able to respond in an autonomous and confident manner to planned and uncertain situations, and should be able to manage themselves and others effectively. They must create and maximize opportunities for the improvement of the health seeking experience and delivery of healthcare services. Program objectives should enable the students to:

- ✓ Act as agents of change and be leaders in quality improvement and service development, so that they contribute and enhance people's wellbeing and their healthcare experience
- ✓ Systematically evaluate care; ensure the use of these findings to help improve people's experience and care outcomes, and to shape clinical treatment protocols and services
- ✓ Identify priorities and effectively manage time and resources to ensure the maintenance or enhancement of the quality of care



- ✓ Recognize and be self-aware of the effect their own values, principles and assumptions may have on their practice. They must take charge of their own personal and professional development and should learn from experience (through supervision, feedback, reflection and evaluation)
- ✓ Facilitate themselves and others in the development of their competence, by using a range of professional and personal development skills
- ✓ Work independently and in teams. They must be able to take a leadership role to coordinate, delegate and supervise physiotherapy care safely, manage risk and remain accountable for the care given; actively involve and respect others' contributions to integrated person-centered care; yet work in an effective manner across professional and agency boundaries. They must know when and how to communicate with patients and refer them to other professionals and agencies, to respect the choices of service users and others, to promote shared decision-making, to deliver positive outcomes, and to coordinate smooth and effective transition within and between services and agencies.

### **7. Social Accountability and Responsibility**

The students will recognize that allied and healthcare professionals need to be advocates within the health care system, to judiciously manage resources and to acknowledge their social accountability. They have a mandate to serve the community, region and the nation and will hence direct all research and service activities towards addressing their priority health concerns. Program objectives should enable the students to:

- ✓ Demonstrate knowledge of the determinants of health at local, regional and national levels and respond to the population needs
- ✓ Establish and promote innovative practice patterns by providing evidence-based care and testing new models of practice that will translate the results of research into practice, and thus meet individual and community needs in a more effective manner
- ✓ Develop a shared vision of an evolving and sustainable health care system for the future by working in collaboration with and reinforcing partnerships with other stakeholders, including academic health centres, governments, communities and other relevant professional and non-professional organizations
- ✓ Advocate for the services and resources needed for optimal patient care



## **8. Scientific attitude**

The student will utilize sound scientific and/or scholarly principles during interactions with patients and peers, educational endeavors, research activities and in all other aspects of their professional lives. Program objectives should enable the students to:

- ✓ Engage in ongoing self-assessment and structure their continuing professional education to address the specific needs of the population
- ✓ Adopt evidence-based practice by applying principles of scientific methods
- ✓ Take responsibility for their educational experiences
- ✓ Acquire basic skills such as presentation skills, giving feedback, patient education and the design and dissemination of research knowledge; for their application to teaching encounters.

## **9. Lifelong learning**

The student should be committed to continuous improvement in skills and knowledge while harnessing modern tools and technology. Program objectives will aim at making the students being able to:

- ✓ Perform objective self-assessments of their knowledge and skills; learn and refine existing skills; and acquire new skills
- ✓ Apply newly gained knowledge or skills to patient care
- ✓ Enhance their personal and professional growth and learning by constant introspection and utilizing experiences
- ✓ Search (including through electronic means), and critically evaluate medical literature to enable its application to patient care
- ✓ Develop a research question and be familiar with basic, clinical and translational research in its application to patient care
- ✓ Identify and select an appropriate, professionally rewarding and personally fulfilling career pathway



## **PROGRAM OBJECTIVES AND OUTCOME**

### **BACHELORS OF PHYSIOTHERAPY**

#### **Learning Objectives:**

1. The purpose of this curriculum is to delineate the cognitive, affective and psychomotor skills deemed essential for completion of this program and to perform as a competent physiotherapist who will be able to examine, evaluate, diagnose, plan, execute and document physiotherapy treatment independently or along with the multidisciplinary team.
2. At the completion of this course, the student is expected to evaluate patients for impairments and functional limitations and able to execute all routine physiotherapeutic procedures as per the evaluation.
3. At the completion of this course, the student should be able to operate and maintain physiotherapy equipment used in treatment of patient, physiotherapy treatment planning (both electrotherapy and exercise therapy) & procedures independently.
4. At the completion of this course, the student should be able to provide patient education about various physiotherapeutic interventions to the patient and care givers.

#### **Program Outcome**

1. Coursework entitles independent physiotherapy assessment and treatment in any healthcare delivery centers in India by the graduates.
2. The coursework is designed to train students to work as independent physiotherapists or in conjunction with a multidisciplinary team to diagnose and treat movement disorders as per red and yellow flags.
3. Course works will skill the graduate's physical/ functional diagnosis, treatment planning, management, administration of physiotherapy treatment and for patient support.
4. Graduates can found employment opportunities in hospitals/nursing homes/sports teams/fitness centers/Community Rehabilitation /Health planning boards/health promotions services in both private and public sectors as well as in independent physiotherapy clinics.
5. Physiotherapy graduate are encouraged to pursue further qualification to attain senior position in the professional field and also to keep abreast with the recent advances, new technology and research. The professional should opt for continuous professional education credits offered by national and international institutes.

#### **Terminal Objectives (Expected Outcomes):**

6. The graduate will be a 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.
7. The graduate will utilize critical inquiry and evidence based practice to make clinical decisions essential for autonomous practice.



**Dayananda Sagar**  
**University** Bengaluru

**COLLEGE OF PHYSIOTHERAPY**  
**SCHOOL OF HEALTH SCIENCES**  
*Shavige Malleleshwara Hills*  
*Kumaraswamy Layout*  
*Bangalore- 560078*

8. The graduate will function as an active member of professional and community organizations. The graduate will be a service-oriented advocate dedicated to the promotion and improvement of community health.
9. The graduate will demonstrate lifelong commitment to learning and professional development.



## **PROGRAM OBJECTIVES AND OUTCOME**

### **MASTERS OF PHYSIOTHERAPY**

#### **Learning Objectives:**

At the completion of this course, the student should be -

1. Able to execute all routine physiotherapeutic procedures with evidence based practice.
2. Able to be a prominent member of the multidisciplinary physiotherapy team and treat all the conditions which need physiotherapeutic procedures.
3. Able to provide adequate knowledge about the treatment procedures and its benefit.
4. Able to transfer knowledge and skills to students as well young professionals.
5. Able to perform independent physiotherapy assessment and treatment for patients.
6. Able to undertake independent research in the field of physiotherapy.
7. Learn multidisciplinary practice skills.
8. Able to practice and assess patient independently.
9. On successful completion of M.P.T programme, the Physiotherapist professional will be able to take up physiotherapy teaching assignments independently for undergraduate teaching programme. He / She will be able to prepare project proposal with selected research design and interpret the evaluated outcome measures (using sound data processing techniques and statistical methods). He/she will be able to practice in his / her specialty area with advanced knowledge and skills.

#### **Program Outcome**

1. Course work includes exercise physiology, principles of physiotherapy practice, electrophysiology and electives (during 2nd year of MPT). The student will be skilled in treatment planning, management, administration of physiotherapy treatment and provision of patient support.
2. Acquire in-depth knowledge of structure and function of human body related to the respective branch of specialty.
3. Acquire the in-depth knowledge of movement dysfunction of human body, cause thereof principles underlying the use of physiotherapeutic interventions for restoring movement dysfunction towards normalcy.
4. Demonstrate skill in Physical & Functional diagnosis pertaining to patient under his/her care.
5. Demonstrate ability to critically appraise recent physiotherapeutic and related literature from journals & adopt diagnostic & therapeutic procedures based on it.
6. The student will also perform independent research within the department and help the department and the team for treatment planning of the patient.
7. PT post-graduate is encouraged to pursue further qualification to attain senior position in the professional field, also to keep abreast with the advance and new technology the



professional should opt for continuous professional education credits offered by national and international institutes.

8. Employment opportunities can be found in hospitals in both private and public sectors as well as in independent physiotherapy clinics and as well as teaching institutes.

9. Demonstrate ability to make clinical decision (based on evaluation) regarding Physiotherapy strategy techniques and select appropriate outcome measures based on the comprehensive knowledge of specialty.

10. Demonstrate an expertise in evidence-based skill in the management disorders including movement dysfunction in concerned specialty.

11. Demonstrate an expertise in health promotion, early identification and intervention for quality restoration of function.

12. Planning and implementation of treatment programme adequately and appropriately for all clinical conditions common as well as rare related to respective specialty in acute and chronic stage, in intensive care, indoor, outdoor and institutional care, independent practice, on fields of sports and community and during disaster situations.

13. Demonstrate proficiency in creating awareness using newer technology, at various levels in community for healthcare & professional awareness.

14. Demonstrate leadership, managerial, administrative & communication skills.

15. Demonstrate the knowledge of legislation applicable to compensation for functional disability welfare schemes & rights of the disabled, laws related to industrial workers & disabled & appropriate certification.

16. Demonstrate proficiency in classroom and clinical teaching using newer and appropriate technology.



**YEAR : I YEAR**

**COURSE CODE : 17PT101**

**TITLE OF THE COURSE : HUMAN ANATOMY**

**COURSE OBJECTIVES**

THE STUDY OF ANATOMY WILL INCLUDE IDENTIFICATION OF ALL GROSS ANATOMICAL STRUCTURES. PARTICULAR EMPHASIS WILL BE PLACED ON DESCRIPTION OF BONES, JOINTS, MUSCLES, BRAIN, CARDIO-PULMONARY AND NERVOUS SYSTEMS AS THESE ARE RELATED TO THE APPLICATION OF PHYSIOTHERAPY PATIENTS.

**COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES, DEMONSTRATIONS AND PRACTICALS THE STUDENT WILL HAVE IN DEPTH KNOWLEDGE OF HUMAN ANATOMY AND WILL BE ABLE TO IDENTIFY BONES, JOINTS, MUSCLES, BRAIN, CARDIO-PULMONARY AND NERVOUS SYSTEMS AS NEEDED FOR THE STUDY AND PRACTICE IN PHYSIOTHERAPY.

**YEAR : I YEAR**

**COURSE CODE : 17PT102**

**TITLE OF THE COURSE : HUMAN PHYSIOLOGY**

**COURSE OBJECTIVES**

THIS COURSE HELPS THE STUDENT TO UNDERSTAND THE BASIS OF NORMAL HUMAN PHYSIOLOGY WITH SPECIAL EMPHASIS ON THE FUNCTIONING OF THE CARDIOVASCULAR, MUSCULOSKELETAL, NERVOUS SYSTEM AND RESPIRATORY SYSTEM.

**COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES, DEMONSTRATIONS, AND LAB AND PRACTICAL THE STUDENT WILL BE ABLE TO DEMONSTRATE AN UNDERSTANDING OF ELEMENTARY HUMAN PHYSIOLOGY.

**YEAR : I YEAR**

**COURSE CODE : 17PT103**

**TITLE OF THE COURSE : BIOCHEMISTRY**



## **COURSE OBJECTIVES**

THIS COURSE PROVIDES THE KNOWLEDGE AND SKILLS IN FUNDAMENTAL ORGANIC CHEMISTRY AND INTRODUCTORY BIOCHEMISTRY THAT ARE ESSENTIAL FOR FURTHER STUDIES. IT COVERS BASIC BIOCHEMICAL, CELLULAR, BIOLOGICAL AND MICROBIOLOGICAL PROCESSES, BASIC CHEMICAL REACTIONS IN THE PROKARYOTIC AND EUKARYOTIC CELLS, THE STRUCTURE OF BIOLOGICAL MOLECULES, INTRODUCTION TO THE NUTRIENTS I.E. CARBOHYDRATES, FATS, ENZYMES, NUCLEIC ACIDS AND AMINO ACIDS.

## **COURSE OUTCOME**

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.

**YEAR : I YEAR**

**COURSE CODE : 17PT104**

**TITLE OF THE COURSE : KINESIOLOGY**

## **COURSE OBJECTIVES**

THIS COURSE SUPPLEMENTS THE KNOWLEDGE OF ANATOMY AND ENABLES THE STUDENTS TO HAVE A BETTER UNDERSTANDING OF THE PRINCIPLES OF BIOMECHANICS AND THEIR APPLICATIONS IN MUSCULOSKELETAL FUNCTION AND DYSFUNCTION.

## **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS IN ADDITION TO CLINICAL, THE STUDENT WILL BE ABLE TO DEMONSTRATE AN UNDERSTANDING OF THE PRINCIPLES OF BIO-MECHANICS AND KINESIOLOGY AND THEIR APPLICATION IN HEALTH AND DISEASE.

**YEAR : I YEAR**

**COURSE CODE : 17PT105**

**TITLE OF THE COURSE : PSYCHOLOGY**



## **COURSE OBJECTIVES**

THIS COURSE WILL ENABLE THE STUDENT TO UNDERSTAND SPECIFIC PSYCHOLOGICAL FACTORS AND EFFECTS IN PHYSICAL ILLNESS AND THUS HELP THEM TO HAVE A HOLISTIC APPROACH IN THEIR DEALINGS WITH PATIENTS DURING ADMISSION, REHABILITATION AND DISCHARGE.

## **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER COMPLETION OF LECTURES AND DEMONSTRATIONS THE STUDENTS 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 PATIENT / CONDITION.

**COURSE CODE : 17PT106**

**TITLE OF THE COURSE : SOCIOLOGY**

## **COURSE OBJECTIVES**

THIS COURSE WILL INTRODUCE TO THE STUDENT, THE BASIC SOCIOLOGICAL CONCEPTS, PRINCIPLES AND SOCIAL PROCESSES. SOCIAL INSTITUTIONS (IN RELATION TO THE INDIVIDUAL, FAMILY AND COMMUNITY) AND THE VARIOUS SOCIAL FACTORS AFFECTING THE FAMILY IN RURAL AND URBAN COMMUNITIES IN INDIA.

## **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THE COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES, 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. THEY WILL BE ABLE TO RELATE THIS TO THERAPEUTIC SITUATIONS IN THE PRACTICE OF PHYSIOTHERAPY.

IN ADDITION, THE STUDENT WILL BE ABLE TO SHOW THEIR PROFICIENCY BASED ON WRITTEN AND INTERNAL EVALUATION

**YEAR : II YEAR**

**COURSE CODE : 17PT201**

**TITLE OF THE COURSE : PATHOLOGY**

## **COURSE OBJECTIVES**



THE COURSE WILL ENABLE STUDENTS TO UNDERSTAND THE CONDITIONS IN PATHOLOGY AND ITS APPLICATION IN RELATION WITH PHYSIOTHERAPY. STUDENTS WILL LEARN THE PATHOLOGICAL CHANGES IN VARIOUS CONDITIONS, DISEASES AND DISORDERS, WHICH ARE COMMONLY TREATED BY PHYSIOTHERAPY.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS IN ADDITION TO CLINICAL APPLICATIONS THE STUDENT WILL BE ABLE TO UNDERSTAND THE CAUSES, SIGNS, SYMPTOMS, INVESTIGATIONS, DIFFERENTIAL DIAGNOSIS, FINAL DIAGNOSIS, MANAGEMENT IN RELATION WITH PHYSIOTHERAPY.

**YEAR : II YEAR**

**COURSE CODE : 17PT202**

**TITLE OF THE COURSE : MICROBIOLOGY**

### **COURSE OBJECTIVES**

THE COURSE WILL ENABLE STUDENTS TO UNDERSTAND THE CONDITIONS IN MICROBIOLOGY AND ITS APPLICATION IN RELATION WITH PHYSIOTHERAPY. STUDENTS WILL LEARN THE PATHOLOGICAL CHANGES IN VARIOUS CONDITIONS, DISEASES AND DISORDERS, WHICH ARE COMMONLY TREATED BY PHYSIOTHERAPY.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS IN ADDITION TO CLINICAL THE STUDENT WILL BE ABLE TO UNDERSTAND THE CAUSES, FINDINGS, INVESTIGATIONS, MANAGEMENT IN RELATION WITH PHYSIOTHERAPY.

**YEAR : II YEAR**

**COURSE CODE : 17PT203**

**TITLE OF THE COURSE PHARMACOLOGY**

### **COURSE OBJECTIVES**

THIS COURSE COVERS THE BASIC KNOWLEDGE OF PHARMACOLOGY INCLUDING ADMINISTRATION, PHYSIOLOGIC RESPONSE AND ADVERSE EFFECTS OF DRUGS UNDER NORMAL AND PATHOLOGIC CONDITIONS. TOPICS FOCUS ON THE INFLUENCE OF DRUGS IN REHABILITATION PATIENT/CLIENT MANAGEMENT. DRUGS USED IN IONTOPHORESIS AND PHONOPORESIS WILL BE DISCUSSED IN DETAIL.



### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THE COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS, THE STUDENT WILL BE ABLE TO UNDERSTAND THE EFFECTS AND THE ADVERSE EFFECTS OF VARIOUS DRUGS ON DIFFERENT SYSTEMS OF THE BODY. THIS WOULD HELP THE STUDENTS TO UNDERSTAND THE LIMITATIONS IMPOSED BY THE DRUGS ON ANY THERAPY.

**YEAR : II YEAR**

**COURSE CODE : 17PT204**

**TITLE OF THE COURSE : EXERCISE THERAPY**

### **COURSE OBJECTIVES**

IN THIS COURSE THE STUDENT WILL LEARN THE PRINCIPLES, TECHNIQUES AND EFFECTS OF EXERCISE AS A THERAPEUTIC MODALITY IN THE RESTORATION OF PHYSICAL FUNCTION.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS, IN ADDITION TO PRACTICAL AND CLINIC, THE STUDENT WILL BE ABLE TO LIST THE INDICATIONS AND CONTRAINDICATIONS OF VARIOUS TYPES OF EXERCISE, DEMONSTRATE THE DIFFERENT TECHNIQUE, AND DESCRIBE THE EFFECTS.

**YEAR : II YEAR**

**COURSE CODE : 17PT205**

**TITLE OF THE COURSE : ELECTROTHERAPY**

### **COURSE OBJECTIVES**

IN THIS COURSE THE STUDENT WILL LEARN THE PRINCIPLES, TECHNIQUE AND EFFECTS OF ELECTROTHERAPY AS A THERAPEUTIC MODALITY IN THE RESTORATION OF PHYSICAL FUNCTION

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES, DEMONSTRATIONS, PRACTICALS AND CLINICS THE STUDENT WILL BE ABLE TO LIST THE INDICATIONS AND CONTRAINDICATIONS OF VARIOUS TYPES OF



ELECTROTHERAPY DEMONSTRATE THE DIFFERENT TECHNIQUE AND DESCRIBE THEIR EFFECTS.

**YEAR : III YEAR**

**COURSE CODE : 17PT301**

**TITLE OF THE COURSE : GENERAL MEDICINE**

### **COURSE OBJECTIVES**

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. ALSO, DISCUSSES & INTEGRATES SUBSEQUENT MEDICAL MANAGEMENT OF GENERAL, RHEUMATOLOGY, GERONTOLOGY, CARDIO-VASCULAR & RESPIRATORY SYSTEMS, TO FORMULATE APPROPRIATE INTERVENTION, INDICATIONS, PRECAUTIONS & CONTRAINDICATIONS.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS, THE STUDENT WILL BE ABLE TO UNDERSTAND THE CAUSES, FINDINGS, AND MANAGEMENT IN RELATION WITH PHYSIOTHERAPY. THEY SHOULD HAVE A BRIEF IDEA OF THE ETIOLOGY AND PATHOLOGY, THE PATIENT'S SYMPTOMS AND THE RESULTANT FUNCTIONAL DISABILITY. THIS WOULD HELP THE STUDENTS TO UNDERSTAND THE LIMITATIONS IMPOSED BY THE DISEASES ON ANY THERAPY.

**YEAR : III YEAR**

**COURSE CODE : 17PT302**

**TITLE OF THE COURSE : GENERAL SURGERY**

### **COURSE OBJECTIVES**

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 TERMINOLOGIES 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.

### **COURSE OUTCOME**

AT THE END OF THE COURSE, THE CANDIDATE WILL BE ABLE TO:

DESCRIBE THE EFFECTS OF SURGICAL TRAUMA, & ANAESTHESIA IN GENERAL; CLINICALLY EVALUATE & DESCRIBE THE SURGICAL MANAGEMENT IN BRIEF; DESCRIBE PRE-OPERATIVE EVALUATION, SURGICAL INDICATIONS IN VARIOUS SURGICAL APPROACHES, MANAGEMENT AND POST OPERATIVE CARE IN ABOVE MENTIONED AREAS WITH POSSIBLE COMPLICATIONS; AND BE ABLE TO READ & INTERPRET FINDINGS OF THE RELEVANT INVESTIGATIONS.

**YEAR : III YEAR**

**COURSE CODE : 17PT303**

**TITLE OF THE COURSE : ORTHOPEDICS & TRAUMATOLOGY**

### **COURSE OBJECTIVES**

INTRODUCE THE STUDENT TO THE ORTHOPEDIC CONDITIONS WHICH COMMONLY CAUSE DISABILITY. PARTICULAR EFFORT IS MADE IN THIS COURSE TO FACILITATE THE UNDERSTANDING OF STUDENT WITH ANY DETAILS PERTAINING TO DIAGNOSIS WHICH WILL CONTRIBUTE TO THEIR UNDERSTANDING OF THE LIMITATIONS IMPOSED BY ORTHOPEDIC PATHOLOGY ON THE FUNCTIONING OF THE INDIVIDUAL.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THAT AFTER THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS IN ADDITION TO CLINICS, THE STUDENT WILL BE ABLE TO DEMONSTRATE AN UNDERSTANDING OF ORTHOPEDIC CONDITIONS CAUSING DISABILITY AND THEIR MANAGEMENT.

**YEAR : III YEAR**

**COURSE CODE : 17PT304**

**TITLE OF THE COURSE : MUSCULOSKELETAL & SPORTS PHYSIOTHERAPY**

### **COURSE OBJECTIVES**

THIS COURSE SERVES TO INTEGRATE THE KNOWLEDGE GAINED BY THE STUDENTS IN CLINICAL ORTHOPEDICS WITH THE SKILLS GAINED IN EXERCISE THERAPY, ELECTRO THERAPY AND KINESIOLOGY, THUS ENABLING THEM TO APPLY THESE IN CLINICAL



SITUATIONS OF DYSFUNCTION DUE TO PATHOLOGY IN THE MUSCULOSKELETAL SYSTEM.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE FOLLOWING THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS, PRACTICAL AND CLINICAL, THE STUDENT WILL BE ABLE TO IDENTIFY DISABILITY DUE TO MUSCULOSKELETAL DYSFUNCTION. SET TREATMENT GOALS AND APPLY THEIR SKILLS IN EXERCISE THERAPY, ELECTRO THERAPY AND MASSAGE IN CLINICAL SITUATION TO RESTORE MUSCULO SKELETAL FUNCTION.

**YEAR : III YEAR**

**COURSE CODE : 17PT305**

**TITLE OF THE COURSE : CARDIO-RESPIRATORY & GENERAL PHYSIOTHERAPY**

### **COURSE OBJECTIVES**

THIS COURSE SERVES TO INTEGRATE THE KNOWLEDGE GAINED BY THE STUDENTS IN CLINICAL CARDIORESPIRATORY CONDITIONS WITH THE SKILLS GAINED IN EXERCISE THERAPY, ELECTRO THERAPY AND KINESIOLOGY, THUS ENABLING THEM TO APPLY THESE IN CLINICAL SITUATIONS OF DYSFUNCTION DUE TO PATHOLOGY IN THE CARDIO-RESPIRATORY PATHOLOGY.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE FOLLOWING THE PRESCRIBED HOURS OF LECTURES AND DEMONSTRATIONS, PRACTICAL AND CLINICAL, THE STUDENT WILL BE ABLE TO IDENTIFY DISABILITY DUE TO CARDIO-RESPIRATORY DYSFUNCTION. SET TREATMENT GOALS AND APPLY THEIR SKILLS IN EXERCISE THERAPY, ELECTRO THERAPY AND OTHER PERTAINING SUBJECT AREAS IN CLINICAL SITUATION TO RESTORE CARDIO-RESPIRATORY FUNCTION.

**YEAR : IV YEAR**

**COURSE CODE : 17PT401**

**TITLE OF THE COURSE : NEUROLOGY & NEUROSURGERY**

### **COURSE OBJECTIVES**

INTRODUCE THE STUDENT TO THE NEUROLOGICAL CONDITIONS CAUSING DISABILITY AND THEIR MANAGEMENT. PARTICULAR EFFORT IS MADE IN THIS COURSE TO AVOID BURDENING THE STUDENT WITH ANY DETAIL PERTAINING TO DIAGNOSIS WHICH WILL



NOT CONTRIBUTE TO THEIR UNDERSTANDING OF THE LIMITATIONS IMPOSED BY NEUROPATHOLOGY ON THE FUNCTIONING OF THE INDIVIDUAL.

### **COURSE OUTCOME**

THE EXPECTED OUTCOME OF THIS COURSE IS THE STUDENT WILL BE ABLE TO DEMONSTRATE AN UNDERSTANDING OF NEUROLOGICAL CONDITIONS CAUSING DISABILITY AND THEIR MANAGEMENT.

**YEAR : IV YEAR**

**COURSE CODE : 17PT402**

**TITLE OF THE COURSE : COMMUNITY MEDICINE**

#### **Course Objectives:**

THIS SUBJECT FOLLOWS THE BASIC SCIENCE SUBJECTS TO PROVIDE THE KNOWLEDGE ABOUT CONDITIONS THE THERAPIST WOULD ENCOUNTER IN THEIR PRACTICE IN THE COMMUNITY. IT FACILITATES AN UNDERSTANDING OF VARIOUS ASPECTS OF HEALTH AND DISEASE, LIST THE METHODS OF HEALTH ADMINISTRATION, HEALTH EDUCATION AND DISEASE PREVENTIVE MEASURES.

### **COURSE OUTCOME**

AFTER THE PRESCRIBED HOURS OF LECTURES AND DISCUSSION THE STUDENT WILL BE ABLE TO DEMONSTRATE AN UNDERSTANDING OF VARIOUS ASPECTS OF HEALTH AND DISEASE, LIST THE METHODS OF HEALTH ADMINISTRATION, HEALTH EDUCATION AND DISEASE PREVENTIVE MEASURES.

**YEAR : IV YEAR**

**COURSE CODE : 17PT403**

**TITLE OF THE COURSE : NEURO-PHYSIOTHERAPY**

#### **COURSE OBJECTIVES:**

THE STUDENT WILL BE FACILITATED TO IDENTIFY DISABILITIES DUE TO NEUROLOGICAL DYSFUNCTION, PLAN AND SET TREATMENT GOALS AND APPLY THE SKILLS GAINED IN EXERCISE THERAPY AND ELECTROTHERAPY IN THESE CLINICAL SITUATIONS TO RESTORE NEUROLOGICAL FUNCTION AND ACQUIRE THE KNOWLEDGE OF NORMAL NEURODEVELOPMENT, WITH SPECIFIC REFERENCE TO LOCOMOTION, 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.

**COURSE OUTCOME :**

AT THE END OF THE COURSE, THE CANDIDATE WILL BE ABLE TO IDENTIFY DISABILITIES DUE TO NEUROLOGICAL DYSFUNCTION, PLAN AND SET TREATMENT GOALS AND APPLY THE SKILLS GAINED IN EXERCISE THERAPY AND ELECTROTHERAPY IN THESE CLINICAL SITUATIONS TO RESTORE NEUROLOGICAL FUNCTION.

**YEAR : IV YEAR**

**COURSE CODE : 17PT404**

**TITLE OF THE COURSE : COMMUNITY BASED REHABILITATION**

**COURSE OBJECTIVE:**

THE CANDIDATE WILL BE FACILITATED TO DESCRIBE THE GENERAL CONCEPTS ABOUT HEALTH, DISEASE AND PHYSICAL FITNESS; PHYSIOLOGY OF AGING PROCESS AND ITS INFLUENCE ON PHYSICAL FITNESS; NATIONAL POLICIES FOR THE REHABILITATION OF DISABLED; THE STRATEGIES TO ACCESS PREVALENCE AND INCIDENCE OF VARIOUS CONDITIONS RESPONSIBLE FOR INCREASING MORBIDITY IN THE SPECIFIC COMMUNITY; REASONS FOR NON-COMPLIANCE IN SPECIFIC COMMUNITY ENVIRONMENT AND SOLUTION FOR THE SAME.

**COURSE OUTCOME :**

THE CANDIDATE WILL BE ABLE TO DESCRIBE THE GENERAL CONCEPTS ABOUT HEALTH, DISEASE AND PHYSICAL FITNESS; PHYSIOLOGY OF AGING PROCESS AND ITS INFLUENCE ON PHYSICAL FITNESS; NATIONAL POLICIES FOR THE REHABILITATION OF DISABLED AND THE ROLE OF A PHYSIOTHERAPIST; THE STRATEGIES TO ACCESS PREVALENCE AND INCIDENCE OF VARIOUS CONDITIONS RESPONSIBLE FOR INCREASING MORBIDITY IN THE SPECIFIC COMMUNITY AND THE ROLE OF A PHYSIOTHERAPIST IN IMPROVING MORBIDITY, EXPECTED CLINICAL AND FUNCTIONAL RECOVERY, REASONS FOR NON-COMPLIANCE IN SPECIFIC COMMUNITY ENVIRONMENT SOLUTION FOR THE SAME; THE EVALUATION OF DISABILITY AND PLANNING FOR PREVENTION AND REHABILITATION; COMMUNITY BASED REHABILITATION IN URBAN AND RURAL SET UP.

**YEAR : IV YEAR**

**COURSE CODE : 17PT405**

**TITLE OF THE COURSE : RESEARCH METHODOLOGY AND BIOSTATISTICS**

**COURSE OBJECTIVE:**



THE STUDENT WILL GAIN KNOWLEDGE ON THE BASIC RESEARCH METHODOLOGY AND VARIOUS DESIGNS AND SAMPLING METHODS USED IN RESEARCH METHODOLOGY. THE STUDENTS SHALL ALSO BE GIVEN AN OVER VIEW OF BIOSTATISTICAL APPROACHES THAT MAY BE INVOLVED IN RESEARCH.

**COURSE OUTCOME:**

AT THE END OF THE COURSE THE CANDIDATE WILL BE ABLE TO DESCRIBE ABOUT THE DESIGNS, SAMPLING METHODS AND INTERPRETATION OF DATA IN PROFESSIONAL PRACTICE AND THE RESEARCH PROCESS AS A WHOLE. THE STUDENT SHALL ALSO DEMONSTRATE AN UNDERSTANDING IN VARIOUS PRELIMINARY BIOSTATISTICAL APPROACHES THAT MAY BE INVOLVED IN THE RESEARCH DATA MANAGEMENT.



## 1st Year MPT

### RESEARCH AND ADMINISTRATION (15MPT501)

#### Course Objectives

##### *Research Methodology*

The course is intended to give an Overview of Research and its Methodologies; concepts of research; the need for research; types of research; and the steps in conducting research.

This course is designed to enable students to:

1. identify and discuss the role and importance of research in the social sciences.
2. identify and discuss the issues and concepts salient to the research process.
3. identify and discuss the complex issues inherent in selecting a research problem, selecting an appropriate research design, and implementing a research project.
4. identify and discuss the concepts and procedures of sampling, data collection, analysis and reporting.

##### *Biostatistics*

The course on biostatistics is designed to define the principal concepts about **biostatistics**, recognize the definition of **statistics**, its subject and its relation with the other sciences, collect data relating to variable/variables which will be examined and calculate descriptive **statistics** from these data.

##### *Administration*

The course is designed to inculcate leadership and managerial skills of the students in clinical / community **health** settings

#### Course Outcome

##### *Research methodology*

At the end of this course, the students should be able to:

- ✓ understand some basic concepts of research and its methodologies
- ✓ identify appropriate research topics
- ✓ select and define appropriate research problem and parameters
- ✓ prepare a project proposal (to undertake a project)
- ✓ organize and conduct research (advanced project) in a more appropriate manner
- ✓ write a research report and thesis

##### *Biostatistics:*

On successful completion of this course, students will be able to:



- ✓ Apply basic statistical concepts commonly used in Health and Medical Sciences;
- ✓ Use basic analytical techniques to generate results;
- ✓ Interpret results of commonly used statistical analyses in written summaries; and
- ✓ Demonstrate statistical reasoning skills correctly and contextually.

### **Administration**

Demonstrate leadership and managerial skills in clinical / community health settings

### **APPLIED SCIENCES (15MPT502)**

#### **Objectives**

The course is designed to facilitate an in-depth knowledge in the areas of biomechanics and clinical kinesiology, exercise physiology and electro physiology.

#### **Outcome**

On successful completion of the course students will be able to demonstrate an understanding of the principles of bio-mechanics and kinesiology and their application in health and disease; able to relate the indications and contraindications of various types of exercise and electrotherapy interventions in varied population, apply the different technique during patient care, and analyze the effects.

### **FUNCTIONAL DIAGNOSIS AND THERAPEUTICS (15MPT503)**

#### **Objectives:**

The course is designed to facilitate an in-depth knowledge in the areas of patient diagnostic procedures as well as advanced therapeutic procedures that needs to be utilized for the patient care.

#### **Outcome:**

On successful completion of the course students will be able to:

1. Competently clinically practice in a healthcare setting with a variety of people across the age groups and from acute to chronic contexts.
2. Deliver a physiotherapy healthcare service in a collaborative, ethical, client- centered and culturally responsive manner.
3. Identify and manage adverse events/near misses and minimize risk associated with physiotherapy assessment and intervention.



4. Demonstrate the use and integration of current research and evidence in the delivery of a physiotherapy healthcare service.
5. Select, and safely and effectively perform, an appropriate assessment (including, but not limited to; patient history and physical examination) using relevant assessment tools
6. Demonstrate skills in clinical reasoning and clinical decision making to correctly interpret and analyse assessment findings in order to plan intervention and management.



## **2nd Year MPT**

### **Specialty General (15MPTY601)**

#### **Objectives:**

Apply recent evidence related to technique/ approaches/ technology etc. to treat & train patients with across different health conditions in the field of orthopedic, neurology, cardiovascular, pulmonary, gynecology and at the community level including the develop of skills towards appropriate documentation of the diagnostic and treatment procedures.

#### **Outcome:**

1. Competently clinically practice in a healthcare setting with a variety of people across the lifespan and from acute to chronic contexts.
2. Deliver a physiotherapy healthcare service in a collaborative, ethical, client- centred and culturally responsive manner.
3. Identify and manage adverse events/near misses and minimise risk associated with physiotherapy assessment and intervention.
4. Demonstrate the use and integration of current research and evidence in the delivery of a physiotherapy healthcare service.
5. Select, and safely and effectively perform, an appropriate assessment (including, but not limited to; patient history and physical examination) using relevant assessment tools
6. Demonstrate skills in clinical reasoning and clinical decision making to correctly interpret and analyse assessment findings in order to plan intervention and management
7. Select, and safely and effectively deliver, appropriate evidence-based interventions and management strategies.
8. Select and apply appropriate outcome measures and adapt or progress management on the basis of measured outcomes including planning for discharge.
9. Effectively deliver appropriate preventative and educational strategies.
10. Communicate effectively verbally, non-verbally and in written and electronic forms with patients, care-givers, clients and other members of the multi-professional health care team.



## **Recent advances and evidence based practice (15MPTY602)**

### **Objectives:**

Recent advances and evidence-based practice (EBP) is valued widely in clinical environments. Implementation of EBP facilitates effective clinical decision making and superior patient outcomes through the integration of the best available evidence, expert opinions, and patient preferences. The objective of the course is to facilitate students search online databases for evidence, critically analyze research articles based on levels of evidence, synthesize collected evidence to develop a guideline and clinical decision support tools.

### **Outcome:**

- 1 Explain the origins, processes and application of evidence-based healthcare practice in relation to the students area of practice
- 2 Demonstrate how to develop a clinical question for the implementation of the evidence based health care process
- 3 Discriminate between the different types and levels of evidence and describe the strengths and deficiencies of each
- 4 Use skills in the construction of search strategies and literature searching
- 5 Critically appraise research articles
- 6 Articulate the methods used to combine evidence to produce recommendations for physiotherapy practice

## **SPECIALTY ELECTIVE (15MPTY62X)**

### **Objectives:**

This elective course facilitates the student gain knowledge in Integrating evidence-based medicine and new diagnostic or therapeutic strategies into patient care within the elective specialty; analyzing and presenting the current literature in the field of the elective on a local and national level; appropriately utilize consultation with specialists for the co-management of the disorders; appropriately utilize imaging techniques; appropriately utilize special services such as occupational therapy; care for patients in a cost effective manner; streamline the care of patients and identify accessible resources for their care; demonstrate good work habits, including maturity, punctuality, availability and efficiency.

### **Outcome:**



1. At the end of this course, the student should
2. demonstrate understanding of the diagnosis and management of conditions;
3. demonstrate understanding of when operative versus non operative therapy is indicated;
4. demonstrate understanding of the risks and benefits of various interventional procedures;
5. obtain an accurate history and perform an accurate physical examination of the patient under the elective considered;
6. demonstrate the preoperative and postoperative evaluation of the patients under the elective considered;
7. demonstrate the ability to prepare a focused SOAP (subjective, objective, assessment, and plan) note;
8. demonstrate the ability to prepare and deliver an oral focused presentation;
9. demonstrate the development of differential diagnoses for the patients under the elective considered;
10. demonstrate understanding of the clinical, laboratory, and radiological resources used for diagnosing conditions;
11. demonstrate effective communication with the team, residents, physician assistants, nurses, ancillary personnel, etc



1. At the end of this course, the student should
2. demonstrate understanding of the diagnosis and management of conditions;
3. demonstrate understanding of when operative versus non operative therapy is indicated;
4. demonstrate understanding of the risks and benefits of various interventional procedures;
5. obtain an accurate history and perform an accurate physical examination of the patient under the elective considered;
6. demonstrate the preoperative and postoperative evaluation of the patients under the elective considered;
7. demonstrate the ability to prepare a focused SOAP (subjective, objective, assessment, and plan) note;
8. demonstrate the ability to prepare and deliver an oral focused presentation;
9. demonstrate the development of differential diagnoses for the patients under the elective considered;
10. demonstrate understanding of the clinical, laboratory, and radiological resources used for diagnosing conditions;
11. demonstrate effective communication with the team, residents, physician assistants, nurses, ancillary personnel, etc

  
**PRINCIPAL**  
College of Physiotherapy  
Dayananda Sagar University  
Bangalore 560078