 SMU SIKKIM MANIPAL UNIVERSITY <small>INSPIRED BY LIFE</small>	Program & Course Outcomes
Program Name	Bachelor of Physiotherapy
Program Code	BPT203

Program Outcomes

PO1: Physiotherapy graduates will be able to take up employment as physiotherapy consultants in hospitals, clinics, physical disability rehabilitation centres, sports centres

PO2: Identification and evaluation of impairments in state of health of individual:
Use of foundational courses to understand the process of dysfunction in an individual

PO3: Goal setting for meeting health and social care needs:
Formulate patient and family centred goal setting and appropriate outcomes of intervention

PO4: After achieving competency and skill, physiotherapists should be able to perform systems review to screen patients/clients to determine if physical therapy services are warranted or if a referral to other health professional is required.

PO5: After achieving competency and skill, Physiotherapist should be able to carry out physiotherapy management as an independent practitioner or as per the referral requests from other branches of medical fraternity.

PO6: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the Physiotherapy practice.


PO7: Skills: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the health care practice.

PO8: Life-long learning: Recognise the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings to disseminate general awareness about the relation between physical well-being and state of health among individuals and group

PO10: Apply evidence based knowledge in clinical decision making specific to patient conditions and demonstrate specific skills and strategies to effectively deliver physiotherapy services in rehabilitating the patient to achieve maximal physical functional abilities

Prepared by	Approved by	Revision Status	Year
Program Coordinator	HoI, SMCPT	1.0	2017

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Course Outcomes

BPT 1 st Year	
Course Code	Course Outcomes
ANATOMY PT1101	CO1 - Understand organisation of various systems in human body CO2 - Acquire competencies in recognizing the anatomical structures, their gross and surface anatomy CO3 - Describe in detail the structure and function of musculoskeletal, central nervous system, cardio-vascular, respiratory, and excretory systems CO4 - Have general outline of digestive, reproductive and endocrinal system and their functions
PHYSIOLOGY PT1102	<ul style="list-style-type: none"> - Be able describe physiological functions of various systems, with special reference to Musculo-skeletal, Neuro-motor, Cardio-vascular, Respiratory, Female urogenital function and alteration in functions with ageing - Acquire the knowledge of the relative contribution of each organ system in maintenance of the homeostasis - Analyze physiological response & adaptation to environmental stresses with special emphasis on physical activity and temperature. - Acquire the skill of basic clinical examination, with special emphasis to Peripheral & Central Nervous system, cardiovascular & Respiratory system, & Exercise tolerance/ Ergography
BIOCHEMISTRY PT1103	<ul style="list-style-type: none"> - Demonstrate understanding of basic Biochemistry principles in human processes and metabolism - Relate biochemistry knowledge with underlying mechanism of physiotherapeutics
SOCIOLOGY PT1104	<ul style="list-style-type: none"> - By the end of this course the students will be able - Understand the dynamics of society and its interaction with health in rural and urban communities in India - Understand basic sociological principles related with social processes, social institutions (in relation to the individual, family and community)
Exercise Therapy I PT1105	<ul style="list-style-type: none"> - Demonstrate understanding of motion in human body pertaining to axis and planes of movement, fundamental and derived positions - Demonstrate understanding of the forces acting in the Musculo-skeletal system - Demonstrate proficiency in testing evaluating joint motions

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<p>Electro Therapy I PT1106</p>	<ul style="list-style-type: none"> - Demonstrate understanding of various electric currents used in human body - Discuss safety issues, and preparation and care of electrotherapeutic modalities. - Describe the types of electrotherapeutic current, waveforms, and their applications - Identify purpose, effects, indications, contraindications, and precautions for application of electrotherapy modalities
<p>Basic Nursing and First Aid (not for university exams) PT1107</p>	<ul style="list-style-type: none"> - Demonstrate and maintain competency to provide first aid in cases of emergency
<p>BPT 2nd Year</p>	
<p>PATHOLOGY PT1201</p>	<ul style="list-style-type: none"> - Demonstrate understanding of patho-physiological processes which govern the maintenance of homeostasis, mechanisms of their disturbance and the morphological and clinical manifestations associated with it. - Demonstrate understanding of the mechanisms and patterns of tissue response to injury such that he/she can appreciate the pathophysiology of disease processes and the clinical manifestations
<p>MICROBIOLOGY PT1201</p>	<ul style="list-style-type: none"> - Demonstrate understanding of microbes, their classification, routes of infection and interpret culture tests, list common diagnostic tests for infections - Demonstrate understanding of principles of prevention of infections, sterilization, disinfectants, - Demonstrate understanding of basic immunological process associated with infections
<p>PHARMACOLOGY PT1202</p>	<ul style="list-style-type: none"> - able to understand and correlate the biochemical process involved with drugs in human body - able to correlate the physiologic and pharmacologic actions of these drugs, their primary beneficial, adverse effect and contraindications, with a particular emphasis on how drug therapy can impact physical rehabilitation
<p>GENERAL PSYCHOLOGY & PSYCHIATRY PT1203</p>	<ul style="list-style-type: none"> - Apply principles of psychological theories to relate to development and deficiency in perception and cognito- behavioral aspects of human functioning - Apply principles of psychological theories in enhancing learning, performance, skill acquisition - Relate psychological methods to initiate, increase and or maintain desired behaviour and decrease / stop undesired behaviours to prevent disability or disabling conditions

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	<ul style="list-style-type: none"> - Relate the basic principles of cognito-behavioral approaches in management of chronic catastrophizing conditions - Able to understand the abnormal psycho-somatic disorders and their impact on human functioning
EXERCISE THERAPY II PT1204	<ul style="list-style-type: none"> - List the indications and contraindications of various types of exercise and demonstrate the different techniques and describe their effects. - demonstrate Basic handling and movement analysis skills - Demonstrate competence in implementing selected components of interventions identified in the plan of care established by the physical therapist utilizing underlying physiological principles and awareness of indications, contraindications, diagnosis
ELECTRO THERAPY II PT1205	<ul style="list-style-type: none"> - Demonstrate the understanding of the principles, techniques and effects of electrotherapy as a therapeutic modality in the restoration of physical function - List the indications and contraindications of various types of electrotherapy, modalities and demonstrate the different techniques and describe their effect. - Demonstrate safe handling and termination of treatment procedure
BIOMECHANICS AND KINESIOLOGY PT1206	<ul style="list-style-type: none"> - Demonstrate understanding of internal and external forces acting on human body - Describe kinematics and kinetics of different joints of body - Interpret graphs and simple models which are used to explain human movement.
BPT 3rd Year	
CLINICAL ORTHOPAEDICS PT1301	<ul style="list-style-type: none"> - Conduct an appropriate basic examination of the musculoskeletal system, including history and physical examination - Understand the common traumatic and orthopedic conditions, which commonly cause disability - Able to recognise afflictions, deformities and disabilities arising in Pediatric Orthopaedics, trauma, infective diseases of joints, spinal conditions
RHEUMATOLOGY PT1301	<ul style="list-style-type: none"> - Have a brief understanding of the basic patho-physiological process of common rheumatological conditions, which commonly cause disability - Able to recognise afflictions, deformities and disabilities arising in rheumatological conditions of joints
NEURO-MEDICINE PT1302	<ul style="list-style-type: none"> - Understand the patho-physiological process in development of diseases of nervous system - Understanding of common procedures for establishment of neurological diagnosis, interpret the reports to prevent further complications and guide the rehabilitation process - Able to recognise afflictions, conduct an appropriate basic examination of the nervous system
NEUROSURGERY PT1302	

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Program & Course Outcomes

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	<ul style="list-style-type: none"> - Demonstrate an understanding of neurological conditions causing disability and their management
OBSTETRICS AND GYNECOLOGY PT1303	<ul style="list-style-type: none"> - Understand and manage all stages of pregnancy, including intrapartum and postpartum care - Detect high risk pregnancy, provide primary care and learn when to refer to higher centre - To know the common pathological conditions of reproductive tract and its implications in women’s health
PAEDIATRICS PT1303	<ul style="list-style-type: none"> - To acquire adequate knowledge of optimal growth and development. - to acquire adequate knowledge on major health problems of children like malnutrition, poisoning, metabolic disorders, abuse - To have brief idea of paediatric examination to estimate deviations in sick children in comparison to health children - Understand common paediatric disorders and emergencies in terms of epidemiology, etiopathogenesis, clinical manifestations, diagnosis, rational therapy and rehabilitation
PREVENTIVE SOCIAL MEDICINE & COMMUNITY REHABILITATION PT1304	<ul style="list-style-type: none"> - Understand the effects of the interaction between individual, environment and infective agents - Understand the community dynamics on the health of the individual with special emphasis on disability limitation specific protection and rehabilitation. - Understand the concept of level of health care delivery, social security, objectives of health agencies in promoting health
PHYSIOTHERAPY IN ORTHOPEDIC CONDITIONS PT1305	<ul style="list-style-type: none"> - Integrate the knowledge gained by the students in clinical Orthopedics with the skills gained in Exercise therapy, Electrotherapy and Physical evaluation for identification of disfunction of musculoskeletal system amenable to rehabilitation - To demonstrate sound knowledge in evaluation of Musculo-skeletal pathologies using tests and examinations - To plan appropriate rehabilitation interventions for patients with disorders of musculoskeletal system
PHYSIOTHERAPY IN NEUROLOGICAL CONDITIONS PT1306	<ul style="list-style-type: none"> - Apply basic evaluation and intervention outcome processes appropriate for neurological physiotherapy practice - Conduct an appropriate basic examination of the neurologic system, including history and physical examination - Demonstrate basic measurement and testing procedures commonly used in assessing neurologic dysfunction in adults and Paediatrics from the perspective of rehabilitation

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Program Name

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BPT 4th Year

**GENERAL MEDICINE (GENERAL MEDICINE, CHEST MEDICINE AND DERMATOLOGY)
PT1401**

- Understand the basic principle of history taking and clinical examinations
- Understand the correlation of clinical symptoms and physical signs to manifestation in state of illness
- Develop a brief idea about etiology, pathology, Type and Degree of Disability the patient will have as a result of the disease, so that he/she as a physiotherapist with physician should help the patient to achieve cure and/or ameliorate his/her illness and sufferings.

**GENERAL SURGERY
PT1402**

GENERAL SURGERY

- Describe aetiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children
- Acquire understanding of principles of operative surgery, including pre-operative, operative and post-operative care and monitoring and the impairments that follow the surgical procedures
- Describe the post-surgical care and precautions in amputations, thoracic, abdominal and vascular surgeries
- Acquire competency in handling post surgical cases for rehabilitation so that he/she as a Physiotherapist with physician should help the patient to achieve cure and/or ameliorate his/her illness and sufferings

ANESTHESIOLOGY

- Understand the secondary impairments which follow in cardio-respiratory systems during immobilisation
- Understand the principles of care in unconscious patient, including airway and ventilation management, maintaining bronchial hygiene during tracheostomy, intubation and other similar procedures
- Get acquainted to common pain control procedures in acute and chronic pain and criteria for the same
- Demonstrate competency in basic CPR

**GENERAL SURGERY
PT1402**

OPHTHALMOLOGY

- Understand the correlation of clinical symptoms and physical signs with manifestation of Visual Impairments like eye movements, visual acuity and systemic manifestations in eye
- List out infective conditions of the eye, with the main aim to prevent infection
- Understand ocular involvement in various conditions where basic care of the eye has to be taken
- Know common surgical procedures for maintenance of visual acuity, visual disturbance in other systemic conditions like DM, conditions causing paralysis of eyelids

ENT

- Understand the correlation of clinical symptoms and physical signs with manifestation of Impairments in the conditions of ear, nose

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		<p>and throat</p> <ul style="list-style-type: none"> - Demonstrate understanding of manifestations of vestibular system, and its interference in with activities of daily living. - Develop competency in assessment of vestibular systems using clinical examination
<p>FUNCTIONAL DIAGNOSIS PT1403</p>	<p>EXERCISE PHYSIOLOGY</p>	<ul style="list-style-type: none"> - Demonstrate knowledge proficiency in exercise prescription for both healthy and chronic disease populations - Evaluate pre-participation screening/ health risk appraisal and stratification, b) fitness assessment and evaluation - Develop a comprehensive exercise program based on energy and sport demands.
	<p>ELECTRO DIAGNOSIS</p>	<ul style="list-style-type: none"> - Demonstrate knowledge electrophysiology function of neuromuscular systems - Acquire knowledge of EMG Biofeedback parameters - Have hands on knowledge of EMG and NCV in various phases of rehabilitation and research
<p>PHYSIOTHERAPY IN GENERAL CONDITIONS PT1404</p>		<ul style="list-style-type: none"> - Demonstrate a sound understanding of application to rehabilitation techniques to cardio respiratory conditions - Demonstrate a well-developed approach in promoting wellness as relevant to the pulmonary and cardiovascular systems. - Understand the functions of the multidisciplinary team in the management of cardiopulmonary patients, including intensive care and cardiopulmonary rehabilitation, and describe the physiotherapists role in the multidisciplinary team
<p>COMMUNITY BASED PHYSIOTHERAPY PT1405</p>		<ul style="list-style-type: none"> - Demonstrate a sound understanding of the models of disability and disability creation process - To perform evaluations as per the principles of classification of functioning disability and health to facilitate client independence in community through systems approach of interventions using rehabilitative techniques - Develop an attitude to address an identified health issue relevant to rehabilitation based on the principles of CBR matrix and use these principles in programme activities
<p>RESEARCH AND ETHICS PT1406</p>		<ul style="list-style-type: none"> - Understand basic outline of research methodology and have brief idea of statistical skills used in collection, compilation, analysis and interpretation of data - To plan and execute a research project with help of supervisors - Understand the ethical aspects of research and protection of the rights of the participants in research

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