Teerthanker Mahaveer University
Department of Physiotherapy

BPT (Bachelor of Physiotherapy)

Programme Outcome

PO-1	**:**	Acquiring knowledge of fundamental principles, tools & techniques and their applications in the field of Physical therapy.
PO-2	**:**	Developing in-depth critical and analytical thinking in order to identify, formulate and implement Physiotherapy care plan.
PO-3	**:**	Utilizing soft skills, communication skills and concepts of ethics.
PO-4	**:**	Demonstrating team spirit, empathetic social concern, leadership and environment sensitivity for local and national healthcare needs.
PO-5	**:**	Creating ability to engage in evidence based innovation, decision-making, entrepreneurship

Programme Specific Outcome

PSO-1	**:**	Understanding the basic concepts of physical therapy related to medical sciences, biomechanics, therapeutic exercises, modalities, special techniques, first aid, patient psychology, nutritional science and social setup.
PSO-2	**:**	Understanding the concept of research methodology and biostatistics and its application to enhance new knowledge in the field of physiotherapy and uphold Evidence Based Practice.
PSO-3	**:**	Understanding the concept of health, epidemiology, healthcare programs, role of NGOs and community based rehabilitation.
PSO-4	**:**	Applying the concepts to work efficiently and ethically in professional environment and be able to use computers for research and clinical work.
PSO-5	**:**	Applying evidence based rehabilitation strategies used in the field of Orthopaedics, Neurological Sciences, Cardiorespiratory, Sports and others.
PSO-6	**:**	Applying the skills to efficiently manage emergency health situations.
PSO-7	**:**	Creating a plan to execute theoretical knowledge in clinical settings for autonomous physiotherapy practice

Course Outcomes

BPT102	**CO-1**	Understanding the human anatomical structures.
	CO-2	Describing the functional and topographical anatomy of various organs and their respective systems.
	CO-3	Analyzing general human anatomy.
	CO-4	Identifying and differentiating applied anatomy of soft tissues, hard tissues, joints, organs and their respective systems.
BPT103	**CO-1**	Understanding the general physiology of the body.
	CO-2	Explaining normal functioning and interaction of all the organ systems.
	CO-3	Identifying applied physiology of various body systems.

	CO-4	Analyzing the response of various body systems to physiological and pathological stress.
BPT 104	**CO-1**	Understanding the basic concepts and principles of Biochemistry.
	CO-2	Understanding macronutrients, micronutrients and role of enzymes and hormones.
	CO-3	Explaining the bio-molecular, chemical, anabolic and catabolic processes in terms of aerobic and anaerobic metabolism.
	CO-4	Applying the knowledge of biochemical processes for clinical diagnosis.
BPT 105	**CO-1**	Understanding the basic principles, concepts and terminologies of fundamental exercise therapy and yogic practice.
	CO-2	Explaining biomechanics of fundamental exercise therapy and yogic practice.
	CO-3	Describing the concepts of therapeutic gymnasium, hydrotherapy and goniometry.
	CO-4	Analyzing the use of various types of exercises in appropriate condition.
BPT 106	**CO-1**	Understanding the fundamental concepts and applications of physics and basic electrical components.
	CO-2	Explaining the use of electrodiagnosis.
	CO-3	Describing principles, techniques, effects, indications, contraindications and dosage parameter for low frequency currents, medium frequency currents, heat and cold modalities.
	CO-4	Analyzing the use of current modalities, superficial heat therapy and cryotherapy in appropriate diseased conditions.
BPT139	**CO-1**	Understanding of concepts and importance of English as a language.
	CO-2	Identifying use of basic communicative skills in real life situations.
	CO-3	Applying the basic skills of English for professional communication among peers and teachers.
BPT 109	**CO-1**	Understanding the concepts of ecology.
	CO-2	Explaining natural resources, environmental pollution, policies and practices.
	CO-3	Identifying the cause and effect relationship of environment and human community
	CO-4	Creating awareness for saving environment
BPT110	**CO-1**	Understanding the basic principles and concepts of First Aid along with Emergency care in various situations.
	CO-2	Demonstrating the principles and concepts of body mechanics, nutrition, care of instruments in hospitals, environmental safety and bedside management.
	CO-3	Applying the concepts of first aid management in various emergency and casualty situations.
BPT 151	**CO-1**	Describing all anatomical structures from a regional perspective.
	CO-2	Identifying muscles, bones, bony prominences joints, along with surface landmarks.
	CO-3	Demonstrating movements of joints.
	CO-4	Applying the knowledge of palpation of nerves and arteries.
BPT152	**CO-1**	Understanding physiological tests and the concepts related to cardiac, pulmonary and neurological systems.

	CO-2	Summarizing the concept of homeostasis, physical fitness and normal Electrocardiogram (ECG).
	CO-3	Applying the principles of homeostasis and hematology to measure blood pressure, spirometry, lung volumes, Hemoglobin, color index and for identification of blood cells.
	CO-4	Developing the concepts of neurophysiology for superficial and deep reflex testing and Electroencephalogram (EEG
BPT153	**CO-1**	Demonstrating the concept of health and disease and applying biochemical tests to check for carbohydrates and proteins in samples.
	CO-2	Applying the concepts, theories and principles of human biochemistry tests.
	CO-3	Analyzing the knowledge of biochemical processes to investigate urine, glucose, urea, bilirubin and cholesterol based samples.
BPT 154	**CO-1**	Understanding and applying the basic concepts for the assessment of sensations, reflexes, blood pressure, pulse rate, chest expansion and respiratory rate.
	CO-2	Utilizing the basic principles and concepts of Exercise therapy, joint movements, free exercises, relaxation techniques, yoga, starting and derived positions.
	CO-3	Developing the basic concepts of using suspension therapy, goniometry, the various equipment used in a clinical therapeutic gymnasium setting.
BPT 155	**CO-1**	Identifying various modalities.
	CO-2	Applying heat and cold therapy, low frequency and medium frequency currents and TENS.
	CO-3	Practicing with faradic and galvanic currents to elicit muscle stimulation.
	CO-4	Analyzing the electrodiagnostic procedures.
BPT 201	**CO-1**	Recalling and describing the concepts, working principles, physiological and therapeutic effects, methods of application, indications, and contraindications of electrotherapeutic and pharmaco-therapeutic modalities.
	CO-2	Understanding the concepts of electro-diagnostic procedures
	CO-3	Applying the concepts of basic electrical components, low and medium frequency currents, superficial heating modalities and nerve muscle physiology.
	CO-4	Utilizing the theoretical knowledge in wound care and generating treatment plans with specific dosage and analyzing the modality of choice.
BPT 202	**CO-1**	Understanding the concepts, principles and techniques of exercise therapy indepth.
	CO-2	Explaining the basic concepts, indications, contraindications and precautions of various types and modes of exercises, home program and ergonomics
	CO-3	Summarizing limb-muscle girth measurement, balance, coordination, posture, muscle re- education and walking aids.
	CO-4	Applying the concepts of muscle testing, various exercises, walking aids measurements and goniometry
BPT 203	**CO-1**	Recalling the knowledge of human anatomy and fundamentals of exercise

		therapy.
	CO-2	Understanding the concepts and principles of biomechanics
	CO-3	Analyzing the application of concepts and principles of biomechanics in musculoskeletal function and dysfunction.
	CO-4	Applying concepts of anatomy and mechanics to the joint motion, gait and posture
BPT 204	**CO-1**	Understanding the basic concepts of abnormal physiological and pathological disease processes of various body systems.
	CO-2	Describing the concepts of infection prevention, sterilization and disinfectants and mechanisms of disturbances, manifestations of tissue response to injury and homeostasis.
	CO-3	Explaining various microbes, their classification, routes of infection, basic immunological responses, common diagnostic tests and interpretation of tests.
	CO-4	Applying the knowledge of disease processes when assessing and treating a patient.
BPT205	**CO-1**	Understanding the basic principles of general pharmacology
	CO-2	Describing the basic pharmacology of commonly used drugs.
	CO-3	Analyzing the importance of drugs in the overall treatment including Physiotherapy.
BPT 206	**CO-1**	Understanding the principles, theories and concepts of Human Psychology
	CO-2	Demonstrating the concepts of sociology, socialization and social groups in terms of healthcare and rehabilitation.
	CO-3	Summarizing the concepts of abnormalities and diseases of human psychology
	CO-4	Outlining the role of family, community, culture, caste system and social change for healthcare and rehabilitation
BPT 210	**CO-1**	Understanding the necessity of computer in our daily life.
	CO-2	Explaining basic components of computer, operating systems, peripheral devices, network types and topologies.
	CO-3	Demonstrating the concepts for Microsoft office, problem solving, wordprocessing, spreadsheet, presentation, software techniques.
	CO-4	Applying the learned concepts in daily life and field of physiotherapy.
BPT 251	**CO-1**	Applying the principles of apparatus testing with preparation of treatment tray.
	CO-2	Utilizing the wind-up procedure after electrotherapy treatment.
	CO-3	Developing the techniques for patient evaluation and application of various electro-modalities.
BPT 252	**CO-1**	Demonstrating the basics of exercise therapy along with goniometry, Manual Muscle Testing, movements and Proprioceptive Neuromuscular Facilitation.
	CO-2	Practicing various types and modes of exercises, functional re-education, stretching and joint mobilization.
	CO-3	Applying the knowledge of limb and girth measurement, gait assessment and posture evaluation.
BPT 253	**CO-1**	Identifying gait parameters, abnormal gait and abnormal posture

	CO-2	Demonstrating movement analysis and muscle insufficiencies
	CO-3	Applying the concepts of axes and planes to anatomical structures
TMUPS101	**CO-1**	Utilizing effective verbal and non-verbal communication techniques in formal and informal settings
	CO-2	Understanding and analyzing self and devising a strategy for self growth and development.
	CO-3	Adapting a positive mindset conducive for growth through optimism and constructive thinking.
	CO-4	Utilizing time in the most effective manner and avoiding procrastination.
	CO-5	Making appropriate and responsible decisions through various techniques like SWOT, Simulation and Decision Tree.
	CO-6	Formulating strategies of avoiding time wasters and preparing to-do list to manage priorities and achieve SMART goals.
BPT301	**CO-1**	Understanding the principles, concepts and indications, surgical approach and management of general, neurological, thoracic, cardiac, abdominal, ENT, gynaecological and plastic surgeries.
	CO-2	Outlining the etiology, clinical features, signs and symptoms, complications, management and surgical treatment of diseases of the arteries and veins.
	CO-3	Applying the knowledge of various disease/surgical conditions during assessment of patient.
	CO-4	Applying the knowledge of various disease/surgical conditions during assessment of patient.
BPT302	**CO-1**	Understanding the concepts, general preventive measures, common signs and symptoms of infectious, circulatory and communicable diseases.
	CO-2	Outlining the concepts, clinical conditions, management and treatment of Cardiovascular, Respiratory, Digestive, Endocrine, Nutritional, Urogenital, Geriatric, Pediatrics and Skin diseases.
	CO-3	Applying the knowledge of various disease conditions during assessment of patient.
	CO-4	Summarizing the definition, defence mechanism, symptomatology, types, causes and various therapies of Psychiatry and drug abuse.
BPT 305	**CO-1**	Understanding and applying the concepts of subjective and objective assessment of Nervous, Musculoskeletal, Cardiovascular and Pulmonary systems.
	CO-2	Outlining the concepts of Quality of Life.
	CO-3	Analyzing the assessment of pain and obesity.
	CO-4	Concluding with right provisional diagnosis and correct interpretations of clinical tests, special tests and outcome measures.
BPT 306	**CO-1**	Understanding the principles and concepts of orthopedics, inclusive of, clinical and surgical orthopaedic conditions.
	CO-2	Applying the principles of clinical management of fractures, regional and general conditions and various orthopedic surgeries.
	CO-3	Analyzing the clinical conditions and surgeries to develop the concepts of examination of orthopedic patient.
	CO-4	Summarizing the knowledge of various orthopaedic disease conditions &amputations; their identification and management.

BPT307	**CO-1**	Recalling basics of Neuroanatomy and Neurophysiology.
	CO-2	Understanding the etiology, pathology, clinical features and treatment methods for various diseases affecting the nervous system.
	CO-3	Applying the principles of clinical neurology in clinical evaluation, investigations, differential diagnosis and management of neurological conditions.
	CO-4	Summarizing the knowledge of various neurological disease conditions; their identification and management.
BPT308	**CO-1**	Understanding the principles and concepts of Research methodology.
	CO-2	Describing the appropriate statistical methods required for a particular research design
	CO-3	Outlining the methods of Parametric and Nonparametric Tests, Descriptive statistics and Inferential Statistics.
	CO-4	Choosing the appropriate research design and developing appropriate research hypothesis for a research project.
	CO-5	Developing an appropriate framework for research studies
BPT 309	**CO-1**	Understanding the concepts of determinants of health, well-being, disease prevention and control.
	CO-2	Summarizing the concepts of epidemiology, different levels of public health administration and health programs in India.
	CO-3	Explaining the concepts of demography, family planning, maternity, child health care, nutrition, occupational & mental health and approaches of health education.
	CO-4	Describing the role of various voluntary organizations, NGOs in community health
BPT 310	**CO-1**	Understanding the concepts and principles of nutritional assessment, diagnosis and care, therapeutic modification of diet and routine hospital diets.
	CO-2	Explaining the etiology, symptoms and metabolic changes and diet management in various diseases
	CO-3	Outlining the principles for calculating ideal body weight and risk factors of nutritional therapy for underweight and overweight individuals.
	CO-4	Applying the concepts of diet management in various diseases.
BPT 355	**CO-1**	Applying the concepts, methods of assessment of musculoskeletal, nervous, cardiovascular and respiratory system through case presentations.
	CO-2	Interpreting the diagnostic procedures, Electromyography, Nerve Conduction Velocity Studies, X-ray, Electrocardiogram for interpretation of reports.
	CO-3	Analyzing the special tests and their interpretations.
	CO-4	Selecting the appropriate test, tool and technique essential for effective rehabilitation.
TMUPS102	**CO-1**	Communicating effectively in a variety of public and interpersonal settings.
	CO-2	Applying concepts of change management for growth and development by understanding inertia of change and mastering the Laws of Change.
	CO-3	Analyzing scenarios, synthesizing alternatives and thinking critically to

		negotiate, resolve conflicts and develop cordial interpersonal relationships.
	CO-4	Functioning in a team and enabling other people to act while encouraging growth and creating mutual respect and trust. CO5. Handling difficult situations with grace, style, and professionalism.
BPT 357	**CO-1**	Applying the principles of basic anatomical, physiological and biomechanical concepts to clinical settings for assessment and diagnosis of a condition.
	CO-2	Analyzing the special tests for various tissues and systems of the body.
	CO-3	Identifying the signs & symptoms in different diseases and dysfunctions and elicited responses to various stimuli.
	CO-4	Creating an appropriate assessment of patient for deciding the appropriate management
BPT358	**CO-1**	Demonstrating basic first aid skills needed to control bleeding and immobilize injuries.
	CO-2	Demonstrating the skill needed to assess the ill or injured person.
	CO-3	Demonstrating skills to assess and manage foreign body airway obstruction in infants, children and adults.
	CO-4	Demonstrating skills to provide one- and two- person cardiopulmonary resuscitation to infants, children and adults.
	CO-5	Demonstrating proper use of pocket mask, bag-valve mask and ventilation to an artificial airway during resuscitation attempts.
BPT401	**CO-1**	Recalling the principles of clinical management of fractures, regional and general conditions and various orthopaedic surgeries.
	CO-2	Understanding the concepts and application of manual therapy and rehabilitation protocols.
	CO-3	Analyzing the progress, prognosis and follow up in recovery phase of patients.
	CO-4	Practicing clinical assessment of patient and prescribing Evidence Based physiotherapy management of common orthopaedic conditions.
BPT402	**CO-1**	Recalling the etiology, pathology and clinical features for various diseases affecting the nervous system.
	CO-2	Understanding the principles of motor control, motor learning, neuroplasticity and neurophysiological approaches, techniques and treatment methods.
	CO-3	Analyzing the assessment tools and techniques for evaluation and physiotherapy management of neurological conditions, surgeries and neurological gaits by applying the basic concepts of neuroanatomy and neurophysiology.
	CO-4	Practicing the use of Evidence Based treatment.
BPT 406	**CO-1**	Recalling cardiorespiratory anatomy and physiology.
	CO-2	Understanding cardiorespiratory rehabilitation, investigations, drug therapy, ICU management, special techniques and tools for cardiorespiratory disorders.
	CO-3	Employing the knowledge of various cardiovascular, respiratory conditions, neonatal, pediatric and dermatological conditions, wound ulcers, obstetrics and general surgical conditions.

	CO-4	Analyzing the various treatment plans with assessment for a patient in hospital setting, for discharge and an outpatient department.
BPT407	**CO-1**	Understanding the knowledge, concepts and biomechanics of various sports injuries.
	CO-2	Describing effect of exercise on body systems, sports specific diet and measurement of fitness components and sports skills.
	CO-3	Outlining and employing the assessment plans, management and rehabilitation protocols for specific injuries on-field and off- field.
	CO-4	Explaining Athletic Drug Abuse and Doping, sports psychology and sports in special groups
BPT 410	**CO-1**	Understanding the concepts and principles of Community Based Rehabilitation and general rehabilitation.
	CO-2	Explaining the concept of disability, its evaluation, health and occupational health, geriatric health, national healthcare programs and policies, NGOs and assistive devices.
	CO-3	Practicing appropriate physiotherapy skills when rehabilitating the patient in community set up.
	CO-4	Summarizing the role of ergonomics, vocational rehabilitation and community awareness in Community Based Rehabilitation.
BPT411	**CO-1**	Understanding the principles and theories of various legal aspects of healthcare, medical ethics and physiotherapy.
	CO-2	Outlining the history of physiotherapy and various levels of evidences with their use in physiotherapy practice.
	CO-3	Analyzing the tools for Evidence Based Practices, its limitations and research critique to Physiotherapy.
	CO-4	Practicing the ethical principles in physiotherapy.
BPT451	**CO-1**	Applying the principles of assessment, rehabilitation, management of various Orthopaedic conditions and manual therapy techniques.
	CO-2	Analyzing the patients' assessment for physical testing and diagnosis of various Orthopaedic conditions and diseases and available treatment strategies and selection of the suitable rehabilitation.
	CO-3	Justifying the choice of treatment protocol.
BPT452	**CO-1**	Analyzing the patient for neurological conditions.
	CO-2	Interpreting the knowledge of different neurological approaches and conditions to develop an effective treatment plan.
	CO-3	Justifying the choice of treatment approach used
BPT 458	**CO-1**	Practicing the various treatment strategies for the management of cardiorespiratory and other medical conditions.
	CO-2	Analyzing the basic principles of physiotherapy assessment of cardiorespiratory and other medical conditions.
	CO-3	Justifying the selection of the preferred approach amongst the various strategies.
BPT459	**CO-1**	Understanding and applying the sports specific special tests for various tissues.
	CO-2	Applying various methods of assessment and management of an injured athlete, on and off field.
	CO-3	Justifying the selection of the preferred approach amongst the various

		strategies.
BPT 466	**CO-1**	Understanding and applying the concepts of organization of community based rehabilitation centers.
	CO-2	Demonstrating the use of various Orthotic and Prosthetic devices.
	CO-3	Applying knowledge of ergonomics at workplace.
BPT 457	**CO-1**	Recalling the concepts of anatomy, physiology, biomechanics, exercise therapy, electrotherapy, assessment skills and knowledge of various disease conditions.
	CO-2	Utilizing the knowledge of assessment skills, concept of rehabilitation skills and therapeutic skills to rehabilitate patient.
	CO-3	Applying the concepts of research methodology to develop a small project.
	CO-4	Justifying the use of assessment tool and rehabilitation techniques