BACHELOR OF PHYSIOTHERAPY

Human beings make a society. Healthy human beings make a healthy society. However, every society has its share of unhealthy human beings. Illness disease and invalidity may be a curse for society; but their victims certainly are not. They are as much a part of society as the healthiest of individuals.

Objectives: This course fulfils specific needs of hospitals. The syllabus and course content take into consideration the existing background as well as the future needs of hospitals. This exclusive programme will provide a professional qualification to those who wish to take up hospital administration as a career. It will be of benefit to those currently engaged in hospital administration at senior and middle levels.

Eligibility Criteria: 10+2(Biology) or equivalent in any stream

Every student has to attain a minimum of D grade in all courses, a student may however, repeat or change any course being offered. Notwithstanding, every student must acquire the desired number of credits. The detailed course structure under different categories is given in succeeding pages. Brief description of the course content follows thereafter.

*This course will be offered after necessary approvals from the respective council and as per their requirements
# BACHELOR OF PHYSIOTHERAPY

<table>
<thead>
<tr>
<th>Codes</th>
<th>Courses</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.101</td>
<td>Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>19.102</td>
<td>Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>19.103</td>
<td>Biomechanics</td>
<td>4</td>
</tr>
<tr>
<td>19.104</td>
<td>Psychology</td>
<td>4</td>
</tr>
<tr>
<td>19.105</td>
<td>Physiology</td>
<td>4</td>
</tr>
<tr>
<td>19.106</td>
<td>Sociology</td>
<td>4</td>
</tr>
<tr>
<td>19.107</td>
<td>Basic Nursing</td>
<td>4</td>
</tr>
<tr>
<td>19.201</td>
<td>Orientation to Physiotherapy</td>
<td>4</td>
</tr>
<tr>
<td>19.202</td>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>19.203</td>
<td>Pathology</td>
<td>4</td>
</tr>
<tr>
<td>19.204</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>19.205</td>
<td>Pharmacology</td>
<td>4</td>
</tr>
<tr>
<td>19.206</td>
<td>Exercise Therapy</td>
<td>4</td>
</tr>
<tr>
<td>19.207</td>
<td>Electrotherapy</td>
<td>4</td>
</tr>
<tr>
<td>19.301</td>
<td>Research Methodology &amp; Biostatistics</td>
<td>4</td>
</tr>
<tr>
<td>19.302</td>
<td>First Aid &amp; CPR</td>
<td>4</td>
</tr>
<tr>
<td>19.303</td>
<td>Introduction to Treatment</td>
<td>4</td>
</tr>
<tr>
<td>19.304</td>
<td>General Medicine</td>
<td>4</td>
</tr>
<tr>
<td>19.305</td>
<td>General Surgery</td>
<td>4</td>
</tr>
<tr>
<td>19.306</td>
<td>Orthopedics and Traumatology</td>
<td>4</td>
</tr>
<tr>
<td>19.307</td>
<td>Orthopedics and Sports Physiotherapy</td>
<td>4</td>
</tr>
<tr>
<td>19.401</td>
<td>Cardio-Respiratory &amp; General Physiotherapy</td>
<td>4</td>
</tr>
<tr>
<td>19.402</td>
<td>Allied Therapies</td>
<td>4</td>
</tr>
<tr>
<td>19.403</td>
<td>Neurology &amp; Neurosurgery</td>
<td>4</td>
</tr>
<tr>
<td>19.404</td>
<td>Neuro-Physiotherapy</td>
<td>4</td>
</tr>
<tr>
<td>19.405</td>
<td>Community Medicine</td>
<td>4</td>
</tr>
<tr>
<td>19.406</td>
<td>Community Based Rehabilitation</td>
<td>4</td>
</tr>
<tr>
<td>19.407</td>
<td>Ethics, Administration and Supervision</td>
<td>4</td>
</tr>
<tr>
<td>19.408</td>
<td>Evidence Based Physiotherapy Practice</td>
<td>4</td>
</tr>
</tbody>
</table>
19.101 Anatomy
Credit: 4
Content: General Histology, Study of basic tissues of the body, embryology, Regional Anatomy, thorax, cardiovascular system, mediastinum, pericardium, respiratory system, abdomen, pelvis, endocrine glands, musculo skeletal anatomy, neuro anatomy

19.102 Biochemistry
Credit: 4
Content: Nutrition, importance, calorific value, energy requirement of a person, balanced diet, carbohydrate chemistry, lipid chemistry, amino-acid chemistry, enzymes, Nucleotide and Nucleic acid Chemistry, Digestion and Absorption, Carbohydrate Metabolism, Lipid Metabolism, Amino acid and Protein Metabolism, Vitamins, Mineral Metabolism, Cell Biology, Muscle Contraction, Biochemistry of Connective tissue, Hormone Action, Acid-Base balance, Water balance, Electrolyte balance, Clinical Biochemistry

19.103 Biomechanics
Credit: 4
Content: Basic Concepts in Biomechanics: Kinematics and Kinetics, Joint structure and Function, Muscle structure and function, Biomechanics of the Thorax and Chest wall, The Temperomandibular Joint, Biomechanics of the vertebral column, Biomechanics of the peripheral joints, Analysis of Posture and Gait

19.104 Psychology
Credit: 4
Content: Introduction to psychology, growth and development, sensation, attention and perception, motivation, frustration and conflict, emotions, intelligence, thinking, learning, personality, social psychology.

19.105 Physiology
Credit: 4
Content: General Physiology, blood, nerve muscle physiology, cardiovascular system, respiratory system, digestive system, renal system, endocrine system, reproductive system, special senses, nervous system, physiology of exercise, Effect of gravity / altitude /acceleration / pressure on physical parameters, physiology of age, applied physiology, pulmonary functions, cardiovascular functions, muscles and nervous system functions, blood functions, metabolic functions

19.106 Sociology
Credit: 4
Content: Meaning- Definition and scope of sociology, its relation to Anthropology, Psychology, Social Psychology, Social Factors in Health and disease situations, socialization, social groups, family, community, culture and health, social change, social problems of disabled, social security, social worker.

19.107 Basic Nursing
Credit: 4
Content: Nursing principles. Inter-Personnel relationships, Bandaging, Nursing Position, Lifting and Transporting Patients, Bed side Management, Methods of Giving Nourishment, Care of Rubber Goods, Surgical Dressing

19.201 Orientation to Physiotherapy
Credit: 4
Content: Patterns of Health Care Delivery, National Trends and resources, Components of Physiotherapy Profession, Role of Physiotherapy in meeting Health Care, Needs in India, Physiotherapist as 'Educator', Typical Job settings, Common problems and solutions

19.202 English
Credit: 4

19.203 Pathology
Credit: 4
Content: Introduction to Pathology, Cell injuries, Inflammation and Repair, Immunopathology, Infectious diseases, Circulatory Disturbances, Growth Disturbances and Neoplasia, Nutritional Disorders, Genetic Disorders, Hematology, Leukocytic disorders, Respiratory System, Cardiovascular Pathology, Alimentary tract, Hepato – biliary pathology, Lymphatic System, Musculoskeletal System, Endocrine pathology, Neuropathology, Inflammations and Infections, Dermatopathology

19.204 Microbiology
Credit: 4
Content: General Microbiology, Routes of infection and spread, Physiology, Antimicrobials, Immunology, Bacteriology, General Virology, Mycology, Clinical/Applied Microbiology

19.205 Pharmacology
Credit: 4
Content: General Pharmacology, Autonomic Nervous system, Cardiovascular Pharmacology, Neuropharmacology, Disorders of Movement, Inflammatory/ Immune Diseases, Digestion and Metabolism, Geriatrics

19.206 Exercise Therapy
Credit: 4
19.207 Electrotherapy
Credit: 4

19.301 Research Methodology and Biostatistics
Credit: 4
Content: Introduction to Research methodology, Research problem, Research design, Sampling Design, Measurement & scaling techniques, Methods of data collection, Sampling fundamentals, Processing & analysis of data, testing of hypothesis, computer application in research, Meaning, definition, characteristics of statistics, Tabulation of Data, Measure of Central Tendency, Probability and Standard distributions, Sampling techniques, Analysis of variance & covariance

19.302 First Aid and CPR
Credit: 4
Content: Importance of First Aid in Physiotherapy, examination of Vital Signs, first Aid in cardiac arrest, first Aid in Respiratory failure, first Aid in Burns, first Aid in Electric shock, first Aid in Drowning, first Aid in Spinal cord injuries, first Aid in Hypovolemic Shock, first Aid in Poisoning, instrumentation used in First Aid (First Aid kit), first Aid in RTA, indication of CPR, assessment and technique of CPR, artificial ventilation.

19.303 Introduction to Treatment
Credit: 4
Content: General Information regarding Hospital wards, Patients hospital records and functioning of department in patient management and departmental clinical units, History taking, assessment, tests, Patient communication, documentation of findings, treatment organization and planning/execution for intervention, record keeping and information retrieval, techniques of use of electrotherapy equipments on patients, monitoring of dosages and winding up procedure, introduction about standardized tests and scales used in various types of cases for assessment and interpretation, exercise therapy treatment organization and methods of application on various types of cases

19.304 General Medicine
Credit: 4
Content: Infection, Poisoning, Food and Nutrition, Endocrine diseases, Diseases of the blood, Diseases of the digestive system, Cardiovascular Disease, Respiratory Disease, Diseases of the Skin, Pediatrics, Psychiatric Disorders

19.305 General Surgery
19.306 Orthopedics and Traumatology
Credit: 4


19.307 Orthopedics and Sports Physiotherapy
Credit: 4

Content: PT assessment for Orthopedic conditions - SOAP format, Fractures - types, classification, signs and symptoms, complications, Fracture healing – factors affecting fracture healing, Specific fractures and dislocations, Selection and application of physiotherapeutic techniques, maneuver's, modalities for preventive, curative and rehabilitative means in all conditions, Principles of various schools of thought in manual therapy, Degenerative and Inflammatory conditions, Infective conditions, Define, review the postural abnormalities of spinal column, clinical features, deformities, medical and surgical management, Deformities, Cerebral palsy, Poliomyelitis, Leprosy, Amputations, Spinal conditions, Effects of spinal traction, types of traction, Osteoporosis- causes, predisposing factors, investigations and treatment, orthopedic surgeries, Shoulder joint Elbow and forearm, Wrist and Hand, Hip: Joint surgeries, Knee, Ankle and foot, Introduction to Bio-Engineering, Sports Physiotherapy, Applied Yoga in orthopedic conditions.

19.401 Cardio-Respiratory and General Physiotherapy
Credit: 4

Content: Anatomical and Physiological differences between the Adult and Pediatric lung, Bedside assessment of the patient-Adult & Pediatric, Investigations and tests – Exercise tolerance Testing, Physiotherapy techniques to increase lung volume, Physiotherapy techniques to decrease the work of breathing, Physiotherapy techniques to clear secretions, Drug therapy, Management of wound ulcers, Physiotherapy in dermatology, Neonatal and Pediatric Physiotherapy, Physiotherapy in Obstructive lung conditions, Physiotherapy in Restrictive lung.
conditions, Management of breathlessness, Pulmonary Rehabilitation, Physiotherapy following Lung surgeries, Respiratory failure – Oxygen Therapy and Mechanical Ventilation, Introduction to ICU, Burns management, Physiotherapy management following cardiac surgeries, Cardiac Rehabilitation, Physiotherapy management following PVD, Abdominal Surgeries, Management of Amputations following Diabetes, PVD, Physiotherapy intervention in the management of Medical, Surgical and Radiation Oncology Cases, Home program and education of family members in patient care, Physiotherapy in Obstetrics, Health Fitness and Promotion, Applied Yoga in Cardio-respiratory conditions

19.402 Allied Therapies
Credit: 4

19.403 Neurology and Neurosurgery
Credit: 4
Content: Disorders of function in the context of Pathophysiology, Anatomy in Neurology and Cortical Mapping, Classification of neurological involvement depending on level of lesion, Neurological assessment, Investigations, Neuro-ophthalmology, Deafness, vertigo, and imbalance, Lower cranial nerve paralysis, Cerebro-vascular diseases, Head injury, Higher cortical, neuro psychological and neurobehavioral disorders, Movement disorders, Cerebellar and coordination disorders, Spinal cord disorders, Brain tumors and spinal tumors, Infections of brain and spinal cord, Motor neuron diseases, Multiple sclerosis, Disorders of neuromuscular junction, Muscle diseases, Polyneuropathy, Focal peripheral neuropathy, Paediatric neurology, Toxic, metabolic and environmental disorders, Introduction, Indications and Complications of following Neuro surgeries.

19.404 Neuro-Physiotherapy
Credit: 4
surgical assessment and treatment following conditions, Applied Yoga in Neurological conditions

19.405 Community Medicine
Credit: 4
Content: Health and Disease, Dimensions and Indicators of Health, Concept of well-being, Epidemiology, definition and scope. Dynamics and modes of disease transmission, Screening for Disease, Epidemiology of communicable disease, Public health administration, Health programmes in India, Demography and Family Planning, Preventive Medicine in Obstetrics, Nutrition and Health, Environment and Health, Hospital waste management, Disaster Management, Occupational Health, Mental Health, Health Education

19.406 Community Based Rehabilitation
Credit: 4
Content: Rehabilitation: Definition, Types, Community, Community Entry strategies, CBR and Community development, Introduction to Community Based Rehabilitation, Principles of Community based Rehabilitation, Planning and management of CBR Programmes, Disability, Disability Evaluation, Role of Government in CBR, Role of Social work in CBR, Role of voluntary Organizations in CBR, National District Level Rehabilitation Programme, Role of Physiotherapy in CBR, Screening and rehabilitation of pediatric disorders in the community, Extension services and mobile units, Vocational training in rehabilitation, Geriatrics, Industrial Health & Ergonomics

19.407 Ethics, Administration and Supervision
Credit: 4
Content: Ethical principles in health care, Ethical principles related to physiotherapy, Scope of practice, Enforcing standards in health profession, Medical ethics and Economics in clinical decision-making, Rules of professional conduct, Confidentiality and Responsibility, Malpractice and negligence, Provision of services and, advertising, Legal aspects, Memorandum Of Association & Rules and Regulations, Branches of administration, Nature and scope of administration, Principles of hospital administration and its applications to physiotherapy, Planning and organization, Financial issues including budget and income generation, Hospital administration, National health policy and health care system in India, Organization of physiotherapy department, Organizing meetings, committees, and negotiations, Personnel management, Material management, Quality assurance, Public relations in hospital and human resource management.

19.408 Evidence Based Physiotherapy
Credit: 4
Content: Introduction to Evidence Based Practice: Concepts of Evidence based Physiotherapy: Awareness, Consultation, Judgement, Development of Evidence based knowledge, Evidence Based Practitioner: The Reflective Practitioner, Finding the Evidence: Measuring outcomes in Evidence Based Practice, Measuring Health, Outcomes, Measuring clinical outcomes, Searching for the Evidence, Assessing the Evidence, Economic evaluation of the evidence, Using the evidence, Practice guidelines,
algorithms, and clinical pathways, Communicating evidence to clients, managers and funders, Research dissemination and transfer of knowledge