SCHOOL OF PHYSIOTHERAPY
D. Y. PATIL UNIVERSITY
(established under Section-3 of UGC Act.1956 vide notification no. F. 9.21/2000.U.3 dated 20.06.2002 of the Govt. of India)

SYLLABUS

MASTER OF PHYSIOTHERAPY

(M.P.T.) DEGREE COURSE

Academic year 2018-19 and Progressively

Sector- 7 Dr. D.Y. Patil Vidyanagar, Nerul, Navi Mumbai.
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Vision, Mission & Goals of the University

Vision

To provide quality in all spheres of higher learning in general and Health Services in particular to all including those in the rural and urban areas of the nation, keeping in view the societal needs in the global context.

Mission

To impart and disseminate knowledge, develop competencies and also to provide for Research and Development in the emerging areas of Health Sciences, Science and Technology, Business Management, Hospitality Management, Law, Liberal Education, Teacher's Education, Sports etc.

Goals

To be recognized as one of the leading institutes of higher learning in India and gain recognition in the global arena.

INTRODUCTION

a) D.Y. PATIL UNIVERSITY:

Visualizing the power of quality as early in the 1980, Padmashree Dr. D.Y. Patil started providing facilities for higher education for the young talented students over the years. The D.Y. Patil Group with its commitment and dedication has earned a reputation of being a provider of quality education in particular in areas of professional significance. It has 150 educational institutions from the Pre-primary stage to Post Graduate stage located in Mumbai, Navi Mumbai, Pune and Kolhapur catering to the educational needs of aspiring boys and girls.

In the Medical and Dental education, Dr. D.Y.Patil Medical College and Dr. D.Y.Patil Dental College & Hospital, Navi Mumbai, have been providing quality education since 1990. Recognizing this, on the recommendations of the University Grants Commission the Government of India has declared these two colleges of Padmashree Dr. D.Y.Patil as a Deemed to be University.

In 2009 following Departments under the ambit of Dr. D. Y. Patil Vidyapeeth have been approved by University Grants Commission:

- D. Y. Patil School of Ayurved & Research Institute
- School of Physiotherapy
- School of Biotechnology & Bioinformatics
- School of Business Management
- School of Education
- School of Hospitality & Tourism Studies

The Association of Indian Universities has also accepted this University as its member.

The students benefit from the experience of quality teachers and the excellent infrastructure that they are provided with to help them realize their dreams of becoming competent professionals who can contribute to cause of national development.

The degrees and diplomas awarded by this University have the same status and recognition as those awarded by any Indian University recognized by the University Grants Commission, New Delhi. This University operates its educational programmes in accordance with the norms, regulations and guidelines laid down by the various statutory Central Government Bodies - Medical Council of India, Dental Council of India, Central Council of Indian Medicines and All India Council of Technical Education, New Delhi etc.

b) SCHOOL OF PHYSIOTHERAPY, D.Y PATIL UNIVERSITY.

Physiotherapy plays an important role in rehabilitating patient to his or her predisease status. It is said that a physician adds years to life while a Physiotherapists adds life to years.

In 2009, Department of Physiotherapy started Master of Physiotherapy programme of two years duration, MPT Part I & Part II. The programme provides an educational experience of the essentials required for the health care in the country. The educational process involves knowledge of fundamental & recent advances, ability to make logical / clinical decisions regarding patient management & adopt interventions of choice independently.

The department of Physiotherapy is very well equipped with modern and advanced Electrotherapeutic and Exercise therapeutic equipments. Department boasts of State of the Art Electrotherapeutic & Electrodiagnostic Unit, Kinesiotherapy & Physical Diagnosis Unit, Musculoskeletal Physiotherapy Unit, Neuro Physiotherapy Unit, Cardiovascular & Respiratory Physiotherapy Unit, Sports Physiotherapy Unit & Unit of Physiotherapy in Community Health. The faculty comprises of well qualified, competent, enthusiastic Post Graduate teachers. MPT Part I curriculum is common to all the post graduate students irrespective of the speciality which includes an update of the Basic Sciences such as Biomechanics & Applied Physiotherapy & Biophysics, Advanced skills of assessment for improving abilities in functional diagnosis and clinical reasoning. It also includes Allied Subjects such as Management, Ethics & Teaching Technology.

MPT Part II offers following five specialties:-

- Musculoskeletal Physiotherapy
- Neurophysiotherapy
- Cardiovascular and Respiratory Physiotherapy
- Physiotherapy in Community Health
- Sports Physiotherapy

Curriculum includes study of any one Speciality selected from above & an independent research project/ dissertation, preferably based on the Specialty.
There is good intra and inter faculty interaction and various integrated programmes are held to bring about a good learning experience.

The syllabus of M.P.T. has been developed under the supervision of Prof. Mrs. Sujata Yardi, Director & Chairperson of the Post Graduate Physiotherapy Board of Studies in consultation with the faculty and further scrutinized by the academic section.

2. AIMS AND OBJECTIVES OF M.P.T DEGREE COURSE

2.1 The Master of Physiotherapy (speciality) Programme is directed towards rendering training in Speciality Clinical fields to enhance professional competence in order to fulfill requirement for Physiotherapy Education and Practice.

Aims

On completion of the course of study having successfully passed the examination, the candidate would be able

- to function as a consultant in the respective physiotherapy speciality through knowledge of the fundamental and recent advances
- to make logical / clinical decisions regarding patient management & adopt interventions of choice independently
- to acquire skills in teaching technology & gain experience in research methodology
- to practice Physiotherapy in respective Speciality, maintaining the highest regards for ethical aspects
- to acquire expertise in clinical reasoning, problem solving and measurement of treatment outcome, emphasizing
  on the recent diagnostic & therapeutic trends in the concerned speciality
- to take up teaching assignments independently for undergraduate teaching programme.

Objectives

At the end of the course, the candidate shall be able to:

- Acquire in-depth knowledge of structure and function of human body related to the respective branch of speciality, movement dysfunction of human body, cause thereof, & of principles underlying the use of physiotherapeutic interventions, for restoring movement dysfunction towards normalcy.

- Demonstrate skill in Physical & Functional diagnosis pertaining to patient under care.
- Demonstrate ability to make clinical decision (based on evaluation) regarding Physiotherapy strategy techniques and select appropriate outcome measures based on the comprehensive knowledge of speciality.
- Planning and implementation of treatment programme adequately and appropriately for all clinical conditions 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 implementing evidence-based skill in the management

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

- Demonstrate ability to critically appraise recent physiotherapeutic and related literature from journals & adopt diagnostic & therapeutic procedures based on it.

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

- Demonstrate proficiency in conducting a professional scientific research, documentation & presentations at various levels.

3. REGULATIONS RELATING TO MASTER OF PHYSIOTHERAPY (M.P.T) DEGREE COURSE

3.1 PREAMBLE:

3.1.1 This syllabus is framed under the provision of Rule 26 (C) of the MOA 2003 of the University.

3.1.2 The Master of Physiotherapy programme shall be under the Faculty of Medicine.

3.1.3 The name of the Degree programme shall be Master of Physiotherapy (M.P.T)

3.2 ELIGIBILITY:

3.2.1 Every candidate for admission to the course for the degree of Master of Physiotherapy (Speciality) should have the Bachelor degree in Physiotherapy of the University or a degree of another University recognized as equivalent thereto.

3.3. DURATION OF THE COURSE:

3.3.1 Master of Physiotherapy (speciality) shall be a full time course with duration of **two** academic years

3.4. MASTER OF PHYSIOTHERAPY CURRICULUM:

3.4.1 The aim and objectives of the M.P.T curriculum is to train a post- graduate candidate in the respective speciality to enable him to function as a consultant in the respective physiotherapy speciality thorough knowledge of the fundamental and recent advances. He should be able to make logical / clinical decisions regarding patient management & adopt interventions of choice independently. During this period, he will be expected to acquire skills in teaching technology & gain experience in research methodology. He should have highest knowledge of ethical aspects to practice Physiotherapy in respective Speciality,

3.4.2 The teaching and training programme shall be evolving one and there shall be more emphasis on demonstration, clinical work, seminars and group discussion than on classroom teaching. The student shall have expertise in clinical and theoretical framework in respective speciality.

3.4.3 The progress of the student shall be monitored through the seasonal examinations. A record of student's work shall be maintained which would form the base for internal assessment of MPT Part I. The students shall be encouraged to do clinical presentations, to participate in group discussions and seminars, to enable them to develop personality, expression and acquire depth of knowledge. Student is expected to submit a research proposal during MPT part I and submit the dissertations during MPT part II six months prior to university examination.

3.5. REGULATIONS AND SCHEME OF EXAMINATION (MPT COURSE):

3.5.1 The scheme of examination for the M.P.T. course shall be divided into two University examinations, namely, MPT Part I examination at the end of 1st academic year, MPT Part II examination at the end of 2nd academic year.

3.5.2 The examination shall be open to a candidate who satisfies the requirement of attendance, ***minimum 50% in Prelims conducted annually each year and submission of research synopsis within 6 months in 1st year and submission of Dissertation by the end of 6 months in the 2nd year.***

3.5.3 Certificate to the above effect be procured from the Head of the Department by the candidate along with the application for examination and the prescribed fee. Examination shall be held twice in a year.

3.6. MAXIMUM MARKS IN EXAMINATION:

3.6.1 For passing the examination, the candidate must secure a minimum of 50% marks of total marks each in theory and practical.

3.7. DURATION OF EXAMINATION:

3.7.1 Each written paper of 100 marks shall be of 3 hours duration.

3.8. ATTENDANCE:

3.8.1 85% attendance is mandatory in each term of each year to be eligible to appear for Annual University Exams

CURRICULUM FOR THE MASTERS DEGREE IN PHYSIOTHERAPY [SPECIALITY]
M. P.T. [Sp]

Title – This course shall offer FIVE specialties & the respective Degree shall be called as follows –

1. Master of Musculo-skeletal Physiotherapy ----------M.P.T(Musculoskeletal Conditions)
2. Master of Neuro Physiotherapy----------M.P.T.(Neurological Conditions)
3. Master of Cardio Vascular & Respiratory Physiotherapy----M.P.T. (Cardio vascular & Respiratory Conditions)
4. Master of Community Physiotherapy----------M.P.T.(Community health)
5. Master of Sports Physiotherapy----------M.P.T.(Sports)

Duration –

This course is of total 80 weeks over a period of two academic years. It is conducted in two Parts i.e. - M.P.T part I & M.P.T. part II. M.P.T. Part – I having duration of 39 weeks in one academic year & M.P.T. Part- II having 41 weeks in next academic year respectively. University examination shall be held at the end of Part - I & II respectively.

Total Transcript hours ----------=3520 hours

6 ½ hours / full day = 39 hours / week x 39 weeks = 1521 hours in M.P.T. part-I + 1599 hours in M.P.T. part –II = 3120 hours + additional clinical 200 hours/ year for "On Call / Sunday/ Holiday Duty".

M.P.T. Part – I – Duration- 39 weeks [1721 hours = 1521+200]

1) Didactic/ clinical training / lab-5 hrs / week = 195 hrs
2) Regular Clinical posting – 30 hrs/ week x 39 week = 1170 hrs + On Call duty 200 hrs= 1370 hrs / year

3) Scientific Inquiry – 156 hrs [includes projects / review of literature/ seminars/ case presentation etc.

M.P.T. Part – II – Duration- 41 weeks [1799 hours = 1599+200]

1) Didactic/ clinical training / lab-3 hrs / week = 123 hrs
2) # Regular Clinical posting – 24 hrs/ week x 41 week = 984 hrs [# the student shall be permitted to complete any one clinical assignment out side the institute in need be, with the consent of the Guide & the H.O.D.] + On Call duty 200 hrs= 1184 hrs / year
3) Dissertation & Scientific Inquiry – 492 hrs.

Dissertation should be submitted 6 months prior to the MPT Part II University examination

Course Description -

Part –I – This course is common to all the students. This course includes an update of the Basic Sciences such as Biomechanics & Applied Physiotherapy, Biophysics etc for improving abilities in functional diagnosis and clinical reasoning. This course also includes Allied Subjects such as Management, Ethics & Teaching Technology. The candidate has to study 5 Cases for presentation at the time of practical examination.

Part –II – This course includes study of any one Specialty selected from above & an independent research project/ dissertation, preferably based on the Specialty.

[Please see the syllabus for further details]

Medium of Instruction –English

Eligibility-

Candidate holding a Degree in Physiotherapy from a recognized university in India or abroad.
The candidate should be a member of Maharashtra State OTPT Council.
He / She shall be belonging to at least 10+2+3 ½ years education pattern.

Admission –

The course shall commence in the second half of the academic year. The Candidate will select the Speciality as per the choice / merit at the time of admission at the M.P.T. Part- I. Candidate will be get the transcript only after the completion of the entire course. Transcript for only M.P.T. Part-I will not be issued to any candidate.

A. In case there is any vacancy created during its first term of M.P.T Part – I, such vacancy shall be filled at the beginning of the second term, by selecting the candidate from the waiting list.
B. One PG teacher shall register not more than 3 students per academic year as a guide.

Attendance –

The candidate shall put up minimum 85 % attendance requirement as per the University byelaws with satisfactory performance in the didactic / practical/* Clinical training, & attendance requirement as per the University byelaws with satisfactory performance in Clinical posting in Each assignment which will be a pre-requisite [to be duly certified by the Guide & H.O.D.] for the admission at the respective university examination a] A candidate who does not fulfill the required attendance or/ & satisfactory performance in the didactic/ practical/* Clinical training or clinical posting, shall repeat the term/s till he/she fulfils the prescribed requirements.

Hostel facility –

It will be Mandatory, in case the candidate is assigned for a Residency post.

SYLLABUS --------M.P.T [Part – I]

Manual Medicine & Applied Physiotherapy

Objectives –

At the end of the course, the candidate will-

- Acquire the knowledge & skill of various approaches of Manual therapy for Joints of the limbs/spine.
- Be able to integrate the Manual Therapies to rehabilitate the Mechanical Neuro – Muscular Problems
- Be able to impart knowledge & clinical training to undergraduate students in Manual therapy

Syllabus –

1. Physiological and accessory movements, Biophysics of contractile and non contractile tissues, Response to mechanical loading.
2. Principles of Articular Neurophysiology and its Clinical Applications.
3. History of Manual Therapy. Overview of various Manual Therapy approaches for all the skeletal joints.
4. Clinical reasoning and differential clinical diagnosis based on various approaches such as Maitland, Kaltenborne, Cyriax, Mulligan, Meckenzie etc.
5. Principles of different soft tissue mobilizations like Myofacial Techniques, Neural Tissue Mobilization, Muscle Energy Technique etc.
6. Practical application of various Manual Therapy modes given in no. 4 & 5 above.
7. Therapeutic Exercise as an adjunct to manual therapy.

Advanced Electro Therapeutics

Objectives –

At the end of the course, the candidate will –

- Acquire the update knowledge of Production / biophysics, the Physiological & therapeutic effects of various Electrical Currents, Thermal Agents, Ultrasound & Electro-Magnetic Radiations & Potential Risk Factors on prolonged exposure.
- Acquire the knowledge about various Pharmaco Therapeutic agents to be used in combination with various Electrotherapeutic modes, with appropriate clinical decision & reasoning in the management of Pain, Tissue healing / Wound care and skin conditions.
- Be able to train the undergraduate students in this subject at pre-clinical level.

Syllabus –

1. Recent concept of Physiological and Therapeutic Effects of Low, Medium and High Frequency Currents.
2. Cellular response to environmental and man made Electro magnetic field, Risk factors of prolonged exposure, Safety measures.
3. Advanced Electrotherapeutics in the management of Pain including neuropathic, psychosomatic pain.
4. Principles of combinations of drugs with Therapeutic Currents, Ultrasound.
5. Advanced Electro Therapeutics in Tissue healing, Wound care, Management of Scars keloids, Muscle Plasticity & Integumentary Conditions.
6. Biofeedback – Principles and Applications.

Electro-Physiology and Electrodiagnosis

Objectives-

At the end of the course, the candidate will –

- Be able to interpret the E.M.G. and Nerve Conduction Studies with appropriate clinical reasoning.

- Acquire the sound knowledge of use of E.M. G. machine for the simple Electrodiagnostic studies of motor unit and methodology of Sensory and Motor Conduction and Reflex Study.
- Expertise in the skill of using various electrical currents for the purpose of Electrodiagnostic & be able to interpret the same with appropriate clinical reasoning.
- Be able to train the undergraduate students at Preclinical & Clinical level.

Syllabus –

1. Physiology of Resting Membrane Potential, Action Potential, Propagation of action Potential
2. Classification – a) Muscle fiber b) Nerve fiber c) Motor unit
3. Synapse and Synaptic Transmission, Transmission at Neuro Muscular Junction
4. Propagation of nerve impulses, Physiology of Muscle Contraction
5. Electrical excitability of muscle and nerve and propagation of nerve impulse.
6. Muscle plasticity in response to electrical stimulation.
7. Pain modulation – Afferent pain transmission and role of central nervous system
8. Reflex – Classification and Properties.
9. Sensations – Path ways and Classification.
10. Type of Nerve injury and Wallerian Degeneration.
11. Electro Diagnosis with Therapeutic Currents – S.D. curve, Faradic Galvanic Test, Tests for Sensory & Pain Threshold & Pain tolerance.
12. Electromyography – a) Instrumentation, Electrodes b) E.M.G.- Normal and Abnormal.
13. Nerve Conduction - a) Sensory/Motor b) "F" Wave c) "H" Reflex d) Blink Reflex
14. Decremental Studies for Neuro Muscular Junction Disorders.

Biomechanics & Bio-engineering

Objectives-

At the end of the course, the candidate will –

- Acquire the updated knowledge of the Patho-mechanics of the Human Movement

- Be able to apply the principles of Biomechanics in functional analysis of movement, Ergonomic Analysis / advice and Prostheses / Orthotics
- Be able to prescribe, check out & train in the application of lower limb prostheses, and Spinal / lower extremity Orthosis used as mobility aids
- Be able to prescribe the Ergonomic alterations at the Work Place and Industry.
- Be able to fabricate, temporary hand splints & functional splints for Gait training.
- Acquire skill in disability evaluation & will be able to CERTIFY the same.
- Be able to impart knowledge & train the students in this subject at the undergraduate level.

Syllabus –

1. Forces, Equilibrium, Levers- laws –mechanical advantage
2. Applied mechanics in the evaluation procedures
3. Material properties of bones and soft tissues.
4. Internal & External forces during Posture & Activity.
5. Kinetics / Kinematics of extremity & spinal joints including T.M. Joint, Posture, Gait, Jogging, Running, Climbing up and down & A.D.L., Methods of kinetic and kinematic Investigations, Applied mechanics in Physiological and Pathological deviations.
6. Biomechanics of Thoracic cage, Biomechanics of Respiration & Circulation.
7. Analysis of functional hazards related to Environment / Industry and Clinical reasoning for the appropriate Ergonomic advise.
8. Applied mechanics in the application of Prostheses, Orthoses & Mobility aids – Materials, designs and biomechanical compatibility.
9. Requirement and Prescription criteria in Orthotic, Prosthetic application, with reference to Biomechanical and ergonomic consideration for energy efficiency and safe function.
10. Check out procedures in Prosthetic & Orthotic Fabrication of temporary splints for Face, Hand & Lower Limb for support, prevention of deformities & functional training.

Neuro – Development & Principles of Neuro-physiological approaches

Objectives-

At the end of the course, the candidate will –

- Acquire updated knowledge of development of nervous system with emphasis on sensory-motor behavior with special reference to Locomotion
- Be able to understand various aspects of Physiological aging of the nervous system.
- Be able to identify the abnormalities in the development of nervous system
- Be able to examine assess & analyze dysfunction of the nervous system with special reference to locomotion.
- Describe concepts of various Neuro-physiological approaches of Physio Therapy management.
- Describe concepts of Motor Control, Motor Learning and Relearning with special emphasis on locomotion. Recent concept regarding functions of nervous system.

Syllabus –

1. Applied Neuro Anatomy and Neuro Physiology – Neuron, synapse and factors exerting an influence on motoneuron pool, production of voluntary movement, reflexes & reactions.
2. Neurodevelopment –a) Sensory-Motor integration with emphasis to locomotion b) Cognition & Social behavior.
3. Abnormalities of Neurodevelopment.
4. Assessment movement a) Tone b) Coordination c) Abnormal movements
5. Integration of assessment data & analysis & application of Principles of Management.
6. Prioritizing Short & Long term goals in management
7. Strategies to improve Motor function.
8. Assessment of Neurogenic Hand and Foot
9. Neuro-Physiology of aging & its effects on Movement, Posture and Locomotion.

Exercise Physiology, Fitness & Health Promotion

Objectives-

At the end of the course, the candidate will –

- Acquire updated knowledge of Physiology of Physical Exercise and will be able to interpret the Physiological effects of the vital parameters of simple laboratory tests such as “Stress Test”
- Acquire the skill of using Bicycle-Ergometry & Treadmill for the purpose of General Fitness & Exercise tolerance for Healthy persons.
- Be able to prescribe & train for general fitness and health promotion for children, pregnant and lactating females, obese and elderly subjects.
- Be able to impart knowledge for training the undergraduate students.

Syllabus –

1. Assessment of Cardio-Vascular and Respiratory Conditions - Principles of assessment, Tests for Cardio-Respiratory fitness. Interpretation of Radiological and Routine Biochemical Investigations Differential Diagnosis. Cardio-Vascular and Respiratory Dynamics including Neural and Hormonal Control
2. Role of Aerobic and Anaerobic mechanism during exercises.
3. Acute effects of High, Burst and Short duration exercises.
4. Acute effect of Steady level exercise on following parameters – Blood flow, Heart Rate, Blood Pressure, Pulse Rate, Respiration Rate, Acid Base Balance, Body Temperature, Fluid-Electrolyte Balance and Substrate Utilization.
5. Exercise Testing, Planning & Prescription, Aerobic and Anaerobic Exercise Training
6. Conditioning effects of various levels of Sub-Maximal Exercises.
7. Conditioning exercises for Strength / Endurance / Flexibility.
8. Fatigue – Types, Relevance with Exercise Tolerance tests & Training
9. Principles of health promotion for Growing Children, Healthy Adults, Pregnant /Lactating females, Elderly, Sports person
10. Obesity –exercises for weight reduction
11. Body temperature regulation

Nutrition & Diet

Objectives –

At the end of the course, the candidate will –

- Acquire the updated knowledge of requirement of ideal nutrition for general fitness & health promotion, in children, pregnant and lactating females, and sportsmen in field games / athletes and in aging population.
- Be able to prescribe appropriate diet during weight reduction programme & later, for maintenance / prevention of obesity.

Syllabus –

1. Nutrition – aerobic & anaerobic metabolism & various components of Food & Energy Values, Hormonal influence, O2/CO2 Transmission, Acid-Base balance, Electrolyte Balance.
2. Energy update – expenditure during rest, confinement during illness and various levels of Physical Exercises, factors influencing energy uptake and substrate utilization. Diet – for Growing Age, Pregnancy, Lactation, Acute Illness, Convalescent Period, High level of Physical Activity, Aging & Sports.
3. Body composition – Obesity – prescription of Diet & its modification during weight reduction programme.

Professional Issues, Ethics and Constitution

Objectives –

At the end of the course, the candidate will acquire the knowledge of

- Ethical Codes of Physiotherapy practice, Moral and Legal aspects of Physiotherapy practice
- Constitution and Function of Indian Association of Physiotherapists (IAP).

- Role of World Health Organization (WHO) and World Confederation of Physiotherapists (WCPT)

Syllabus-

1. Concept of Morality, Ethics and Legality.
2. Rules of Professional conduct, Medico Legal and Moral Implications.
3. Communication skills, Client interest and Satisfaction.
4. Inter Disciplinary Relation, Co-partnership, Mutual Respect, Confidence and Communication, Responsibilities of the Physiotherapists, Status of Physiotherapist in Health Care.
5. Role of Professional in Socio Personal and Socio Economical context
6. Need of Council Act for regulation of Professional Practice, Self-Regulatory role of Professional Association.
7. Constitution and Functions of IAP.
8. Persons with Disability Act
9. Role of WCPT, Various branches and special interest group of WCPT.

Administration, Management & Professional Practice

Objectives-

At the end of the course, the candidate will-

- Acquire the managerial & Management skills in Planning, implementation and administration in clinical practice [service / self employment] & academic activities including the skill of Documentation and use of information technology in professional practice.
- Be able to impart the knowledge to the undergraduate students.

Syllabus:-

1. Management - Concept of Theories of Management & their application to Physio Therapy practice with quality assurance at various levels of health delivery system, teaching institutions, & self employment – Managerial strategies of planning &

Organization of Structure, Delivery, funding of service delivery, information technology, time management& career development.

2. Administration & Marketing – personal Poliices –Communication & Contract. Administration principles based on Goal & Function at large Hospital / Domiciliary ser up / Private Clinic / Academic Institution
3. Methods of maintaining records – Budget planning
4. Performance analysis – Physical structure, reporting system, Man P Status, Functions, Quality & Quantity of Services, Turn over – Cost benefit, Contribution.

Community Health

Objectives-

At the end of the course, the candidate will –

- Acquire the In-depth understanding of the concept of Community Based Rehabilitation.
- Be able to assist in planning & organizing camps at Community level
- Be able to import services & training at the Community level effectively with minimum resources.

Syllabus-

1. Definition of Community, Concepts of Community, Community Based / Institutional Based Rehabilitation.
2. WHO definition of Health & Disease.
3. Health Care Delivery System – 3 tier.
4. Disability- types, evaluation & prevention, PWD Act (2001), modes of disability, attitude towards the disabled.
5. Health Promotion for All, peripubertal age group, women, aged, obese/overweight individuals, cardiovascular & pulmonary conditions, musculoskeletal conditions, neurological conditions, metabolic conditions & sports person.

6. Woman & Child care.
7. Geriatrics
8. Industrial Health

Teaching Technology

Objectives –

At the end of the course, the candidate will –

- Acquire the knowledge of concepts of Educational Objectives, various methods of teaching & learning, various evaluation methods & Principles of curriculum planning.
- Acquire the skill in communication, teaching skills in classroom, laboratory & clinical teaching including bed-side teaching.

Syllabus-

1. Role of an educator
2. The environment – Physical surroundings, colleagues. The necessities for ideal environment.
3. Process of learning– principles of learning (CHRIST), Principles of adult learning, learning and motivation, student teacher relationships.
4. Educational Objectives.
5. Teaching learning methods and aids – lecture as a teaching tool, Micro and small group teaching, bed side teaching for clinical skills, teaching learning aids.
6. Skill development- Clinical skills, Communication skills, Counseling skills
7. Evaluation – Mechanics of paper setting, M.C.Qs., validation of M.C.Q.s, M.C.Q. bank, S.A.Qs , L.A.Qs, Viva, Objective Structure Clinical Examination(O.S.C.E.), Objective Structure Practical Examination(O.S.P.E.)
8. Curriculum planning – Integrated teaching, Problem based learning, Evidence based medicine.
9. Continuing Medical Education.

Research Methodology & Bio-statistics

Objectives –

At the end of the course, the candidate will acquire the knowledge of

- Objectives and Types of Research, Criteria of Research.
- Basic concepts of research, Design problems & sampling techniques of research
- The knowledge of various types of study design & planning for the same
- The skill of planning for a Research Study
- The skill of various methods of Data Analyses.

Syllabus-

1. Meaning of Research, Research Approaches, Significance of Research, Research Process, Criteria of Good Research, Defining the Research Problem, Selecting the Research Problem, Necessity & Technique in defining the problem. Research Design: Developing a Research Plan.
2. Data Collection: Collection of primary data, observation method, interview method, data through questionnaires & schedules, collection of secondary data, selection of appropriate method of data collection, guidelines for developing questionnaire, Interview methods, Survey vs Experimental method
3. Processing & Analysis of data: Data analysis, Statistics & Research, measures of central tendency, Dispersion, Asymmetry, Relationship, Regression Analysis.
4. Testing of Hypothesis: Parametric tests, Non Parametric tests (Distribution free tests), Design & Analysis of Experiments.
5. Ethical Concepts in Research
6. Role of Computer in Research

SCHEME OF EXAMINATION - MPT PART I

Eligibility for Annual Exams

1. Minimum 50% in Prelims
2. Submission of research synopsis within 6 months in 1st year
3. Minimum 85% attendance in each term.

MPT Part I examination will be held at the end of first academic year.

Theory

There will be **3 papers**.

Paper I – Applied Physiotherapy I	**75 marks**
Paper II – Applied Physiotherapy II	**75 marks**
Paper III- Research and Biostatistics	5**0 marks**
Total	**200 marks**

- ✓ Paper I , Applied Physiotherapy I- will be based on Subjects Manual Medicine & Applied Physiotherapy, Advanced Electrotherapeutics, Electrophysiology & Electrodiagnosis, Biomechanics & Bioengineering , Teaching Technology.

- ✓ Paper II , Applied Physiotherapy II- will be based on Subjects Neurodevelopment & Principles of Neurophysiological Approaches, Exercise Physiology, Fitness & Health promotion, Nutrition & Diet, Community Health, Professional Issues, Ethics & Constitution and Administration, Management & Professional Practice.

- ✓ Paper III will be based on Research Methodology and Biostatistics

The pattern of question **Paper I & II** is as follows:

Q1) Long answer question	**20 mks**
Q2) Long answer question	**20 mks**
Q3) Short answer questions (any 5 out of 6) 7 mks each-	**35 mks**
Total	**75 mks** each

The pattern of question **Paper III** is as follows:

Answer ANY 5/6 **(10X 5= 50 mks)**

- 3 Questions on Research Methodology
- 2 Questions on Biostatistics

Practicals

- ✓ Case 1 - Based on Surgical conditions **75 Marks**
- ✓ Case 2 – Based on Medical conditions **75 Marks**
- ✓ Spots – 6 of 5 Marks each **30 Marks**

  Based on Electrodiagnosis, Orthosis/Prosthesis, Pulmonary Function Test, E.C.G., X-ray Chest/Extremities and Spine, ABG, etc.

- ✓ Internal Assessment **20 mks**

(10 marks allotted for 5 case presentations throughout the 1st year and 10 marks for Seminar Presentation throughout the 1st year)

Total Marks for Practicals **200 Marks**