

# **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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## **Department of Physiotherapy**

**Sri Devaraj Urs Academy of Higher Education and Research**  
(Deemed to be a university- Declared under Section 3 of the UGC Act, 1956)  
Tamaka, Kolar, Karnataka.

**REGULATIONS ON MASTER IN PHYSIOTHERAPY – 2022**

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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## SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

### VISION

"UNIVERSITY OF EXCELLENCE - KNOWLEDGE FOR POSTERITY"

### MISSION

- To Be A Global Center Of Excellence For Teaching, Training, and Research In The Field of Higher Education.
- To Inculcate Scientific Temper, Research Attitude And Social Accountability Amongst Faculty And Students.
- To Promote with Value Based Education For The Overall Personality Development and Leadership Qualities To Serve The Humanity.

### OBJECTIVES

- To provide need-based infrastructure and facilities to students to become responsible professionals with social commitment and accountability.
- To implement effectively innovative programmes in teaching learning and evaluation.
- To impart scientific and socio-cultural temperament among students to forge National identity and needs.
- To provide instruction and training in basic and advanced branches of learning.
- To provide facilities for research for the advancement and dissemination of knowledge.
- To undertake extramural studies, consultancy, extension programmes and field outreach services for the development of society.
- To collaborate with other Universities, Institutions of excellence and Research Organizations within the country and outside for the purpose of teaching, training, and research.
- To undertake need-based activities for the betterment of socially and educationally backward society.

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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## Department of Physiotherapy

### Vision

“Global excellence in physiotherapy education,  
health care and research performance”

### Mission

1. Providing outstanding learning environment for Physiotherapy education to enhance quality of life, health, fitness and mobility related to human movement.
2. Educate for client-centered, evidence-informed, inter-professional practice.
3. Produce competent and caring physiotherapist through excellent teaching, patient care and innovative therapy research.
4. Educate and train in advanced Physiotherapy practice for future and current Physiotherapist.
5. Contribute to community health care, mobility enhancement and disability prevention.
6. Promote leadership in physiotherapy management.

# MASTER IN PHYSIOTHERAPY (MPT) 2022

## CONTENTS

Section	Topics	Page Nos.
1.	Introduction	1-5
2.	Regulations governing master of physiotherapy degree program <ul style="list-style-type: none"><li>• Eligibility for admission</li><li>• Intake of the students</li><li>• Guide</li><li>• Criteria for recognition of (mpt) pg guide</li><li>• Duration of the course</li><li>• Medium of instruction</li><li>• Course content &amp; structure</li><li>• Methods of training</li><li>• Monitoring process</li><li>• Attendance</li><li>• Dissertation</li><li>• Change of guide</li><li>• Particulars of theory question papers and distribution of marks</li><li>• Scheme of examination</li><li>• Particulars of viva-voce</li><li>• Pattern of model question paper for mpt examination</li><li>• Scheme of examination</li><li>• Valuation of answer scripts</li><li>• Conduct of practical examination</li><li>• Criteria for declaring as pass in university examination</li><li>• Carryover policy</li><li>• Declaration of class</li><li>• Eligibility for graduation</li></ul>	6- 13
3.	Objectives <ul style="list-style-type: none"><li>• Master of Physiotherapy in Musculoskeletal disorders and Sports Physiotherapy (MPT-MSS)</li><li>• Master of Physiotherapy in Neurological sciences (MPT-NPD)</li><li>• Master of Physiotherapy in Cardio-Respiratory Disorders (MPT-CRD)</li><li>• Master of Physiotherapy in Community and rehabilitation</li></ul>	14-17

## MASTER IN PHYSIOTHERAPY (MPT) 2022

	<b>(MPT-CPT)</b> <ul style="list-style-type: none"> <li>• Master of Physiotherapy in Pediatrics (MPT-Ped.)</li> </ul>	
<b>4.</b>	<b>Course content</b> MPT-A-01 Physiotherapy Practice	<b>18-19</b>
<b>5.</b>	MPT –A-02 Research Methodology and Biostatistics	<b>20-21</b>
<b>6.</b>	MPT A-03 Basic Sciences –PART 1	<b>22</b>
<b>7.</b>	MPT-B-01 Basic sciences –PART 2	<b>23</b>
<b>8.</b>	MPT-B-02 Physiotherapy diagnosis and clinical decision making	<b>24</b>
<b>9.</b>	MPT –C- 01 – PART 1 Elective Subjects Applied Physiotherapeutics <ul style="list-style-type: none"> <li>• Physiotherapy in musculoskeletal disorders and sports.</li> <li>• Physiotherapy in neurological sciences.</li> <li>• Physiotherapy in cardio respiratory diseases.</li> <li>• Physiotherapy in community and rehabilitation</li> <li>• Physiotherapy in pediatrics.</li> </ul>	<b>25-28</b>
<b>10.</b>	MPT –D- 01 – PART 2 Elective Subjects Applied Physiotherapeutics <ul style="list-style-type: none"> <li>• Physiotherapy in musculoskeletal disorders and sports.</li> <li>• Physiotherapy in neurological sciences.</li> <li>• Physiotherapy in cardio respiratory diseases.</li> <li>• Physiotherapy in community and rehabilitation</li> <li>• Physiotherapy in pediatrics.</li> </ul>	<b>29-32</b>
<b>11.</b>	MPT –C- 02 – PART 1 MPT – D-02- PART 2 Advances in Elective Subjects <ul style="list-style-type: none"> <li>• Physiotherapy in musculoskeletal disorders and sports.</li> <li>• Physiotherapy in neurological sciences.</li> <li>• Physiotherapy in cardio respiratory diseases.</li> <li>• Physiotherapy in community and rehabilitation</li> <li>• Physiotherapy in pediatrics.</li> </ul>	<b>33-35</b>
<b>12.</b>	<b>ANNEX -1 CURRICULUM OUTLINE</b>	<b>36</b>

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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## INTRODUCTION

### PROGRAM TITLE

#### MASTER OF PHYSIOTHERAPY (MPT)

The Masters Degree in Physiotherapy is a two year program consisting of classroom teaching, self academic activities and clinical posting. In the first year theoretical basis of physiotherapy is refreshed along with research methodology and biostatistics. The students are rotated in all areas of clinical expertise during this period. They are required to choose their study for dissertation and submit a synopsis. During the second year the students will be posted in their area of specialty. They are required to complete and submit their dissertation. The learning program includes seminars, journal reviews, case presentations, case discussions and classroom teaching. Some of the clinical postings are provided at other reputed centers in the country in order to offer a wider spectrum of experience. The students are encouraged to attend conference, workshop to enhance their knowledge during the course of study. University examinations are held at the end of second year.

#### ELECTIVES OFFERED AND DEGREE AWARDED

1. Master of Physiotherapy in Musculoskeletal disorders and Sports Physiotherapy (MPT-MSS)
2. Master of Physiotherapy in Neurological sciences (MPT-NPD)
3. Master of Physiotherapy in Cardio-Respiratory Disorders (MPT-CRD)
4. Master of Physiotherapy in Community and rehabilitation (MPT-CPT)
5. Master of Physiotherapy in Pediatrics (MPT-Ped.)

#### GOALS OF COURSE

1. Preparation of a postgraduate student towards his/her professional autonomy with self regulating discipline at par with global standards
2. Formation of base of the professional practice by referral as well as first contact mode using evidence based practice.
3. Impartation of research basis in order to validate techniques & technology in practice to physiotherapy.
4. Acquainting a student with concept of quality care at the institutional as well as the community levels.
5. Inculcation of appropriate professional relationship in multidisciplinary set up, patient management and co partnership basis.

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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6. Preparation of students to address problems related to health education and community physiotherapy.
7. Practicing the concept of protection of rights of the community during referral as well as first contact practice.
8. Incorporation of concept of management in physiotherapy.
9. Experience in clinical training and undergraduate teaching partly.
10. Providing the honest, competent and accountable physiotherapy services to the community.

### **OBJECTIVES OF THE MASTER OF PHYSIOTHERAPY (MPT) PROGRAM:**

This program focuses on facilitating physiotherapy students to acquire ample knowledge, skills and clinical hands on practice eventuating the capacity to formalize an independent professional practice in the focused areas of interest.

The following are the objective of the Master in physiotherapy program :

This program will enable the student to -

1. Perform efficient physiotherapy assessment & appropriate diagnosis to identify the impairment of body structure, body function, environmental and personal factors and to address the activity limitations and participations restrictions.
2. Plan and implement ethical, evidence & need based, effective Physiotherapy treatment to clients with an array of conditions across the lifespan and the continuum of care, to all people irrespective of gender, caste, nation, states and territories, region, minority groups or other groups in acute, chronic cases, critical care, independent practice including health promotion and prevention.
3. Prevent impairments, activity limitations, participatory restrictions and disabilities in individuals at risk of altered movement behaviors due to health factors, socio-economic stressors, environmental factors and lifestyle factors and maintain/restore optimal function and quality of life in individuals with movement disorders.
4. Modify environmental, home and work access and barriers to ensure full participation in one's normal and expected societal roles.
5. Become an essential part of the health and community/welfare services delivery systems; practice independently of other health care/service providers and also within interdisciplinary rehabilitation/habilitation programs.
6. Undertake independent research in the field of physiotherapy.
7. Provide adequate knowledge about the treatment procedures and its benefit. Able to transfer knowledge and skills to students as well young professionals.

## **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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**At the completion of the program, the post graduate physiotherapy student will be able to:**

1. Demonstrate skill in Physical & Functional diagnosis pertaining to patient under his/her care.
2. 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.
3. Demonstrate ability to critically appraise recent physiotherapeutic and related literature from journals & adopt diagnostic & therapeutic procedures based on it.
4. Implantation of research basis in order to validate techniques & technology in practice to physiotherapy.
5. Address problems related to health education and provide competent and accountable physiotherapy services to the community.
6. It inculcates appropriate professional relationship in multidisciplinary set up, patient management and co partnership basis.
7. Display professional autonomy with self regulating discipline at par with global standards.
8. Formation of base of the professional practice by referral as well as first contact mode using evidence based practice.

### **GRADUATE ATTRIBUTES :**

Graduate attributes are developed in conjunction with physiotherapy specific knowledge, skills and attitude. They include

- Comprehensive and well founded knowledge of physiotherapy profession.
- Capacity for independent critical thought, rational inquiry and self directed learning.
- Cognitive, analytical and problem solving skills.
- Cultural competence with ethical and social responsibility based on understanding and appreciation of social and cultural diversity and respect for patient's rights and dignity.

The following post graduate attributes are considered as "essential requirements" to strengthen abilities of a Physiotherapist for widening knowledge, skills and abilities through meaningful learning experiences, and critical thinking. These attributes are necessary for completing the professional education enabling each post graduate to develop expertise in the specialty area and offer exclusive services in clinical practice.

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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Some of the characteristic attributes that a post graduate should demonstrate are as follows:

### 1. KNOWLEDGE & PSYCHOMOTOR SKILL

The student must demonstrate enhanced cognitive learning skills, ability to receive, interpret, remember, reproduce and use information in the cognitive, psychomotor, and affective domains of learning to solve problems, evaluate work, and generate new ways of processing or categorizing similar information listed in course objectives. To develop expert clinical reasoning and be able to function as a consultant as well as expert clinician in the specialty.

### 2. COMMUNICATION

Be able to effectively communicate information and safety concerns on conditions, procedures, home programs with patients, peers and colleagues in a timely manner within the acceptable norms of settings.

### 3. CRITICAL THINKING

Will apply analytical thought to a body of knowledge, analyze based on empirical evidence, draw relevant assumptions or implications, formulate arguments, critically evaluate policies and theoretical framework and formulate a scientific approach to knowledge development.

### 4. PROBLEM SOLVING

Will demonstrate capacity to extrapolate theoretical knowledge and apply competencies gained to solve problems and real life situations.

### 5. ANALYTICAL REASONING

Will evaluate reliability and relevance of evidence, synthesize data, assess validity of arguments supporting hypothesis, debate theoretical frameworks, draw valid conclusions and support them with evidence

### 6. RESEARCH RELATED SKILL

Present results of the experiment in form of scientific peer reviewed publications and demonstrate a sense of scientific enquiry and reflective thinking.

### 7. AWARENESS OF ETHICAL/LLEGAL ISSUES

Will demonstrate ethical values related to patient care, work practices, unbiased actions in all aspects of work and refrain from malpractice, unethical behavior, falsification, plagiarism, misinterpretation of data.

### 8. PROFESSIONALISM

Participate as team player in multidisciplinary teams, display professional and personal integrity and honesty and exhibit self reflection and self awareness.

### 9. LIFELONG LEARNER

## **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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Will demonstrate ability to acquire knowledge and skills through continuous learning, participation and engagement in self paced, self directed learning and education programs focused at personal and professional skill development.

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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## REGULATIONS GOVERNING MASTER OF PHYSIOTHERAPY DEGREE PROGRAM

### ELIGIBILITY FOR ADMISSION

Candidates who have passed B.Sc. (PT) or BPT degree from institutions where the mode of study is a full time program, with minimum 3½ years / 4 ½ years duration from this university or any other recognized university by UGC in India or abroad as equivalent with not less than 50% of marks in aggregate and have completed 6 months of compulsory rotating internship in a recognized Physiotherapy Colleges/university are eligible. Candidates who have passed BPT through correspondence or Distance Education program are not eligible.

OR

Candidates who have passed BPT through Bridge Course or through Lateral Entry after completing their Diploma in Physiotherapy from institutions where the mode of study is a full time program from this university or any other recognized university by UGC in India or abroad as equivalent with not less than 50% of marks in aggregate have completed 6 months of compulsory rotating internship in a recognized Physiotherapy Colleges/university are eligible. Candidates who have passed BPT through correspondence or Distance Education program are not eligible.

### INTAKE OF STUDENTS

The intake of students to the course shall be in accordance with the ordinance in this behalf.

The guide student ratio should be **1:3**

### GUIDE

- The academic qualification and teaching experience required for recognition by this university is as per the criteria for recognition of MPT teachers for guides.

### CRITERIA FOR RECOGNITION OF (MPT) PG GUIDE

1. M.Sc. (PT) /MPT with five years teaching experience working on a full-time position at a Recognized institution.
2. The age of guide / teacher shall not exceed 63 years.
3. The guide student ratio should be 1:3
4. Minimum of 2 publications in referred journal.

### DURATION OF THE COURSE

The duration of master of physiotherapy course shall be extended over a period of two continuous Years'(semester pattern) on a full-time basis. Any break in the career, power of extension of the course and the fixation of the term shall be vested with the University.

# **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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However the total duration to complete the course is 4 years.

## **MEDIUM OF INSTRUCTION**

English will be the medium of instruction for the subjects of study and for the examination of the MPT course.

## **COURSE CONTENT & STRUCTURE**

The course subjects will be outlined under two major headings – Core Subjects or Subjects mandatory for all students and Electives or Subjects of Specialty

## **METHODS OF TRAINING**

The training of postgraduate for MPT degree shall be on a full time pattern with graded responsibilities in the management and treatment of patients entrusted to his / her care. The participation of all the students in all facets of educational process is essential. Every candidate should take part in seminars, group discussions, clinical rounds, care demonstrations, clinics, journal review meetings & CME. Every candidate should be required to participate in the teaching and training programs of undergraduate students. Training should include involvement in clinical, practical work and research studies.

## **MONITORING PROCESS OF STUDIES (INTERNAL MONITORING)**

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects. Every candidate should take part in seminars, group discussions, clinical rounds, care demonstrations, clinics, journal review meetings & CME. Every candidate should be required to participate in the teaching and training programs of undergraduate students. Training should include involvement in laboratory experimental work and research studies.

Assessment:

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects.

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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**Periodic tests:** The Department may conduct periodic tests. The assessment will be comprised of Formative and summative like written theory papers, practical, viva voce and clinical in the pattern of university examination. Records and marks obtained in such tests will be maintained by the Department and sent to the University, when called for.

**Work diary:** Every candidate shall maintain a work diary and record his/her participation in the training programmes conducted by the department such as journal reviews, seminars etc. The work diary shall be scrutinized by the teachers and certified by the Head of the Department and presented in the university examination.

### **Graded responsibility in the care of patients and operative work includes -**

- Teaching Activities – UG Teaching
- Learning Activities : Self Learning, Use of computers & library
- Participation in departmental activities;
- Journal Review meetings
- Seminars
- Clinical case presentation
- Special clinics
- Inter departmental meetings
- Community work, camps / field visits
- Clinical rounds, bed side evaluation.
- Dissertation work
- Participation in conferences/ presentation of paper -Minimum 2 in two years
- Rotation and posting in other departments in any – minimum 2 months in 1 specialty

### **ATTENDANCE**

A candidate is required to attend a minimum of 80% of training and of the total classes conducted during each academic year of the MPT course. Provided further, leave of any kind shall not be counted as part of academic term without prejudice to minimum 80% of training period every year. Any student who fails to complete the course in this manner shall not be permitted to appear the University Examinations. A candidate who does not satisfy the requirement of attendance even in one subject or more will not be permitted to appear for University Examination. He / She will be required to make up the deficit in attendance to become eligible to take subsequent examination.

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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### DISSERTATION

Every candidate pursuing MPT degree course is required to carry out work on a selected research Project under the guidance of a recognized postgraduate teacher. The results of such a work shall be submitted in the form of dissertation. The dissertation is aimed to train a graduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis search and review of literature getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, and comparison of results and drawing conclusions.

Every candidate shall submit to the department of physiotherapy through guide in the prescribed proforma a synopsis containing particulars of proposed dissertation work within 3 months from the date of commencement of the course on or before the dates notified by the university. The synopsis shall be sent through the proper channel. Such synopsis will be reviewed by external valuator who is eligible to be an examiner and the university will register the dissertation topic

No change in the dissertation topic or guide shall be made without prior approval of the university. Guide will be only a facilitator, advisor of the concept and hold responsible in correctly directing the candidate in the methodology and not responsible for the outcome and results. The content of dissertation as follows (Introduction, Aims or objectives of study, Review of literature, Material and methods, Results, Discussion, Conclusion, References, Appendices.

The written text of dissertation shall not be less than 50 pages and shall not exceed 100 pages excluding references, tables, questionnaires and other annexure. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69" and bound properly. Spiral binding should be avoided. The guide, head of the department shall certify the dissertation.

Four copies of dissertation and 3 CD thus prepared shall be submitted to the controller of examinations through proper channel three months before final examination on or before the dates notified by the university. Dissertation thus prepared shall be submitted to the Registrar (Evaluation) as per the format notified by the University, six months before final examination on or before the dates notified by the university.

The examiners appointed by the university shall value the dissertation. Approval of dissertation work is an essential precondition for a candidate to appear in the university examination. The dissertation shall be valued by the evaluator (Examiners) apart from the guide out of which one is external outside the university. The evaluator acceptance other than the guide will be considered as a precondition for eligibility to take up the final semester. Dissertation once defended need not be defended at successive examination attempts.

## MASTER IN PHYSIOTHERAPY (MPT) 2022

### CHANGE OF GUIDE

In the event of registered guide leaving the Department/College for any reason or in the event of death of guide, guide may be changed with prior permission from the university.

I SEMESTER						
Course No	Course title	Hours per semester			Hours/week	
		Total	L	P	L	P
MPT-A-01	Physiotherapy Practice	30	30	-	2	-
MPT-A-02	Research Methodology and Biostatistics	30	30	-	2	-
MPT-A-03	Basic Sciences- PART 1	60	30	30	2	2

II SEMESTER						
Course No	Course title	Hours per semester			Hours/week	
		Total	L	P	L	P
MPT-B-01	Basic Sciences- PART 2	80	35	45	2	3
MPT-B-02	Physical & functional diagnosis	85	40	45	3	3

III SEMESTER						
Course No	Course title	Hours per semester			Hours/week	
		Total	L	P	L	P
MPT-C-01	Applied physiotherapeutics – Part 1 (Elective)	90	45	45	3	3
MPT-C-02	Advances in elective – Part 1(Elective)	90	45	45	3	3

IV SEMESTER			
Course No	Course title	Hours per semester	Hours/week

## MASTER IN PHYSIOTHERAPY (MPT) 2022

		Total	L	P	L	P
MPT-D-01	Applied physiotherapeutics – Part 2 (Elective)	90	45	45	3	3
MPT-D-02	Advances in elective – Part 2 (Elective)	90	45	45	3	3

### SCHEDULE OF EXAMINATION

The University shall conduct examination for MPT course at the end of each semester.

### PARTICULARS OF THEORY QUESTION PAPERS AND DISTRIBUTION OF MARKS

- As per the university notification on question paper model dated 13 July 2021.
- The examination shall be conducted at the end of each semester
- 3<sup>rd</sup> and 4<sup>th</sup> semester will be pertaining to Elective subject chosen by the candidate.

Particulars of Theory question paper & distribution of marks are shown below.

### SCHEME OF EXAMINATION

		1st semester	Marks		2nd semester	Marks
1st year	MPT-A-01	Physiotherapy Practice	120	MPT-B-01	BASIC SCIENCES- PART 2 (with practical)	200 (150+50)
	MPT-A-02	Research Methodology and Biostatistics	120	MPT-B-02	Physiotherapy diagnosis & clinical decision making (with practical)	200 (150+50)
	MPT-A-03	Basic Sciences- PART 1 (with practical)	200 (150+50)	-	-	-
		TOTAL	440		TOTAL	400
2nd year		3rd semester	Marks		4th semester	Marks
	MPT-C-01	Applied Physiotherapeutics - elective PART 1 (with practical)	200	MPT-D-01	Applied Physiotherapeutics - elective - Part 2 (with practical)	200
	MPT-C-02	Advances in elective - Part 1 (with practical)	200	MPT-D-02	Advances in elective - part 2 (with practical)	200

## **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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				MPT-D-03	Dissertation	100
		<b>TOTAL</b>	<b>400</b>		<b>TOTAL</b>	<b>500</b>

### **Particulars of Viva-Voce**

Viva- Voce examination shall aim at assessing depth of knowledge, logical reasoning, confidence & oral communication skills and spotters. Special emphasis shall be given to dissertation work during the MPT Part examination. The marks of Viva-Voce examination shall be included in the clinical examination to calculate the percentage and declaration of results.

### **PATTERN OF MODEL QUESTION PAPER FOR MPT EXAMINATION**

#### **MPT – Theory: Maximum Marks: 100 (No choice)**

Duration: 3 Hours

1. Long Essay (2 Questions) – 2x 20 = 40 Marks
2. Short Essay (6 Questions) – 6x 10 = 60 Marks

#### **MPT Practical and viva voce – 70 Marks**

1. Practical - 40 marks
2. Viva voce – 30 marks

Note: All cases for clinical examination should be on patients.

### **Internal assessment**

Theory IA – 20 marks

Practical IA – 10 marks

### **SCHEME OF EXAMINATION:**

There shall be examinations at the end of each semester as per the calendar of events notified by the university

### **VALUATION OF ANSWER SCRIPTS**

- The paper shall be valued by one internal examiner and one external examiner. The theory valuation shall not be conducted by two internal examiners.
- In case of two valuations, the average of the two valuations will be considered. The regulation for valuation norms will be according to the policy of the academy notified from time to time.

### **CONDUCT OF PRACTICAL EXAMINATION**

➤ The practical examination shall be conducted by 2 examiners who is expert in their subjects, one of them shall be internal examiner and one of them shall be external examiner. One of them shall be external outside the university and the other shall be internal preferably from the same department. The external examiner shall be selected from available panel of examiner list. The external examiner shall have minimum of 5 years teaching experience after MPT from recognized university and the internal examiner shall have minimum of 3 years of teaching experience from the department of Physiotherapy. The practical examination in specialty papers like orthopedic/ neurological physiotherapy, the examiner shall have same discipline in their post graduation and teaching experience. The practical examination shall be conducted with assessing patients and describing the treatment methods. Each practical examination shall be jointly conducted and evaluated by one internal examiner and one external examiner or two external examiners if there are no internal examiners.

### **CRITERIA FOR DECLARING AS PASS IN UNIVERSITY EXAMINATION**

- A candidate shall be declared pass if he / she secures a 50% of marks in theory and secures a 50% of marks in Practical / Clinical and Viva-Voce.
- No grace marks is allowed.

### **CARRYOVER POLICY**

The candidate should clear all carry over subjects/ backlogs in penultimate semester examination before they appear for final semester examination.

### **DECLARATION OF CLASS**

- First class with distinction – 75% & above in aggregate provided the candidate passes the examination in 1<sup>st</sup> attempt.
- First class – 60% & above in aggregate provided the candidate pass the examination in 1<sup>st</sup> attempt.

### **ELIGIBILITY FOR GRADUATION**

A candidate shall have passed in all the subjects of all semester's I-IV, completed and submitted dissertation and also communicated the research work to an indexed journal, to be eligible for award of Masters Degree.

## OBJECTIVES

### **Master of Physiotherapy in Musculoskeletal disorders and Sports Physiotherapy (MPT-MSS)**

This course has an international reputation and is a dynamic course which is based on contemporary best practice. It creates the opportunity for physiotherapists currently working in the musculoskeletal area to be challenged both academically and clinically. A high level of expert tuition is provided for all units and clinical placements. This course focuses on the integration between evidence-based practice and current clinical practice. Clinical reasoning is fundamental to all assessment, treatment, management and rehabilitation for both spinal and peripheral disorders. It is designed to enhance knowledge, skill and clinical competencies in clinical practice, research and issues related to musculoskeletal problems. Physiology of pain, chronic pain management and functional activity analysis including rehabilitation of musculoskeletal system are integrated into clinical practice. Throughout the course, students review the literature critically and apply this information in the evaluation and management of musculoskeletal disorders. Research projects will be completed in Orthopaedic physiotherapy and manuscripts will be submitted to a peer-review journal for publication.

The objectives of this programme are to: -

1. Provide students with detailed training in Orthopaedic physiotherapy theory and practice, including the use of other physiotherapy modalities.
2. Ensure that students practice from Orthopaedic physiotherapy, whilst integrating western medical information as appropriate, to ensure that graduates are safe and competent in the practice of Orthopaedic physiotherapy universally.
3. Provide students with quality clinical experience in hospitals and complementary health clinics from day one of the program.
4. Provide students with opportunities for research and higher degree in Orthopaedic physiotherapy on the completion of their undergraduate degree.

### **Master of Physiotherapy in Neurological sciences (MPT-NPD)**

This course has an international reputation and is a dynamic course which is based on contemporary best practice. It creates the opportunity for physiotherapists currently working in the neurological area to be challenged both academically and clinically. A high level of expert tuition is provided for all units and clinical placements. This course focuses on the integration between evidence-based practice and current clinical practice. Clinical reasoning is fundamental to all assessment, treatment, management and rehabilitation for neurological

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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disorders. It is designed to enhance knowledge, skill and clinical competencies in clinical practice, research and issues related to neurological problems. Physiology of pain, chronic pain management and functional activity analysis including rehabilitation of neurological system are integrated into clinical practice. Throughout the course, students review the literature critically and apply this information in the evaluation and management of neurological disorders. Research projects will be completed in neurological physiotherapy and manuscripts will be submitted to a peer-review journal for publication.

### **Objectives:**

The objectives of this programme are to: -

1. Provide students with detailed training in Neurophysiotherapy theory and practice, including the use of other physiotherapy modalities.
2. Ensure that students practice from Neurophysiotherapy, whilst integrating western medical information as appropriate, to ensure that graduates are safe and competent in the practice of Neurophysiotherapy universally.
3. Provide students with quality clinical experience in hospitals and complementary health clinics from day one of the program.
4. Provide students with opportunities for research and higher degree in Neurophysiotherapy on the completion of their undergraduate degree.

### **Master of Physiotherapy in Cardio-Respiratory Disorders (MPT-CRD)**

This course has an international reputation and is a dynamic course which is based on contemporary best practice. It creates the opportunity for physiotherapists currently working in the cardiovascular and pulmonary area to be challenged both academically and clinically. A high level of expert tuition is provided for all units and clinical placements. This course focuses on the integration between evidence-based practice and current clinical practice. Clinical reasoning is fundamental to all assessment, treatment, management and rehabilitation for both cardiovascular and pulmonary. It is designed to enhance knowledge, skill and clinical competencies in clinical practice, research and issues related to cardiovascular and pulmonary problems. Physiology of various cardiovascular and pulmonary disorders and their rehabilitation are integrated into clinical practice. Throughout the course, students review the literature critically and apply this information in the evaluation and management of cardiovascular and pulmonary disorders. Research projects are completed in cardiovascular and pulmonary physiotherapy and manuscripts will be submitted to a peer-review journal for publication.

### **Objectives:**

The objectives of this programme are to: -

2. Provide students with detailed training in cardiovascular and pulmonary physiotherapy theory and practice, including the use of other physiotherapy modalities.

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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3. Ensure that students practice cardiovascular and pulmonary physiotherapy, whilst integrating western medical information as appropriate, to ensure that graduates are safe and competent in the practice of cardiovascular and pulmonary physiotherapy.
4. Provide students with quality clinical experience in hospitals and complementary health clinics from day one of the program.
5. Provide students with opportunities for research and higher degree in cardiovascular and pulmonary physiotherapy on the completion of their undergraduate degree.

### **Master of Physiotherapy in Community and Rehabilitation**

This course has an international reputation and is a dynamic course which is based on contemporary best practice. It creates the opportunity for physiotherapists currently working in the Community area to be challenged both academically and clinically. A high level of expert tuition is provided for all units and clinical placements. This course focuses on the integration between evidence-based practice and current clinical practice. Clinical reasoning is fundamental to all assessment, treatment, management and rehabilitation for neurological, cardiac, respiratory and musculoskeletal disorders. It is designed to enhance knowledge, skill and clinical competencies in clinical practice, research and issues related to multi system problems in community. Functional activity analysis including rehabilitation of all the systems is integrated into clinical practice. Throughout the course, students review the literature critically and apply this information in the evaluation and management of multisystem disorders. Research projects will be completed in community physiotherapy and manuscripts will be submitted to a peer- review journal for publication.

#### **Objectives:**

The objectives of this programme are to :-

1. Provide students with detailed training in community physiotherapy theory and practice, including the use of other physiotherapy modalities.
2. Ensure that students practice community physiotherapy, whilst integrating western medical information as appropriate, to ensure that graduates are safe and competent in the practice of community physiotherapy universally.
3. Provide students with quality clinical experience in hospitals and complementary health clinics from day one of the program.
4. Provide students with opportunities for research and higher degree in community physiotherapy on the completion of their undergraduate degree.

### **Master of Physiotherapy in Pediatrics**

This course has an international reputation and is a dynamic course which is based on contemporary best practice. It creates the opportunity for physiotherapists currently working in the pediatric area to be challenged both academically and clinically. A high level of expert tuition is provided for all units and clinical placements. This course focuses on the integration

## **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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between evidence-based practice and current clinical practice. Clinical reasoning is fundamental to all assessment, treatment, management and rehabilitation for neurological, cardiac, respiratory and musculoskeletal disorders. It is designed to enhance knowledge, skill and clinical competencies in clinical practice, research and issues related to pediatric problems. Functional activity analysis including rehabilitation of all the systems in pediatric population is integrated into clinical practice. Throughout the course, students review the literature critically and apply this information in the evaluation and management of pediatric disorders. Research projects will be completed in pediatric physiotherapy and manuscripts will be submitted to a peer-review journal for publication.

### **Objectives:**

The objectives of this programme are to: -

1. Provide students with detailed training in pediatric physiotherapy theory and practice, including the use of other physiotherapy modalities.
2. Ensure that students practice from pediatric physiotherapy, whilst integrating western medical information as appropriate, to ensure that graduates are safe and competent in the practice of pediatric physiotherapy universally.
3. Provide students with quality clinical experience in hospitals and complementary health clinics from day one of the program.
4. Provide students with opportunities for research and higher degree in pediatric physiotherapy on the completion of their undergraduate degree.

### **COURSE CONTENT**

#### **MPT-A-01 PHYSIOTHERAPY PRACTICE**

##### **1. Principles of Physiotherapy Practice**

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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- a. Definition of Physiotherapy, Scope of Practice
- b. General and Professional competencies
- c. Physiotherapy Knowledge, Skill and Education Framework
- d. Principles of Evidence Based Practice in Physiotherapy
- e. History taking, assessment tests, Patient Communication, documentation of findings, treatment planning and organization.
- f. Documentation of rehabilitation assessment and management using International Classification of Functioning Disability and Health (ICF).
- g. Use of Standardized scales and tests in various assessments. Psychometric properties and its Interpretation in Physiotherapy practice.

## **2. Core Professional Values in Physiotherapy including Professional and Research Ethics**

- a. Introduction to World Physiotherapy Standards of Physical Therapy Practice Guideline
- b. Core Professional Values across Different Countries and Regions
- c. ICMR Ethical Guidelines
- d. Ethical issues in practice of physiotherapy.

## **3. Management, Entrepreneurship and Leadership in Physiotherapy Practice**

- a. Introduction to Management in Physiotherapy: Definition, Principles, Functions and Evolution of Management Thought
- b. Management Process: Planning, Organizing, Directing, Controlling. Decision making.
- c. Responsibilities of the Physiotherapy Manager: Staffing Responsibilities; Responsibility for Patient Care; Fiscal Responsibilities; Responsibility for Risk Management; Legal and Ethical Responsibilities; Communication Responsibilities
- d. Entrepreneurship in Physiotherapy Practice: Need, Advantages and Opportunities, Challenges and Barriers
- e. Leadership: Need, Relevance, Competencies and Characteristics

## **4. Pedagogy in Physiotherapy Education**

- a. Competency Based Education in Physiotherapy
- b. Basics of Adult Learning Theories including Learning Styles and Motivation
- c. Formulating Intended Learning Outcomes Including Tyler's principles, Bloom's Taxonomy, Miller's Pyramid, Clinical Competence, and Dreyfus' Model of Skill Acquisition
- d. Instructional Design and Individual Assessment such as Multiple-choice Question Writing, Skill assessment, Oral Presentation, and Rubrics and Standardization
- e. Instructional Techniques: Knowledge Transfer

## **MASTER IN PHYSIOTHERAPY (MPT) 2022**

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- f. Instructional Techniques: Skill Development
- g. Instructional Techniques: Attitudes
- h. Instructional Techniques: Teaching with Technology
- i. Academic Planning and Organisation

**MPT –A-02**

**Research Methodology and Biostatistics**

1. **Designing Clinical Research: Basic Ingredients**

- a. Getting Started: The Anatomy and Physiology of Clinical Research
- b. Fundamentals of Literature Search and Review
- c. Conceiving the Research Question and Developing the Study Plan
- d. Choosing the Study Subjects: Specification, Sampling, and Recruitment
- e. Planning the Measurements: Precision, Accuracy, and Validity
- f. Hypotheses and Underlying Principles to Estimating Sample Size and Power

## 2. Designing Clinical Research: Study Designs

- a. Designing Cross-Sectional, Case–Control and Cohort Studies
- b. ii. Enhancing Causal Inference in Observational Studies
- c. iii. Designing a Randomized Blinded Trial, Alternative Clinical Trial

## 3. Implementation of Clinical Research

- a. Designing Questionnaires, Interviews, and Online Surveys
- b. Implementing the Study and Quality Control
- c. Data Management
- d. Designing qualitative studies

## 4. Biostatistics

- a. Basic Fundamentals of Biostatistics
- b. Probability and Normal Distribution
- c. Descriptive Statistics: Measures of Central Tendency and Spread
- d. Hypothesis Testing: One-Sample Inference, Two-Sample Inference, Multi-sample Inference,
- e. Hypothesis Testing: Nonparametric Methods, Categorical Data
- f. Regression, Correlation Methods and Diagnostic Tests
- g. Data synthesis.

## 5. Consuming and Disseminating Research

- a. Strategies for following Emerging Evidence, Clinical Practice Guidelines and Clinical pathways
- b. ii. Best Practices in Research Dissemination
- c. iii. Writing a Manuscript for Publication

## MPT A-03

### BASIC SCIENCES –P ART 1

#### 1. BIOMECHANICS

- a. Biomechanics of Tissues and structures of the musculoskeletal system and clinical application.
- b. Applied Biomechanics of Spine, Upper extremity and Lower extremity.
- c. Applied kinesiology of posture and gait.
- d. Methods of kinetics and kinematics investigation

#### 2. ERGONOMICS-

- a. Analysis of functional hazards (job/task/site analysis) related to Environment /Industry - & clinical reasoning for the appropriate Ergonomic advice.
- b. Fatigue assessment and scientific organization of work-rest regimes to control fatigue.
- c. Ergonomic Approach to lifting and handling, workspace and Environment - Patient Positioning, Body Mechanics and Transfer Techniques
- d. Work related injuries, educational programs for prevention of work related injuries.

## MPT-B-01

### BASIC SCIENCES –PART 2

#### 1. EXERCISE PHYSIOLOGY & NUTRITION

- a. Energy system - Sources of Energy, Energy Transfer and Energy Expenditure at rest and various physical activities.
- b. Exercise testing and prescription and documentation for health and fitness
- c. Responses and Adaptations of various systems to Exercise and training.
- d. Environmental influence on Performance and muscle work
- e. Considerations of age and sex in exercise and training.
- f. Supplementary nutrition

#### 2. ELECTROPHYSIOLOGY & ELECTRO DIAGNOSIS

- a. Nerve muscle physiology
- b. Instrumentation and principles of electrophysiology techniques.
- c. EMG Biofeedback, kinesiological EMG.
- d. Clinical Electro physiological testing – EEG, SSEP, VEP, BAER, LR, H Reflex, F Wave.

### MPT-B-02

#### PHYSIOTHERAPY DIAGNOSIS AND CLINICAL DECISION MAKING –

- a. Clinical examination in general and detection of movement dysfunction.
- b. Principles of pathological investigations and imaging techniques related to neuromuscular, skeletal and cardiopulmonary disorders with interpretation.
- c. Developmental screening, motor learning –motor control assessment.
- d. Anthropometric measurements.
- e. Physical fitness assessment by Range of motion, Muscle strength, endurance and skills, Bodyconsumption, Fitness test for sports.
- f. Evaluation Methods, Special tests and Scales used in Musculoskeletal, Neurological and Cardiopulmonary disorders.
- g. EMG and Biofeedback.
- h. Biophysical measurements, physiotherapy modalities, techniques and approaches.
- i. Evaluation of aging.
- j. Aids and appliances, adaptive functional devices to improve movement dysfunction.
- k. Exercise ECG testing and monitoring.
- l. Pulmonary function tests and Spirometry.
- m. Physical disability evaluation and disability diagnosis.
- n. Gait analysis and diagnosis.
- o. Clinical decision making in electrotherapeutics

## ELECTIVE SUBJECTS

### MPT –C- 01

#### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN MUSCULOSKELETAL DISORDERS AND SPORTS – PART 1

- a. Applied anatomy with emphasis on Biomechanics & Kinesiology of Human motion and Work Physiology
- b. Clinical assessment and rationale of Laboratory investigations along with differential diagnoses.
- c. Clinical Symptomatology, Pathophysiology and Patho-mechanics of musculoskeletal conditions
  - a. Physiotherapy management following fractures, dislocations and their complications,
  - c. Amputations, cumulative trauma disorders and Burns.
  - a. Physiotherapy management in degenerative disorders and allied conditions.
  - b. Physiotherapy in post-operative management of metabolic, hormonal, neoplastic and infective conditions of bones and joints.
  - c. Physiotherapy following arthroplasty, implants and soft tissue repairs.
  - d. Pre & post-operative physiotherapy in tendon transfer. Electrical stimulation and biofeedback procedures.
  - e. Kinetic and kinematics analysis for various functional activities.
  - f. Functional assessment (Hand function, Gait, Posture A.D.L; occupational work).
  - g. Hand Rehabilitation.
  - h. Assessment of locomotor impairments, disabilities and disability evaluation.
  - i. Physiotherapy management of locomotor disorder, principles of medical and surgical aspects, sports psychology and retraining.
  - j. Neurological complications of locomotor disorders.
  - k. Analysis and classification of sports and sports specific injuries and its management.

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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## MPT-C-01

### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN NEUROLOGICAL SCIENCES - PART 1

- a. Anatomy and Physiology of Nervous System.
- b. Normal sequential behavioral and Physiological changes throughout the developmental arc.
- c. Neurophysiology of balance, coordination and locomotion.
- d. Clinical symptomatology and Pathophysiology of the neurological disorders
- e. Principles of clinical neuro diagnosis and investigation.
- f. Various Evaluation Scales and Assessment methods used in neurological rehabilitation.

#### Electro-diagnosis:

- g. Neurophysiology of Nerve conduction studies and Electromyography.
  - h. Instrumentation of Electrical stimulator, EMG, SFEMG, NCS (Nerve Conduction Studies).
  - c. Electrical study of reflexes (H- reflex, Axon reflex, F-response, Blink reflex, Jaw jerk, Tonic Vibration Reflex).
  - d. Tonic Vibration Reflex).
  - e. Repetitive nerve stimulation.
  - f. Evoked potentials (SSEP, MEP, BAERA, and VER).
  - g. Interpretation of neurophysiologic responses in Neuropathy, myopathy and neuromuscular disorders.
  - h. Evaluation of A.N.S dysfunction with reference to psycho-physiological testing.
- #### Biofeedbacktraining
- i. Neuro-psychological functions. Perception testing and training.
  - j. Theories of motor control and theories of motor learning, its application in physiotherapy.
  - k. Common facilitatory and inhibitory techniques.
  - l. Treatment approaches in neurological rehabilitation: Bobath, NDT, SI, Brunnstrom, Roods,PNF, Vojta, MRP, MFR
  - m. Musculoskeletal treatment concept applied to neurology: Adverse neural tissue tension tests inupper limb and lower limb.
  - n. Pathophysiology and Management of tonal abnormalities ( Spasticity, Rigidity, Hypotonia, andDystonia)
  - o. Medical and Physiotherapy management following Cerebrovascular accidents.

## MPT-C-01

### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN CARDIO -RESPIRATORY DISORDERS - PART 1

- a. Anatomy and physiology of cardio-vascular and respiratory systems.
- b. Biomechanics of respiration.
- c. Intrauterine development of cardiopulmonary system and difference between the adult and pediatric cardiopulmonary system.
- d. Epidemiology, Symptomatology and pathophysiology of the cardio-respiratory disorders.
- e. Clinical assessment, rationale of laboratory investigations and differential diagnosis,
- f. Evaluation of respiratory dysfunctions, lung function tests – volumetric, analysis of bloodgases, X-ray chest.
- g. Evaluation cardiac dysfunction. [ECG, exercise ECG testing, Holter monitoring etc., Echocardiogram, X-Ray, Imaging techniques etc.]
- h. Evaluation of peripheral vascular disorders: clinical, blood flow studies, temperature
- i. plethysmography. A.N.S dysfunction testing.
- j. Risk factors and preventive measures in cardio respiratory conditions
- k. Cardio-respiratory emergencies and management principles – medication, critical care,
- l. indications of surgical intervention, stabilization of vital functions defibrillation.
- m. Intensive care unit – Concept and set-up, equipment for advanced methods of resuscitation, monitoring and patient management: artificial airways, ventilators, pulse –oxymetry etc
- n. Oxygen therapy.
- o. Cardio-pulmonary resuscitation.
- p. Respiratory physiotherapy techniques – Techniques to improve lung volume; techniques to reduce the work of breathing and techniques to clear secretions.
- q. Physiotherapy management for common conditions in the ICU
- r. Poisoning, Drug overdose, and Drowning.

## MPT-C-01

### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN COMMUNITY AND REHABILITATION– PART 1

- a. Health and Illness; Levels of Healthcare & Fitness
- b. Basic Concepts of rehabilitation and foundations of rehabilitation
- c. Institute based rehabilitation services and multi-disciplinary approach.
- d. Methodology of CBR with reference to National Health Delivery system.
- e. Role of National Institutes, District Rehabilitation Centre and Primary Health Centre
- f. Public awareness to the various disabilities. Communications. Message generation and dissipation.
- g. Persons with disability; Act – 1995 and related Government infrastructure.
- h. Role of Government in CBR, inter-sectoral programs and co-ordination.
- i. Role of Non-Government organizations in CBR.
- j. Scope of community physiotherapy.
- k. Disability detection and early intervention.
- l. Physical fitness, stress management through yoga and psychosomatic approaches.
- m. Home exercise programs for various classifications of disabilities.
- n. Physiotherapist as a Master Trainer in CBR.
- o. Physiotherapy in maternal and child health care.

## **MPT-C-01**

### **APPLIED PHYSIOTHERAPEUTICS**

#### **PHYSIOTHERAPY IN PAEDIATRICS – PART 1**

- a. Normal motor development (development during Prenatal, Infancy, and child hood)
- b. Reflex maturation.
- c. Developmental assessment and diagnosis.
- d. Developmental screening using various scales.
- e. Genetic basis of paediatric disorders. Embryology & genetic counseling.
- f. Cardio-respiratory assessment of neonate and infant and related paediatric disorder.
- g. Principles of laboratory investigations for differential diagnosis.
- h. Clinical symptomatology and patho-physiology of locomotor and cardiopulmonary disorders.
- i. Growth and development of a child and its disorders
- j. Maturation, Pathophysiological and recovery process in the CNS.
- k. Assessment of progressive locomotor disorders – Neuropathic and Myopathic.
- l. Early intervention- high risk babies, Neonatal care and management

## SPECIALITY

### MPT –D- 01

#### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN MUSCULOSKELETAL DISORDERS AND SPORTS – PART 2

- a. Management of sport injuries, sports fitness
- b. Principles of Injury Prevention
- c. Medico legal issues in sports, Sports Psychology, Sports Nutrition and Sports pharmacology.
- d. Rehabilitation of paediatric musculoskeletal disorders.
- e. Orthopaedic implants-designs, materials, indications, post-operative assessment and training.
- f. External aids, appliances, adaptive self-help devices; prescription, biomechanical compatibility, check-out and training.
- g. Manual therapy: soft tissue manipulations and mobilization, neural mobilization, acupuncture. (Cyriax, Maitland, Butler, McKenzie, Kaltenborn, Mulligan)
- h. Pilates-school of thought, Chiropractic school of thought, Osteopathic school of thoughts.
- i. Myofascial Release technique and Muscle Energy technique
- j. Joint manipulation – peripheral joints and vertebral joints.
- k. Neuromuscular Taping Techniques
- l. Electro diagnosis: Electromyography and evoked potential studies.
- m. Community based rehabilitation in musculoskeletal disorders.

## MPT-D-01

### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN NEUROLOGICAL SCIENCES- PART 2

- a. Traumatic Brain Injury. ( ICU management, Coma stimulation, Restoration of motor control, Rehabilitation and community integration)
- b. Traumatic spinal cord injuries. ( ICU management, Coma stimulation, Restoration of motor control, Rehabilitation and community integration)
- c. Physiotherapy management of demyelinating, inflammatory, infectious, degenerative and metabolic diseases of the nervous system.
- d. Physiotherapy management of Motor neuron diseases, neuromuscular junction disorders, Brain tumor, and Neuro cutaneous disorders.
- e. Diseases of spinal cord, peripheral nerves and cranial nerves
- f. Physiotherapy management for neuromuscular disorders.
- g. Paediatric neurology (Cerebral Palsy, Developmental disorders, Neuropsychiatric disorders, Cerebral & Craniovertebral anomalies & metabolic disorders of nervous system).
- h. Cognitive disorders and its rehabilitation.
- i. Oromotor rehabilitation.
- j. Vestibular disorders and its rehabilitation.
- k. Bladder and Bowel dysfunction and its rehabilitation.
- l. Assessment and management of various neurological gait disorders.
- m. Rehabilitation following disorders of Special Senses, Speech, Language and Perception.
- n. Associated functional disturbances of higher functions and their testing and training.
- o. Application of Functional electrical stimulation and Bio-feedback in neurological rehabilitation.
- p. Learning skills, A.D.L and functional activities.
- q. Aids and appliances in neurological disorders. Prescriptions, testing and training.
- r. Basic knowledge of drugs used for neurological conditions.
- s. Assessment of fitness and exercise prescription for special neurological population – Stroke, Paraplegia, TBI, Multiple Sclerosis, MND, Parkinsonism, & Ataxia.
- t. Community based rehabilitation for neurological dysfunction. Disability evaluation and management.
- u. Stem cell therapy in neurological disorders

# MASTER IN PHYSIOTHERAPY (MPT) 2022

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## MPT – D-01

### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN CARDIO -RESPIRATORY DISORDERS – PART 2

- a. Physiotherapy management following general Medical & Surgical conditions
- b. Physiotherapy management of peripheral vascular disorders
- c. Exercise testing, planning and prescription: aerobic and anaerobic exercise training.
- d. Respiratory Pharmacology
- e. Physiotherapy management in Obstructive and restrictive lung disorders
- f. Pulmonary Rehabilitation
- g. Physiotherapy management following congenital and acquired heart diseases
- h. Cardiac rehabilitation – Conservative and post-operative management.
- i. Physiotherapy modalities used for wound healing
- j. Exercise Prescription for health promotion and fitness for special populations- DM, Obesity, IHD, COPD, HTN
- k. C.B.R in Cardio-vascular and respiratory conditions.

## MPT-D-01

### APPLIED PHYSIOTHERAPEUTICS

#### PHYSIOTHERAPY IN COMMUNITY AND REHABILITATION – PART 2

- a. Evaluation and theories of aging; Assessment of the elderly; Exercise prescription for the elderly; Psychosocial and safety issues in elderly
- b. Geriatric Rehabilitation
- c. Holistic physiotherapy for the aged.
- d. Occupational Health, Occupational Hazards, Industrial Hygiene, Vulnerable workers group and labor law;
- e. Industrial therapy, Injury prevention and returning the worker to productivity
- f. Ergonomics, Principles, Issues related to hand tools, posture, material handling and lifting
- g. Prevention of work related Injuries and redesigning workspace, Designing auditory and visual displays for workers; Occupational stress; Environmental Pollution – noise, vibration etc.
- h. Physiotherapy role in industry – preventive, intervention, ergonomic and rehabilitation.
- i. Women's, Health : Women's reproductive health and health care; Exercise prescription in pre and post- natal stage;
- j. Diagnosis and treatment of musculoskeletal pain and dysfunction during pregnancy and post menopause.

## **MPT-D-01**

### **APPLIED PHYSIOTHERAPEUTICS**

#### **PHYSIOTHERAPY IN PAEDIATRICS – PART 2**

- a. Management of congenital locomotor disorders including the prosthetic and orthotic management.
- b. Analysis of fitness and exercise prescription for special pediatric populations – cerebral palsy, downs syndrome, polio, muscular dystrophy, juvenile diabetes and obesity.
- c. Management of neuro pediatric patients.
- d. Motor learning process – Theory and Techniques.
- e. Disorders of perception and sensory integration.
- f. Integrated approach in management of pediatric disorders.
- g. Pediatric surgeries and its post-operative management.
- h. Adaptive equipment for physically challenged children.
- i. Physiotherapy in public schools.
- j. Sports and fitness in paediatrics.

### **MPT – C-02 & MPT-D-02**

#### **ADVANCES IN ELECTIVES**

##### **Recent advances in Cardio vascular & pulmonary physiotherapy**

- a. Treatment prescription – for cardio – pulmonary diseases with EBP.
- b. Documentation of data & report writing.
- c. Recent advances in CPR.
- d. Recent advances in airway clearance techniques and bronchial hygiene.
- e. Cardio pulmonary training in various populations.
- f. Recent advances and EBP in medical gas therapy, aerosol therapy.
- g. Recent advances and EBP in exercise testing, planning and prescription for cardio – pulmonary diseases .
- h. Recent advances and EBP in exercise testing, planning and prescription in special population.
- i. Recent advances in use of physical agents and PT management in wounds, ulcers, grafts, incisions and vascular disorders.
- j. EBP of various exercises and training methods on cardio pulmonary rehabilitation.
- k. EBP and recent advances in improving cardio respiratory training in all populations – adult, pediatric & geriatric.
- l. Recent advances in health status and quality of life with cardio pulmonary rehab.

### **MPT – C-02 & MPT-D-02**

#### **ADVANCES IN ELECTIVES**

##### **Recent advances in community physiotherapy and rehabilitation**

- a. Recent advances in principles of fitness training and health promotion.
- b. Disability presentation and physiotherapy.
- c. Recent concepts in home and self help programs in community PT.
- d. Recent advances in pediatric disorders screening.
- e. Recent advances in management of musculoskeletal, neurological, cardio pulmonary, geriatric , OBG disorders in community.
- f. New concepts in rural PT
- g. Community awareness and participation -prevention&demands on PT services.
- h. Recent advances in vocational management.
- i. Recent advances in aids and appliances used in rehabilitation.
- j. Current trends in application of exercise and techniques in rehabilitation.
- k. Utilization of international classification of functioning, disability & health in community PT
- l. Evidence based physiotherapy in CBR and its practice.

### **MPT – C-02 & MPT-D-02**

#### **ADVANCES IN ELECTIVES**

##### **Recent advances in neuro physiotherapy**

- a. Recent advances in painmodulation and rehabilitation.
- b. Recent neuro PT techniques – mental imagery technique, virtual reality therapy, robotic movement therapy, pilates, mirror box therapy, mime therapy, cranio sacral therapy, neuro dynamics, neural mobilization, eclectic approach.
- c. EBP in neurophysiotherapy, clinical decision making, diagnosis, prognosis.
- d. Evidences in intervention for neurological impairments.
- e. EBP in physiotherapy management for CNS conditions, stroke, CP, ataxia, parkinson's disease, myopathies, PNI, spinal cord injuries.
- f. Sports training for neurological conditions
- g. Tele-rehabilitation for neurological rehabilitation.

### **MPT – C-02 & MPT-D-02**

#### **ADVANCES IN ELECTIVES**

##### **RECENT ADVANCES IN MUSCULOSKELETAL AND SPORTS PHYSIOTHERAPY**

- a. EBP and recent advances in clinical assessment, investigations and diagnosis of musculoskeletal disorders.
- b. EBP in management of pain in musculoskeletal disorders
- c. Recent advances in PT management of orthopedic conditions
- d. Recent advances in manual therapy and its application in musculoskeletal disorders and sports injuries.
- e. Current trends and EBP in sports injuries and management
- f. Evidence based physiotherapy in management of metabolic and hormonal, neoplastic and infective conditions of bones and joints, congenital and malformation of musculoskeletal disorders, fractures, joint instabilities, soft tissue disorders and nerve injuries, amputation
- g. Recent advances in external aids, adaptive devices, biomechanical compatibility and training for musculoskeletal disorders.
- h. Evidence based physiotherapy management for post operative orthopedic conditions.
- i. EBP in functional rehabilitation of return to sports criteria.

### **MPT – C-02 & MPT-D-02**

#### **ADVANCES IN ELECTIVES**

#### **ADVANCES IN PEDIATRIC PHYSIOTHERAPY**

- a. Physical examination, diagnosis, treatment and reassessment of pediatric neurological, musculoskeletal, cardio respiratory system.
- b. Recent advances in therapeutic techniques used in pediatric conditions.
- c. EBP in exercise prescription for pediatric conditions.
- d. Recent advances in indication, training of prosthesis and orthotics, adaptive equipment in physically challenged children.
- e. EBP in musculoskeletal and neurological loco-motor disorders in children.
- f. EBP on the role of PT in public and special schools.
- g. EBP in the management in pediatric oncology and burns.
- h. Recent advances in assessment and management of pain in children.
- i. Assessment and treatment in neonatal and pediatric ICU units
- j. Recent advances in instrumentations and handling techniques in pediatric PT conditions.
- k. Recent advances in psychosocial and mental health problems in children.
- l. EBP in integrated approach in management of pediatric conditions.

# MASTER IN PHYSIOTHERAPY (MPT) 2022

## ANNEX -1 CURRICULUM OUTLINE

1st sem				2 <sup>nd</sup> sem			
	TL ACTIVITIES	Hrs/week	Hrs/sem		TL ACTIVITIES	Hrs/week	Hrs/sem
1	lecture	6	90		lecture	5	75
2	practical	2	30		practical	6	90
3	clinical training	15	225		clinical training	15	225
4	clinical discussion	2	30		clinical discussion	2	30
5	seminar	2	30		seminar	2	30
6	case presentations	2	30		case presentations	2	30
7	journal club	2	30		journal club	2	30
8	class room teaching	1	15		class room teaching	1	15
9	library	5	75		library	2	30
10	synopsis and dissertation	3	45		synopsis and dissertation	3	45
11	community/field / CME	2	30		community/field / CME	2	30
	<b>TOTAL</b>	42	630		<b>TOTAL</b>	42	630
3rd sem				4th sem			
	TL ACTIVITIES	Hrs/week	Hrs/sem		TL ACTIVITIES	Hrs/week	Hrs/sem
1	lecture	6	90		lecture	6	90
2	practical	6	90		practical	6	90
3	clinical training	15	225		clinical training	15	225
4	clinical discussion	2	30		clinical discussion	2	30
5	seminar	1	15		seminar	1	15
6	case presentations	1	15		case presentations	1	15
7	journal club	1	15		journal club	1	15
8	class room teaching	1	15		class room teaching	1	15
9	library	2	30		library	2	30
10	synopsis and	6	90		synopsis and	6	90

## MASTER IN PHYSIOTHERAPY (MPT) 2022

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	dissertation				dissertation		
1	community/field/	1	15		community/field	1	15
1	CME				/		
	<b>TOTAL</b>	42	630		<b>TOTAL</b>	42	630

## MASTER IN PHYSIOTHERAPY (MPT) 2022

### Distribution of marks in theory and practical

#### Semester -I

Sl. No.	Paper	Subjects	Internal assessment		University Examination			Grand Total
			T	P	T	V	P	
1.	I	Physiotherapy Practice	20	-	100	-	-	120
2.	II	Research Methodology & Biostatistics	20	-	100	-		120
3.	III	Basic sciences Part -1	20	10	100	30	40	200

#### Semester -II

Sl. No.	Paper	Subjects	Internal assessment		University Examination			Grand Total
			T	P	T	V	P	
1.	I	Basic Sciences -Part 2	20	10	100	30	40	200
2.	II	Physiotherapy Diagnosis & clinical decision making	20	10	100	30	40	200

#### Semester -III

Sl. No.	#Paper	Subjects	Internal assessment		University Examination			Grand Total
			T	P	T	V	P	
1.	I	Applied Physiotherapeutics. (Part 1) Physiotherapy in musculoskeletal & sports.	20	10	100	30	40	200
2.	I	Applied Physiotherapeutics. (Part 1) Physiotherapy in Neurological sciences.	20	10	100	30	40	200
3.	I	Applied Physiotherapeutics. (Part 1) Physiotherapy in Cardio-Respiratory Disorders.	20	10	100	30	40	200
4.	I	Applied	20	10	100	30	40	200

## MASTER IN PHYSIOTHERAPY (MPT) 2022

		Physiotherapeutics. (Part 1) Physiotherapy in Community and rehabilitation.						
5.	I	Applied Physiotherapeutics. (Part 1) Physiotherapy in Pediatrics.	20	10	100	30	40	<b>200</b>
6.	II	Recent advances in Musculoskeletal & sports Physiotherapy. (Part 1)	20	10	100	30	40	<b>200</b>
7.	II	Recent advances in Physiotherapy in Neurological sciences. (Part 1)	20	10	100	30	40	<b>200</b>
8.	II	Recent advances in Physiotherapy in Cardio- respiratory. (Part 1)	20	10	100	30	40	<b>200</b>
9.	II	Recent advances in Physiotherapy in Community and rehabilitation. ( Part 1)	20	10	100	30	40	<b>200</b>
10	II	Recent advances in Physiotherapy in Pediatrics . (Part 1)	20	10	100	30	40	<b>200</b>

### Semester -IV

Sl. No.	#Paper	Subjects	Internal assessment		University Examination			Grand Total
			T	P	T	V	P	
1.	I	Applied Physiotherapeutics. (Part 2) Physiotherapy in musculoskeletal & sports.	20	10	100	30	40	<b>200</b>
2.	I	Applied Physiotherapeutics. (Part 2)	20	10	100	30	40	<b>200</b>

## MASTER IN PHYSIOTHERAPY (MPT) 2022

		Physiotherapy in Neurological sciences.						
3.	I	Applied Physiotherapeutics. (Part 2) Physiotherapy in Cardio-Respiratory Disorders.	20	10	100	30	40	<b>200</b>
4.	I	Applied Physiotherapeutics. (Part 2) Physiotherapy in community and rehabilitation.	20	10	100	30	40	<b>200</b>
5.	I	Applied Physiotherapeutics. (Part 2) Physiotherapy in Pediatrics.	20	10	100	30	40	<b>200</b>
6.	II	Recent advances in Musculoskeletal & sports Physiotherapy. (Part 2)	20	10	100	30	40	<b>200</b>
7.	II	Recent advances in Physiotherapy in Neurological sciences. (Part 2)	20	10	100	30	40	<b>200</b>
8.	II	Recent advances in Physiotherapy in Cardio-respiratory. (Part 2)	20	10	100	30	40	<b>200</b>
9.	II	Recent advances in Physiotherapy in Community and rehabilitation. ( Part 2)	20	10	100	30	40	<b>200</b>
10.	II	Recent advances in Physiotherapy in Pediatrics. (Part 2)	20	10	100	30	40	<b>200</b>
11.	III	Dissertation			80*	20		<b>100</b>

\*Presentation

#candidates will write paper I&II based on the elective they have chosen, in the III & IV semester.

### **INTERNAL ASSESSMENT**

Regular internal assessment examinations should be conducted on each course in a semester. There should be a minimum of at least 2 internal assessment examination in each semester. An average of (best)two internal assessments should be taken into consideration during calculation of internal assessment marks.

The student must secure at least 40% in each subject of the internal examinations in both theory and practical of the subject to be eligible to appear for the final semester examination.