2. PROGRAM EDUCATION OBJECTIVES (PEOs)

The overall objective of the learning outcome-based curriculum framework (LOCF) for MPT (Cardiopulmonary Sciences) are as follows:

PEO No.	Education Objective
PEO 1	Students will be able to apply advanced body of knowledge and clinical competency with evidence based practice in Physiotherapy to achieve professional excellence.
PEO 2	Students will execute high order skills in analysis, critical evaluation and/or professional application of clinical and practical skills in Physiotherapy
PEO 3	Students will practice the profession by ethical norms and communicate effectively with the multi-disciplinary team.
PEO 4	Students will acquire creative proficiency in interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution.
PEO 5	Students will synthesize research ideas, develop innovations, incubate new concepts and encourage entrepreneurship.
PEO 6	Students will display lifelong learning process for a highly productive career and will be able to relate the concepts of Physiotherapy towards serving the cause of the society.

3. GRADUATE ATTRIBUTES

S No.	Attribute	Description
1.	**Professional Knowledge**	Critically appraise scientific knowledge and integrate evidence based practice as a health care professional
2.	**Clinical / practical skills**	Apply clinical / practical skills to prevent, assess and manage quality health care services
3.	**Communication**	Displays empathetic and professional communication skills to patients/clients, care-givers, other health professionals and other members of the community
4.	**Cooperation/Team work**	Ability to practice collaboratively and responsibly with multidisciplinary team members to deliver high quality health care
5.	**Professional ethics**	Ability to resolve ethical issues and practice the ethical values in the professional life
6.	**Research / Innovation-related Skills**	Ability to generate and investigate research questions and translate the evidence into clinical practice.
7.	**Critical thinking and problem solving**	Ability to reason and judge critically and provide solutions for real life situations
8	**Reflective thinking**	Employ reflective thinking along with sense of awareness of one self and society
9	**Information/digital literacy**	Excel in use information communication and technology in ongoing learning situations
11.	**Multi-cultural competence**	Ability to effectively lead and respond in a multicultural society
12.	**Lifelong Learning**	Demonstrate the ability to acquire knowledge and skills that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to demands of work place through knowledge/skill development/reskilling.

4. QUALIFICATION DESCRIPTORS:

a. Apply (i) Advanced and up-to-date knowledge and excel in the academic field of study as a whole and its applications, and links to related disciplinary areas/subjects of study; including a critical understanding of the established theories, principles and concepts, and of a number of advanced and emerging issues in the field of Physiotherapy (ii) Procedural knowledge that creates different types of professionals related to the Physiotherapy, including research and development, teaching and in government and public service; (iii) Professional and communication skills in the domain of Physiotherapy, including a critical understanding of the latest developments, and an ability to use established techniques in the domain of Physiotherapy.

b. Possess comprehensive knowledge about Physiotherapy, including current research, scholarly, and/or professional literature, relating to essential and advanced learning areas pertaining to the field of study, and techniques and skills required for identifying problems and issues.

c. Proficient skills in i) identifying the issues in health care needs; ii) collection of quantitative and/or qualitative data relevant to client's needs and professional practice; iii) analysis and interpretation of data using methodologies as appropriate for formulating evidence based hypotheses and solutions.

d. Apply knowledge, understanding and skills for critical assessment of a wide range of ideas and complex problems and issues relating to Physiotherapy in various specialties.

e. Communicate efficiently with all stakeholders, and provide relevant information to the members of the healthcare team.

f. Optimize one's own learning needs relating to current and emerging areas of study, making use of research, development and professional materials based on new frontiers of knowledge.

g. Execute one's disciplinary knowledge and transferable skills to new/unfamiliar contexts and to identify and analyse problems and issues and seek solutions to real-life problems.

MANIPAL COLLEGE OF HEALTH PROFESSIONS
MANIPAL
(A constituent unit of MAHE, Manipal)

The subject code equivalence for subjects mentioned in syllabus copy of course **MPT (Cardiopulmonary Sciences)** from the academic year **2021-22** batch. These changes have been discussed in BOS meeting held on 13.12.2021 and subsequently approved in the 70th Academic Council meeting held on 14.01.2022.

SEMESTER - I

Course Title	Old Code	Revised Code
Advanced Biostatistics & Research Methodology	ABS6101	ABS5101
Principles of Physiotherapy Practice	PTH6001	PTH5001
Clinical Practice in Physiotherapy	PTH6003	PTH5003
Research Proposal in Cardiopulmonary Sciences	PTH6170	PTH5170

SEMESTER - II

Course Title	Old Code	Revised Code
Ethics and Pedagogy	EPG6201	EPG5201
Foundations of Physiotherapy in Cardiopulmonary Sciences	PTH6102	PTH5102
Physiotherapy Clinical Practice in Cardiopulmonary Sciences - I	PTH6104	PTH5104
Research Progress in Cardiopulmonary Sciences - I	PTH6180	PTH5180

SEMESTER - III

Course Title	Old Code	Revised Code
Physiotherapy in General Cardiopulmonary Sciences	PTH7101	PTH6101
Physiotherapy Clinical Practice in Cardiopulmonary Sciences - II	PTH7103	PTH6103
Evidence Based Physiotherapy Practice in Cardiopulmonary Sciences	PTH7105	PTH6105
Research Progress in Cardiopulmonary Sciences -II	PTH7170	PTH6170

SEMESTER – IV: Program Elective
Option-1: Elective in Critical care Physiotherapy

Course Title	Old Code	Revised Code
Critical care Physiotherapy	PTH7112	PTH6112
Clinical practice in Critical care Physiotherapy	PTH7114	PTH6114
Research Project in Cardiopulmonary Sciences	PTH7180	PTH6180

Option-2: Elective in Cardiopulmonary rehabilitation

Course Title	Old Code	Revised Code
Physiotherapy in Cardiopulmonary Rehabilitation	PTH7122	PTH6122
Clinical Practice of Physiotherapy in Cardiopulmonary Rehabilitation	PTH7124	PTH6124
Research Project in Cardiopulmonary Sciences	PTH7180	PTH6180

Option-3: Elective in Health Promotion and Fitness

Course Title	Old Code	Revised Code
Physiotherapy in Health Promotion and Fitness	PTH7132	PTH6132
Clinical Practice of Physiotherapy in Health Promotion and Fitness	PTH7134	PTH6134
Research Project in Cardiopulmonary Sciences	PTH7180	PTH6180

HOD **DEAN** **DEPUTY-REGISTRAR ACADEMICS** **REGISTRAR**

Dean
Manipal College of Health Professions
MAHE, Manipal - 576104

Deputy Registrar - Academics
MANIPAL ACADEMY OF HIGHER EDUCATION
MANIPAL - 576 104

REGISTRAR
MANIPAL ACADEMY OF HIGHER EDUCATION
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5. PROGRAM OUTCOMES (POs):

After successful completion of Master of Physiotherapy (Cardiopulmonary Sciences) program, students will be able to:

PO No.	Attribute	Competency
PO 1	**Professional knowledge**	Apply current evidence and **scientific knowledge** to work as an expert member of health care system
PO 2	**Clinical/ Technical skills**	Employ **clinical skills** to provide quality health care services
PO 3	**Team work**	Empower the **team** with shared goals with the interdisciplinary health care team to improve societal health
PO 4	**Ethical value & professionalism**	Impart **ethical values and professionalism** within the legal framework of the society
PO 5	**Communication**	**Communicate** professionally with the multidisciplinary health care team and the society
PO 6	**Evidence based practice**	Appraise and adopt high quality **evidence based practice** that leads to excellence in professional practice
PO 7	**Life-long learning**	Advance knowledge and skills with the use of recent technology for the **continual improvement** of professional practice
PO 8	**Entrepreneurship, leadership and mentorship**	Build **entrepreneurship, leadership and mentorship** skills to practice independently as well as in collaboration with the multidisciplinary health care team

6. COURSE STRUCTURE, COURSE WISE LEARNING OBJECTIVE, AND COURSE OUTCOMES (COs)

SEMESTER - I

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
ABS6101	Advanced Biostatistics & Research Methodology	3	1	-	-	4	30	70	100
PTH6001	Principles of Physiotherapy Practice	1	2	-	-	3	100	-	100
PTH6003	Clinical Practice in Physiotherapy	-	-	-	36	12	100	-	100
PTH6170	Research Proposal in Cardiopulmonary Sciences	-	-	4	-	2	100	-	100
	Total	**4**	**3**	**4**	**36**	**21**	**330**	**70**	**400**

Note:
ABS6101 will be conducted for 50 marks and normalized to 70 marks

SEMESTER - II

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
EPG6201	Ethics and Pedagogy	1	1	-	-	2	100	-	100
PTH6102	Foundations of Physiotherapy in Cardiopulmonary Sciences	1	2		-	3	50	50	100
PTH6104	Physiotherapy Clinical Practice in Cardiopulmonary Sciences - I	-	-	-	36	12	100	-	100
PTH6180	Research Progress in Cardiopulmonary Sciences – I	-	-	4	-	2	100	-	100
	Total	**2**	**3**	**4**	**36**	**19**	**350**	**50**	**400**

Note:
PTH6102 will be conducted for 100 marks and normalized to 50 marks

SEMESTER - III

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
PTH7101	Physiotherapy in General Cardiopulmonary Sciences	1	2	-	-	3	50	50	100
PTH7103	Physiotherapy Clinical Practice in Cardiopulmonary Sciences - II	-	-	-	36	12	50	50	100
PTH7105	Evidence Based Physiotherapy Practice in Cardiopulmonary Sciences	1	1	-	-	2	100	-	100
PTH7170	Research Progress in Cardiopulmonary Sciences -II	-	-	6	-	3	100	-	100
	Total	**2**	**3**	**6**	**36**	**20**	**300**	**100**	**400**

Note:
PTH7101 will be conducted for 100 marks and normalized to 50 marks
PTH7103 will be conducted for 100 marks and normalized to 50 marks

SEMESTER – IV

Program Elective

The student may choose from anyone options from the list of Program Elective combinations provided in the table below.

Option-1: Elective in Critical care Physiotherapy

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
PTH7112	Physiotherapy in Critical care Physiotherapy	1	2	-	-	3	50	50	100
PTH7114	Clinical practice in Critical care Physiotherapy	-	-	-	36	12	50	50	100
PTH7180	Research Project in Cardiopulmonary Sciences	-	-	10	-	5	50	50	100
	Total	**1**	**2**	**10**	**36**	**20**	**150**	**150**	**300**

Note:
PTH7112 will be conducted for 50 marks
PTH7114 will be conducted for 100 marks and normalized to 50 marks

Option-2: Elective in Cardiopulmonary rehabilitation

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
PTH7122	Physiotherapy in Cardiopulmonary Rehabilitation	1	2	-	-	3	50	50	100
PTH7124	Clinical Practice of Physiotherapy in Cardiopulmonary Rehabilitation	-	-	-	36	12	50	50	100
PTH7180	Research Project in Cardiopulmonary Sciences	-	-	10	-	5	50	50	100
	Total	**1**	**2**	**10**	**36**	**20**	**150**	**150**	**300**

Note:
PTH7122 will be conducted for 50 marks
PTH7124 will be conducted for 100 marks and normalized to 50 marks

SEMESTER – IV-Elective in Health Promotion and Fitness

Course Code	Course Title	Credit Distribution (hours/week)					Marks Distribution		
		L	T	P	CL	CR	IAC	ESE	Total
PTH7132	Physiotherapy in Health Promotion and Fitness	1	2	-	-	3	50	100	150
PTH7134	Clinical Practice of Physiotherapy in Health Promotion and Fitness	-	-	-	36	12	50	100	150
PTH7180	Research Project in Cardiopulmonary Sciences	-	-	10	-	5	50	50	100
	Total	**1**	**2**	**10**	**36**	**20**	**150**	**250**	**400**

Note:
PTH7132 will be conducted for 50 marks
PTH7134 will be conducted for 100 marks and normalized to 50 marks

OVERALL CREDIT DISTRIBUTION

Semester	Credit distribution					Marks Distribution		
	L	T	P	CL	CR	IAC	ESE	Total
I - SEMESTER	4	3	4	36	21	330	70	**400**
II - SEMESTER	2	3	4	36	19	350	50	**400**
III - SEMESTER	2	3	6	36	20	300	100	**400**
IV - SEMESTER	1	2	10	36	20	150	150	**300**
Grand Total	**9**	**11**	**24**	**144**	**80**	**1130**	**370**	**1500**

INTERNAL ASSESSMENT COMPONENT (IAC) WEIGHTAGE DISTRIBUTION

Theory		Practical		Research	
Components	**%**	**Components**	**%**	**Components**	**%**
Mid semester exam	50	Case presentation	50	Performance evaluation	50
Class seminar	30	Clinical performance	50	Presentation/ Report submission	50
Assignments	20				