

### MGM INSTITUTE OF HEALTH SCIENCES

(Deemed University u/s 3 of UGC Act, 1956) Grade 'A' Accredited by NAAC

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## Master of Physiotherapy Program Specialty - Sports Physiotherapy

#### **Program Outcomes for Master of Physiotherapy Program**

Students who complete 2 years postgraduate program in Physiotherapy would earn a Master of Physiotherapy (MPT) specialty degree. The learningoutcomes that a student should be able to demonstrate on completion of a degree levelprogram include academic, personal, behavioral, entrepreneurial andsocial competencies. It is expected that astudent completing a particular course must have a level of understanding of thesubject and its sub-areas in consonance with the learning outcomes mentionedat the end of that course. Program learning outcomes include Physiotherapy specific skills, generic skills, transferable global skills and competencies that prepare the student for employment, higher education, research and develop them as contributing members for overall development of the society. The program learning outcomes relating to MPT degree programSpecialty - Sports Physiotherapy are summarized below:

PO 1	To develop skills in cardiopulmonary resuscitation and physiotherapy care of
101	patient in critical care units
PO 2	To develop behavioral skills and humanitarian approach while
102	communicating with patients, relatives, society at large and co-professionals
	To understand the moral, ethical values and legal aspects concerned with
PO 3	Physiotherapy management, demonstrate professional ethical behavior
	towards client and maintain respect, dignity and confidentiality of patients
	To demonstrate academic skills and knowledge related to understanding the
	structural and functional of human body, applied anatomy, physiology in
PO 4	physiotherapy practicepertaining to cardiovascular and pulmonary system
	with sound clinical reasoning, detailed knowledge of exercise physiology,
	cardio-pulmonary rehabilitation and fitness.
PO 5	To identify the biopsychosocial component of pain and dysfunction

PO 6	To gain knowledge of biomechanics of human movement and its applications
100	in cardio-respiratory conditions and application in Physiotherapy management.
	To integrate Physiotherapy evaluation skills to arrive at a Functional/ Physical
PO 7	Diagnosis in cardiovascular and pulmonary conditions, formulate treatment
PO /	goals, and use sound clinical decision-making skills to assess and manage all
	cardiopulmonary conditions and improve fitness
	To be able to demonstrate skill in maneuvers of respiratory muscle
PO 8	strengthening, manual therapy techniques to improve lung hygiene, breathing
	control, ergonomics, cardiac and pulmonary rehabilitation,
	To demonstrate ability of critical thinking, scientific enquiry, experiential
	learning, personal finance, seek funding for research, entrepreneurship and
PO 9	managerial skills related to task in day-to-day work for personal & societal
	growth, develop innovative devices and techniques for treatment, produce
	intellectual property in specialized are of interest,
PO10	To develop and utilize basic computer applications for data management, data
POIU	storage, generating data bases and for research purposes.

# **Program Specific Outcomes for Master of Physiotherapy Program Specialty - Sports Physiotherapy**

Graduates of the Master of Physiotherapy program will be proficient in skills imbibed in the undergraduate program and in addition demonstrate skills to:

PSO 1	Critically evaluate, prioritize and apply physiotherapy approaches, paradigms and techniques and utilize appropriate, evidence-based skills, techniques and practice in managing andtreating people with injury, disability or illness in a range of health care and/or rehabilitation settings.	
PSO 2	Identify, analyze and respond appropriately to ethical dilemmas and challenges, and ethicalimplications of patient/client presentations.	
PSO 3	Develop a reasoned rationale for clinical evidence-based physiotherapy intervention and design appropriate treatment/management plans to meet the needs of patients/clients within legislative, policy, ethical, funding and other constraint.	
PSO 4	Acquire and utilize new knowledge, research, technologies and other appropriate resources and methods to optimize, and to ensure cost-effectiveness, quality and continuous improvement of health care delivery and outcomes.	
PSO 5	Prepare students for professional practice as Physiotherapists. Graduates will be able to practice across a range of settings, including rural and remote areas. Emphasis will be placed on preparing a contemporary health professional to be client-centered and to work effectively within an interdisciplinary team.	
PSO 6	Work creatively and effectively whilst upholding professional standards and relationships with a range of stakeholders (including clients, colleagues, careers, families, employers, insurers and others whose presence impacts on the patient/client, and other treatment providers and	

	team members) with different understandings, perspectives and priorities influencing		
	physiotherapy practice.		
PSO 7	PSO 7 Adapt communication styles recognizing cultural safety, cultural and linguistic diversity		

#### **Course learning outcomes:**

Course Learning outcomes are defined within the course content that makes up the program. The courses are structured such that learning is vertically and horizontally integrated into the curriculum. The CBCS curriculum offers a certain degree of flexibility in taking courses. Course learning is aligned to the program learning outcomes and graduate attributes. The MPT program is inclusive of 4 semesters inclusive of 12 core courses, (35 Credits), 6 ability enhancement compulsory courses (AECC- 14 credits), 6 ability enhancement elective courses (AEEC – 6 credits) and 3 discipline specific skill electives (SEC – 4 credits) and 2 generic electives (GEC – 2 credits). Clinical training (CLT) is included in each semester (22 credits). Research project will be submitted as a mandatory requirement for award of Master's degree (7 credits). Evaluation of the courses vary as appropriate to the subject area, inclusive of formative and summative assessment, ongoing comprehensive assessment in the form of closed and open book tests, objectively structured practical examination OSPE, objectively structured clinical examination OSCE, problem based assignments, practical assignments, observation of practical skills, project reports, case reports, viva, seminars, essays, and others.

#### **Course Outcomes (CO):**

#### Semester I

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Musculoskeletal Anatomy and Soft Tissue Mechanics
Course Code	MPT049
Credit per Semester	3 credits
Hours per Semester	80 hours

Course Outcomes	
Student will be able to	

CO 1	The student will be able to identify & describe anatomical aspects of bones, tendons and ligaments as it relates to injury.
CO 2	Application of knowledge of musculoskeletal system on functional impairment based on ICF model
CO 3	To understand the Anatomical basis of various musculoskeletal conditions.
CO 4	To identify and interpret general characteristics, material properties, appropriate constitutive model, and adaptation potential for tissue

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Exercise and Sports Physiology
Course Code	MPT050
Credit per Semester	3credits
Hours per Semester	60 hours

Course Outcomes		
	Student will be able to	
CO 1	Identify and describe the limitations for the energy delivery and utilization, as well as the muscular and neural limitations for aerobic and anaerobic sports	
CO 2	Apply application of system concepts behind sports performance.	
CO 3	Understand the advancements in understanding human response to environmental stresses and associate factors for maximizing movement performance	
CO 4	present, evaluate and discuss scientific results in domain areas of sports and exercise physiology	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Sports Biomechanics and Performance Assessment & Enhancement
Course Code	MPT053
Credit per Semester	4credits
<b>Hours per Semester</b>	100 hours

Course Outcomes	
Student will be able to	
CO 1	To describe the biomechanical assessment of different sports
CO 2	To interpret biomechanical information related to technical fault as a risk factor for sports injury
CO 3	To be able to discuss and interpret mechanical faults in sports techniques towards injury prevention
CO 4	To Visualize and communicate sports performance to coaches

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Cardiopulmonary Resuscitation
Course Code	MPTAECC-001
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Outcomes Student should be able to	
CO 1	To describe the importance of high quality CPR and its impact on survival
CO 2	To Describe all steps of chain of survival
CO 3	To apply BLS concepts of chain of survival
CO 4	To Recognize signs of someone needing CPR
CO 5	To Perform high quality CPR for an adult/ child/ infant
CO6	To Describe the importance of early use of Automated external defibrillator (AED)
CO7	To demonstrate appropriate use of an AED
CO8	To Provide effective ventilations by using a barrier device
CO9	To describe the importance of teams in multi- rescuer resuscitation
CO10	Describe techniques of relief of foreign-body airway obstruction for an adult/child/infant

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Research methods
Course Code	MPTAECC002
Credit per Semester	2 credits
Hours per Semester	40 hours

	Course Outcomes	
	Student will be able to	
CO 1	To understand basic concept of research, design, problems & sampling techniques of research.	
CO 2	To gain knowledge of various types of study designs and planning for the same	
CO 3	Plan for a research study	
CO 4	To understand various methods of quantitative and qualitative data analyses	
CO 5	Describe the terminology in research, ethical issues and research process.	
CO 6	Describe important sources, and steps in reviewing of literature.	
CO 7	To understand sampling technique, research process, data collection, biostatics, correlation and statistical significance tests.	
CO 8	To identify and to be able to participate in or conduct descriptive, explorative, survey studies in physical therapy practice with statistics.	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Bioethics, Health management and Administration
Course Code	MPTAECC003
Credit per Semester	3 credits
Hours per Semester	60 hours

Course Outcomes	
CO 1	To describe the nature, meaning and principals of bioethics.
CO 2	To describe human dignity and human rights.
CO 3	To describe the benefit and harm of patient's right & dignity in Health care settings.
CO 4	To understand the role of constitutions and functions of W.H.O. and W.C.P.T and IAP.
CO 5	To be able to understand regarding management and administration, budget planning, leadership and teamwork.

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Teaching Technology
Course Code	MPTAECC004
Credit per Semester	3 credits
Hours per Semester	80 hours

Course Outcomes	
Student will be able to	
CO 1	To describe the philosophies of education.
CO 2	To describe the role of education philosophies.
CO 3	To describe recent new trends and issues regarding education.
CO 4	To understand the concepts of teaching and learning with curriculum formation.
CO 5	To describe methods of teaching, and conduct educational seminars and microteachings using new trends in education.

# **Semester II**

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy	
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Name of the Course	Regional Sports Injuries (Upper & Lower Quadrant)
Course Code	MPT052
Credit per Semester	4 credits
Hours per Semester	100 hours

Course Outcomes		
	Student will be able to	
CO 1	Identify & describe anatomical aspects of sports injuries	
CO 2	Apply knowledge of musculoskeletal system on functional impairment based on ICF model	
CO 3	Understand the Anatomical basis of various musculoskeletal sports injuries	
CO 4	Identify etiology of sports injuries of upper and lower extremity.	
CO 5	Conduct sports specific musculoskeletal assessment and plan of care	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	<b>Motor Control &amp; Skill Acquisition</b>
Course Code	MPT051
Credit per Semester	3 credits
Hours per Semester	80 hours

Course Outcomes		
	Student will be able to	
GO 1		
CO 1	To describe the neuro-physiological changes associated with exercise/ training.	
CO 2	To describe the role of central and peripheral nervous systems for an efficient human movement.	
CO 3	To differentiate between skills of varying nature and contextualize based on population being exercised.	
CO 4	To be able to prepare basic program for learners of different skill sets	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Legal issues and Professional ethics
Course Code	MPTAECC002
Credit per Semester	2 credits
Hours per Semester	40 hours

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	Students will be able to	
CO 1	To provide the basis for participation in clinical risk management, risk management and patient safety committees and for further training as a risk / patient safety	
CO 2	To ensure improvement of patient safety and care, to the prevention and management of legal claims and to healthcare delivery in general	
CO 3	To understand the professional ethics and responsibility as a therapist.	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Medical Device Innovation
Course Code	MPTGEC001
Credit per Semester	2 credits
Hours per Semester	40 hours

	Course Outcomes	
	Students will be able to	
CO 1	Understand phases of device innovation	
CO 2	Understand unmet health needs, inventing and evaluating a new technology	
CO 3	Understand risks and challenges that are unique to medical device innovation	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Scientific Writing
Course Code	MPTGEC002
Credits per semester	2 credits
Hours per semester	40 hours

Course Outcomes Students will be able to		
CO 1	Understand scientific writing process, components of a research paper	

CO 2	Methods of literature search
CO 3	Attain skills of organizing and composing a scientific paper
CO4	Analyze and review scientific papers
CO5	Comprehend ethics of scientific writing
CO6	Understand the editorial process for publication

## **Semester III**

Name of the Ducquemme	Master Of Physiotherapy (MPT)
Name of the Programme	Specialty –Sports Physiotherapy
Name of the Course	Regional Sports Injuries (Head, Neck, Face & Spine )
Course Code	MPT054
Credits per semester	3 credits
Hours per semester	80 hours

Course Outcomes
Student will be able to

CO 1	Identify & describe anatomical aspects of sports injuries involving head, neck, face and spine
CO 2	Apply knowledge of musculoskeletal system on functional impairment based on ICF model
CO 3	Have detailed knowledge regarding etiology of sports injuries involving head, neck, face and spine

Name of the Programme	Master Of Physiotherapy (MPT) Specialty –Sports Physiotherapy
Name of the Course	Pediatric & Adolescent Sports
Course Code	MPT055
Credits per semester	3 credits
Hours per semester	80 hours

Course Outcomes		
	Student will be able to	
CO 1	demonstrate advanced clinical reasoning skills in the assessment and management of the	
	selected sports/performance injuries	
CO 2	critically reflect on their scope of practice and their role within the multi-disciplinary team	
	in the triage and management pathways of children and adolescents with selected athletic	
	injuries and medical conditions	
CO 3	CO 3 understand and evaluate the risk assessment procedures, clinical tests, investigations and	
	interventions used in the assessment, diagnosis and management of sport/performance	
	related injuries	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty –Sports Physiotherapy
Name of the Course	Geriatric and Female Athletes
Course Code	MPT056
Credits per semester	3 credits
Hours per semester	80 hours

Course Outcomes		
	Student will be able to	
CO 1	demonstrate advanced clinical reasoning skills in the assessment and management of the	
	selected sports/performance injuries	
CO 2	critically reflect on their scope of practice and their role within the multi-disciplinary team	
	in the triage and management pathways of geriatric and female athletes with selected	
	athletic injuries and medical conditions	
CO 3	Understand particular factors including diet exercise and sleep which affect health and	
	exercise performance	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty –Sports Physiotherapy
Name of the Course	Sports Psychology
Course Code	MPT057
Credits per semester	3 credits
Hours per semester	60 hours

Course Outcomes		
	Student will be able to	
CO 1	Demonstrate advanced clinical reasoning skills for psychological aspects of sports injuries and performance	
CO 2	Correlate the psychological concepts with the sports and athlete specific situations	
CO 3	Integrate the knowledge about personality, motor learning for behavior modification of athletes	
CO 4	List down the strategies for motivation utilized in the field of sports	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty –Sports Physiotherapy
Name of the Course	Athletic Training
Course Code	MPTAECC009
Credits per semester	2 credits
Hours per semester	40 hours

Course Outcomes	
Student will be able to	
CO 1	Apply the concepts of exercise physiology and training methods to different athletes
CO 2	Understand the training methodology for improving sports performance in particular domain of sports
CO 3	Select specific characteristics of athletic potential and design an appropriate training plan

## **Semester IV**

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Clinical Sports Medicine
Course Code	MPT058
Credit per Semester	3 credits
Hours per Semester	80 hours

Course Outcomes		
	Student will be able to	
CO 1	Understand pathology, pathophysiology, diagnosis and treatment of acute and chronic sports medicine	
CO 2	Apply pathology and pathophysiology of acute and chronic medical illness in the active Population.	
CO 3	Communicate effectively with physicians, staff, and patients concerning the evaluation and Management of orthopedic and sports medicine conditions.	
CO 4	Accurately convey medical information to colleagues, specialists, athletic trainers and coaches	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Pain Sciences
Course Code	MPT059
Credit per Semester	3 credits
Hours per Semester	80 hours

Course Outcomes		
	Student will be able to	
CO 1	Recognize and describe the mechanistic descriptors for the clinical classification of pain	
CO 2	Characterize the central nervous system pathways that modulate nociceptive transmission and appraise how these systems may contribute to pain	
CO 3	Discuss the complex changes that can occur in motor function in association with pain and describe how a plan of care would be individualized to address unhelpful movement behaviors (e.g., fear-avoidance)	
CO 4	Use valid and reliable tools for measuring pain and associated symptoms to assess and reassess related outcomes as appropriate for the clinical context and population.	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Sports Nutrition
Course Code	MPT060
Credit per Semester	3 credits
Hours per Semester	60 hours

Course Outcomes		
	Student will be able to	
CO 1	Recognize and describe the mechanistic descriptors for the clinical classification of pain	
CO 2	Characterize the central nervous system pathways that modulate nociceptive transmission and appraise how these systems may contribute to pain	
CO 3	Discuss the complex changes that can occur in motor function in association with pain and describe how a plan of care would be individualized to address unhelpful movement behaviors (e.g., fear-avoidance)	
CO 4	Use valid and reliable tools for measuring pain and associated symptoms to assess and reassess related outcomes as appropriate for the clinical context and population.	

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Sports Pharmacology
Course Code	MPT061

Credit per Semester	3 credits
<b>Hours per Semester</b>	20 hours

Course Outcomes	
Student will be able to	
CO 1	Understand the mechanism of drug action on sports performance
CO 2	Apply the concepts of pharmacokinetic action of drugs on optimizing systemic responses
CO 3	Educate the athletes about ill effects of drug abuse on sports performance

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Kinanthropometry
Course Code	MPTAEEC 008
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Outcomes	
Student will be able to	
CO 1	Appraise the importance of body types to sports performance
CO 2	Discuss the various models of body composition to classify somatotype into sports specialization
CO 3	Interpret the anthropometrical data to evaluate effectiveness of injury prevention plans

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Physical activity & Public health
Course Code	MPTAEEC 009
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Outcomes		
Student will be able to		
CO 1	Appraise the importance of body types to sports performance	

CO 2	Discuss the various models of body composition to classify somatotype into sports specialization
CO 3	Interpret the anthropometrical data to evaluate effectiveness of injury prevention plans

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Ergonomics
Course Code	MPTAEEC 010
Credit per Semester	1 credits
Hours per Semester	20 hours

Course Outcomes	
Student will be able to	
CO 1	Interpret the design of various workplace stations based on ergonomic principles
CO 2	Develop preventive aspects to work related musculoskeletal disorders(WRMSDs)
CO 3	Apply the ergonomic principles to workplace environment

Name of the Programme	Master Of Physiotherapy (MPT) Specialty - Sports Physiotherapy
Name of the Course	Stress Management
Course Code	MPTAEEC 011
Credit per Semester	1 credit
Hours per Semester	20 hours

Course Outcomes					
Student will be able to					
CO 1	Recognize the role of stress and coping in human wellbeing, communication, relationships, academic and work performance				
CO 2	Explain the physiological dynamics involved with the stress response.				
CO 3	Develop and evaluate intervention strategies for identified stressors				

Dr. Rajesh B. Goel

Registrar

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