



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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CHOICE BASED CREDIT SYSTEM (CBCS)

(with effect from 2019-2020 Batch onwards)

Curriculum for Master of Physiotherapy Community Physiotherapy

Amended upto AC-42/2022, Dated 26/04/2022

Amended History

1. Approved as per Resolution No. 3.2.2.11 (i), BOM – 57/2019, dated 26/04/2019
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5. Amended upto Resolution No. 3.7, Resolution No. 3.10, Resolution No. 3.11 of AC-41/2021, dated 27/08/2021.
6. Amended upto Resolution No. 10.4 of AC-42/2022.



MGM SCHOOL OF PHYSIOTHERAPY
(A constituent unit of MGM INSTITUTE OF HEALTH SCIENCES)
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CHOICE BASED CREDIT SYSTEM
CURRICULUM FOR
MASTER OF PHYSIOTHERAPY (MPT)
Specialty - Community Physiotherapy
DEGREE PROGRAM
(2019)

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VISION AND MISSION OF MGM SCHOOL OF PHYSIOTHERAPY

Vision

MGM Institute of Health Sciences aims to be a top-ranking Centre of Excellence in Health Science Education, Health Care and Research.

Mission

- Students graduating from the Institute will have the required skills to deliver the quality health care to all the sections of the society with compassion and benevolence, without prejudice or discrimination at an affordable cost.
- As a Research Centre, it shall focus on finding better, safer and affordable ways of diagnosing, treating and preventing diseases. In doing so, it will maintain highest ethical standard.

Name of the Degree Offered: Master of Physiotherapy (MPT)

Duration of Program: 2 years (4 Semesters).

Program pattern:

First Semester	August- January
Second Semester	February- July
Third Semester	August- January
Fourth Semester	February- July

Eligibility Criteria:

- He/she has passed the Bachelor in Physiotherapy program recognized by any Indian University or a duly constituted Board
- Minimum percentage of marks: 50% aggregate.

Medium of Instruction:

English will be the medium of instruction for all the subjects of study and for examinations.

I. Preamble

Physiotherapy or Physical Therapy (PT) is a **Movement Science** with an established theoretical and scientific base and widespread clinical applications in the **Prevention, Restoration & Rehabilitation, Maintenance and Promotion of optimal physical function**. Physiotherapists **diagnose and manage movement dysfunction** and enhance physical and functional abilities. This physical dysfunction may be the sequelae of involvement of any of the systems like Musculoskeletal, Neurological, Cardiovascular, Respiratory or other body systems.

These practitioners contribute to society and the profession through practice, teaching, administration, and the discovery and application of new knowledge about physiotherapy experiences of sufficient excellence and breadth by research to allow the acquisition and application of essential knowledge, skills, and behaviors as applied to the practice of physiotherapy. Physiotherapist (PT) are autonomous, effective and compassionate professionals, who practice collaboratively in a variety of healthcare set ups such as neonatal to geriatric, from critical care to community fitness to sports training. Emerging graduate and post graduate students are required to demonstrate a substantial knowledge base, possess skills related to Physiotherapy practices, possess high emotional quotient to address family health and meet community responsibilities, demonstrate gender sensitivity and socio-culturally relevant competence. They should be aware of legal issues governing professional practice and follow evidence based clinical practices.

The Chairman, University Grants Commission (UGC) via letter D.O.No.F.1- 1/2015 (CM) dated 8th January, 2015, communicated the decision of the Ministry of Human Resources Development to implement Choice Based Credit System (CBCS) from the academic session 2015-2016 in all Indian Universities to enhance academic standards and quality in higher education through innovation and improvements in curriculum, teaching- learning process, examination and evaluation systems.

Diversity in the system of higher education, and multiple approaches followed by universities towards curriculum, examination, evaluation and grading system has led to the lack of uniformity. While the Universities must have the flexibility and freedom in designing the examination and evaluation methods that best fits the curriculum, syllabi and teaching– learning methods, there is a need to devise a sensible system for awarding the grades based on the performance of students. Presently the performance of the

students is reported using the conventional system of marks secured in the examinations or grades or both. The conversion from marks to letter grades and the letter grades used vary widely across the Universities in the country. This creates difficulty for the academia and the employers to understand and infer the relative performance of the students graduating from different universities and colleges in the country. Hence the UGC has recommended the implementation of CBCS in Universities.

The grading system is considered to be better than the conventional marks system and hence it has been followed in the top institutions in India and abroad. Introduction of a uniform grading system will facilitate student mobility across institutions within and across countries and also enable potential employers to assess the performance of students. To bring in the desired uniformity, in grading system and method for computing the cumulative grade point average (CGPA) based on the performance of students in the examinations, the UGC has formulated the guidelines and communicated it to all Universities for adoption.

UGC, subsequently, in its notification No.F.1-1/2015 (Sec.) dated 10/4/15 has provided a set of model curricula and syllabi for CBCS program under the Faculties of Arts, Humanities and Sciences providing the academic flexibility for Universities to make changes/ innovation up to 20% in the syllabi of these program. It has also specified that all UG program should be for a minimum of three years duration. UG Program with 120-140 credits in the 180 annual teaching days system being designated as regular B.A /B.Sc./B.Com., B.B.A etc., Those UG programs with 140-160 credits or more with fully supported higher number of annual teaching days can be designated as B.A (Hons)/ B.Sc.(Hons) /B.B.A(Hons)/B.Com(Hons) etc.,

Further, the University Grants Commission encourages higher education institutes to integrate learning outcome based framework into the curriculum for undergraduate education which is considered critical for enabling effective participation of young people in knowledge production, participation in knowledge economy, improving national competitiveness in a globalized world and equipping young people with skills relevant to global and national standards. Outcome oriented curriculum enhances employability of graduates and enables translation of academic research into innovations for practical use in society and economy.

Learning outcomes-based approach specifies what graduates and post graduates are expected to know, understand and able to do after completing the program. The MPT degree is awarded based on

demonstration of achievement of outcomes in terms of knowledge, skills, attitudes and values and academic standards expected of the post graduate. The expected learning outcomes help define the post graduate attributes, qualification descriptors, program learning outcomes, course learning outcomes curriculum planning, design, delivery and review of the academic program. Practical hours will include hands-on training in community-based assessment & rehabilitation on patient population & healthy individuals

MGM Institute of Health Sciences, accredited A grade, has taken a proactive step in adopting the CBCS system for Physiotherapy programs implemented by its constituent unit, MGM School of Physiotherapy. The duration of Master of Physiotherapy (MPT) program is two years offering 90 credits with well-defined learning outcomes. The MPT CBCS Curriculum has been designed with reference to existing curriculum of state Universities within the country, generic guidelines of University Grant Commission, global guidelines for curriculum, input from experts in the field of Physiotherapy and feedback from stakeholders namely students, teachers, alumni, employers and professionals to remain in consonance with the spirit of choice-based credit system and learning objective based curriculum.

II. Introduction : Physiotherapy is a branch of modern medical science which includes examination, assessment, interpretation, physical diagnosis, planning and execution of treatment and advice to any person for the purpose of preventing, correcting, alleviating and limiting dysfunction, acute and chronic bodily malfunction including life saving measures via chest physiotherapy in the intensive care unit, curing physical disorders or disability, promoting physical fitness, facilitating healing and pain relief and treatment of physical and psychological disorders through modulating psychological and physical response using physical agents, activities and devices including exercise, mobilization, manipulations, therapeutic ultrasound, electrical and thermal agents and electrotherapy for diagnosis, treatment and prevention.

(Definition as per the Maharashtra State Council for Occupational therapy & Physiotherapy, 2004)

‘Physiotherapist’ is a qualified professional who has acquired all the above-mentioned knowledge and skills for entry into practice after being awarded a bachelor degree in the subject of “Physiotherapy” from a recognized institute affiliated to the University conducting a fulltime course not less than four years and six months of internship. Students who have passed BPT are eligible to pursue MPT program at MGM in specialty areas such as Cardiovascular Pulmonary Physiotherapy and Fitness, Neurological

Physiotherapy, Musculoskeletal Physiotherapy, Sports Physiotherapy and Preventive and Community Physiotherapy.

III. Objectives of the Master of Physiotherapy (MPT) program:

This program is formulated to enable student to gain adequate knowledge, skills and clinical hands-on experience leading to an ability to establish independent professional practice in the specialized areas of interest. The overall content of the curriculum focuses on learning experiences and clinical education experiences for each student that encompasses the following.

1. Ethical, evidence-based, efficient Physiotherapy treatment of adult as well as paediatric patients/clients with an array of conditions (e.g., musculoskeletal, neuromuscular, cardiovascular/pulmonary, integumentary etc.) 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.
2. Ability to prevent movement disorders or maintain/restore optimal function and quality of life in individuals with movement disorders.
3. Ability to operate as independent practitioners, as well as members of health service provider teams, act as first contact practitioners, from whom patients/clients may seek direct services without referral from another health care professional.
4. Ability to promote the health and wellbeing of individuals and the general public/society, emphasizing the importance of physical activity and exercise.
5. Prevent impairments, activity limitations, participatory restrictions and disabilities in individuals
 - a. at risk of altered movement behaviours due to health factors, socio-economic stressors,
 - b. environmental factors and lifestyle factors.
6. Provide interventions/treatment to restore integrity of body systems essential for movement,
 - a. maximize function and recuperation, minimize incapacity, and enhance the quality of life,
 - b. independent living and workability in individuals and groups of individuals with altered movement behaviours resulting from impairments, activity limitations, participatory restrictions and disabilities.
7. Ability to modify environmental, home and work access and barriers to ensure full participation in one's normal and expected societal roles.

8. 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/rehabilitation programs, independent professional practice in self-employed set up or employment at the multiple settings such as hospitals, nursing homes, institutions catering services to specific conditions (like paraplegic /geriatric homes), primary as well as rural & urban health care set up, community health , domiciliary practice like residential areas, education & research centres, fitness /wellness centres like health clubs, occupational health canters g]- Schools including special schools, geriatric care units, and others.
9. Ability to carry out research projects

IV. Physiotherapy Post-Graduate Attributes:

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. The purpose of this curriculum is to delineate the cognitive, affective and psychomotor skills deemed essential for completion of this program and to perform as a competent Physiotherapist who will be able to evaluate, plan & execute physiotherapy treatment independently. Some of the characteristic attributes that a post graduate should demonstrate are as follows:

- 1. Disciplinary knowledge:** The student must demonstrate comprehensive knowledge and understanding of curricular content over and above that of a graduate. 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. Students will undergo clinical “Hands on Training” with focus on rotational clinical assignments in specialty subject throughout the course which enable the student to develop expert clinical reasoning and be able to function as a consultant as well as expert clinician in the specialty. In addition to the didactic /laboratory and clinical “hands on” training, the program includes seminars, case presentations, journal article reading and appraisal and administrative work under the supervision of faculty members. During the program the student is

expected to prepare and submit a dissertation based on research in a selected specialty.

2. Psychomotor Skills: Physiotherapy post graduate students must demonstrate psychomotor skills of locomotors ability to access lecture halls, practical laboratory and clinics.

- a. They must possess ability to move with reasonable swiftness in emergency situations to protect the patient (e.g., from falling).
- b. They should be competent to perform physical tasks such as positioning patients to effectively perform evaluation, manipulate assessment tools used for evaluation of joint mobility, muscle strength, testing musculoskeletal, neurological and cardiorespiratory systems.
- c. Students should be competent to perform risk assessment, safely and effectively guide, facilitate, inhibit, and resist movement and motor patterns through physical facilitation and inhibition techniques (including ability to give timely urgent verbal feedback), perform transfers, positioning, exercise, mobilization techniques and use assistive devices and perform cardiopulmonary resuscitation.
- d. Students must possess fine motor skills to legibly record thoughts for written assignments (including diagrams) and tests, document evaluations, patient care notes, referrals, etc. in standard medical charts in hospital/clinical settings in a timely manner and consistent with the acceptable norms of clinical settings and safely use electrotherapy modalities and fine mobilisation techniques.
- e. Students must possess visual acuity to read patient's treatment chart, observe demonstrations, visual training, receive visual information from patients, treatment environment and clues of treatment tolerance. Auditory acuity to distinguish between normal and abnormal sounds, engage in conversation with patients and retrieve meaningful information relevant to patient care.

3. Communication skills: The student must be able to express thoughts and ideas effectively in writing and verbally, communicate with others using appropriate media, share views, demonstrate ability to listen carefully, write analytically, present complex information in a clear, and concise manner. Student must be able to effectively communicate information and safety concerns with other students, teachers, patients, peers, under graduate students, staff and personnel by asking questions, giving information, explaining conditions and procedures, or teaching home programs. They should be able to receive and send verbal communication in life threatening situations in a timely manner within the acceptable norms of clinical settings. Physiotherapy education presents

exceptional challenges in the volume and breadth of required reading and the necessity to impart information to others. Students must be able to communicate quickly, effectively and efficiently in oral and written English with all members of the health care team.

4. **Critical thinking:** Post graduate student should be able to apply analytical thought to a body of knowledge, analyse 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. They should be able to identify structural and functional impairments, identify contextual factors influencing function, critically appraise treatment options and implement care that is socio-culturally relevant to each patient.
5. **Problem Solving:** Students must demonstrate capacity to extrapolate theoretical knowledge and apply competencies gained to solve non- familiar problems, complex problems and real-life situations.
6. **Analytical reasoning:** Post graduate students should be able to 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.
7. **Research – Related Skills:** Post graduate students should be able to define research problem, formulate hypothesis, manage resources, analyse and interpret data, explore cause – effect relationships, plan and execute a report, present results of the experiment in form of scientific peer reviewed publications and demonstrate a sense of scientific enquiry, reflective thinking, self-directed learning and creativity.
8. **Co-operation /Team Work:** Students should demonstrate the ability to work effectively and respectfully with a multi-disciplinary team, facilitate co-operative and co-ordinated effort for the common cause in various clinical settings.
9. **Socio-cultural and multicultural competency:** Knowledge of socio-cultural values, attitudes and beliefs relevant to a particular society, nation and global perspectives must be present to effectively engage and identify with diverse groups.
10. **Awareness of moral, ethical and legal issues:** Students must demonstrate moral /ethical values in conduct, awareness of ethical issues related to patient care, work practices, refraining from malpractice, unethical behaviour, falsification, plagiarism, misinterpretation of data, non-adherence to intellectual property rights, adhering to truthful, unbiased actions in all aspects of work without discrimination based on age, race, gender, sexual preference, disease, mental status,

lifestyle, opinions or personal values.

11. Leadership qualities: Students must demonstrate ability for task allocation, organization of task elements, setting direction, formulating an inspiring vision, team building, to achieve a vision, engaging, knowledge and respect individual values and opinions in order to foster harmonious working relationships with colleagues, peers, under graduate students and patients.

12. On-going Learning: Students must demonstrate ability to acquire knowledge and skills through on-going learning, participation in continuous education programs, engaging in self-paced, self-directed learning aimed at personal development, meeting social and cultural objectives, skill development, adapting to changing environment and workplace requirements and challenges.

V. Qualification Descriptors for Master of Physiotherapy (MPT) program:

Students who complete the 2 years Master of Physiotherapy program will be awarded a Master's degree. Expected outcomes that a student must demonstrate include:

1. Systematic, extensive and coherent knowledge and skill in Physiotherapy and its applications including critical understanding of established theories, principles and concepts, knowledge of advanced and emerging issues in Physiotherapy, skills in cardiovascular and pulmonary Physiotherapy and Fitness, recent advances and research in Physiotherapy evaluation and treatment procedures.
2. Comprehensive information regarding appropriate use of electrotherapy modalities, exercise equipment, advanced learning material, skills and techniques as indicated.
3. Skill in collecting quantitative and qualitative data, analysis and interpretation of data using appropriate methodology and communicating results to scientific community and beneficiaries for formulating appropriate evidence-based health care solutions.
4. Address self-learning needs related to current and emerging areas of study, use research and professional material, apply knowledge to new concepts and unfamiliar areas and seek solutions in real life situations.
5. Demonstrate profession related transferable skills relevant to patient care and employment opportunities.

VI. 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 learning outcomes that a student should be able to demonstrate on completion of a degree level program include academic, personal, behavioral, entrepreneurial and social competencies. It is expected that a student completing a particular course must have a level of understanding of the subject and its sub-areas in consonance with the learning outcomes mentioned at 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 program Specialty - Community Physiotherapy are summarized below:

PO 1	To design, implement and assess the effects of interventions and technology in the community-based rehabilitation and to become well-trained grass-root CBR functionaries
PO 2	To apply behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals
PO 3	To apply and examine moral, ethical values and legal aspects concerned with Physiotherapy management, demonstrate professional ethical behavior towards client and maintain respect, dignity and confidentiality of patients, to sensitize people about issues related to gender discrimination and socio-cultural factors
PO 4	To critically analyze interactions between structure and function of human body, applied anatomy, physiology in physiotherapy practice pertaining to cardiovascular, pulmonary and musculoskeletal system with sound clinical reasoning, detailed knowledge of exercise physiology and fitness.
PO 5	To explain biopsychosocial component of pain and dysfunction
PO 6	To analyze biomechanics of human movement and apply biomechanical principles in Physiotherapy management, ergonomic and job analysis, especially in movement disorders in women, children, elderly and industry.
PO 7	To plan and implement community-based rehabilitation programs and to develop linkages with appropriate agencies and groups of individuals
PO 8	To apply strategies for prevention of disabilities and to carry out early identification and intervention for disability prevention, advise the family members and community regarding interventions with disabled people, inform people regarding legislations on disability and developmental schemes and concessions to persons with disabilities.
PO 9	To critically analyze assessment and treatment methods through scientific enquiry, experiential learning and demonstrate entrepreneurship and managerial skills related

	to task in day-to-day work for personal & societal growth, design innovative devices and techniques for treatment, invent intellectual property in specialized are of interest
PO10	To apply basic computer applications for data management, data storage, generating data bases and for research purposes.

VII. Program Specific Outcomes for Master of Physiotherapy Program Specialty - Community 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 technique sand utilize appropriate, evidence-based skills, techniques and practice in managing and treating 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 ethical implications 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 examine 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	Post graduates will demonstrate ability to plan, recommend and implement Physiotherapy treatment and practice independently across a range of clinical settings such as tertiary care hospitals, out-patient departments, specialized intensive care units, cardiac and pulmonary rehabilitation units, fitness centers, geriatric homes, gymnasiums, sports units, pediatric units, community health centers, research-driven institutes and other interdisciplinary health care centers/industry, in both rural and urban areas.
PSO 6	Apply creativity and competency 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	Adapt communication styles recognizing cultural safety, cultural and linguistic diversity

VIII. 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 22 core courses, (37 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). Practical training for specific courses will ensure that core competencies are achieved. Students will practice the skills on healthy adults and apply them for patient care. 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, on-going 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.

IX. CBCS DEFINITION AND BENEFITS:

Choice Based Credit System is a flexible system of learning. The distinguishing features of CBCS are the following:

- It permits students to learn at their own pace.
- The electives are selected from a wide range of elective courses offered by the other University Departments.
- Undergo additional courses and acquire more than the required number of credits.
- Adopt an inter-disciplinary and intra-disciplinary approach in learning.
- Make best use of the available expertise of the faculty across the departments or disciplines
- Has an inbuilt evaluation system to assess the analytical and creativity skills of students in addition to the conventional domain knowledge assessment pattern.

1. Definitions of Key Words:

- i. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- ii. The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).
- iii. **Course:** Usually referred to, as “papers” is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/ tutorials/ laboratory work/ outreach activities/ project work/ viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.
- iv. **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.
- v. **Credit:** A unit by which the course work is interpreted. It functions the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.
- vi. **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the sum total of the credit points obtained by the student in various courses in all semesters and the sum of the total credits of all courses in all the semesters.
- vii. **Grade Point:** It is a numerical marking allotted to each letter grade on a 10-point scale.
- viii. **Letter Grade:** It is an appreciated point of the student’s performance in a selected course. Grades are denoted by letters O, A+, A, B, C and RA x. Programme: An educational programme leading to award of a Degree certificate.
- ix. **Semester Grade Point Average (SGPA):** It is index of performance of all performance of work in a semester. Its total credit points obtained by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- x. **Semester:** Each semester will extend for 6 months and will consist of minimum of 130 teaching/learning days, exclusive of examinations and holidays. The odd semesters will be scheduled from July to December and even semesters from January to June.

- xi. **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

X. SEMESTER SYSTEM AND CHOICE BASED CREDIT SYSTEM

The semester system accelerates the teaching-learning process and enables vertical and horizontal mobility of students in learning. The credit-based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice-based credit system enables students to take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

10.1. Semesters:

An academic year consists of two semesters:

Semesters	PG
Odd Semesters 1 st , 3 rd ,	August – January
Even Semesters 2 nd , 4 th	February – July

10.2Credits:

Credit defines the coefficient of contents/syllabus prescribed for a course and determines the number of hours of instruction required per week. Credits will be assigned in each course on the basis of number of lectures/ practical/tutorial/ laboratory work and other forms of learning required, to complete the course contents in a 15–20-week schedule:

- 1 credit** = 1 hour of lecture per week
- 3 credits** = 3 hours of instruction per week

- ✓ Credits will be assigned on the basis of the lectures (L) / tutorials (T) / Clinical Training (CR) / laboratory work (P) / Research Project (RP) and other forms of learning in a 15-20 week schedule L - One credit for one hour lecture per week

- c. **P/T** - One credit for every two hours of laboratory or practical
d. **CR** - One credit for every three hours of Clinical training/Clinical rotation/posting
e. **RP** - One credit for every two hours of Research Project per week – Maximum Credit 20- 25

	Lecture - L	Tutorial - T	Practical - P	Clinical Training/ Rotation– CT/CR	Research Project– RP*
1 Credit	1 Hour	2 Hours	2 Hours	3 Hours	2 Hours
RP*	Maximum Credit 20 – 25 / Semester				

10.3Types of Courses: Courses in the programme are of three kinds:

- **Core Course**
- **Elective Course**
- **Ability Enhancement Course**

1. **Core Course:** A course, which should compulsorily be studied by a candidate as a basic requirement to complete the program, is termed as a Core course. There are Core Courses in every semester.
2. **Elective Course:** A course which can be chosen from a very specific or advanced subject of study or which provides an extended scope or which enables exposure to some other domain or expertise, is called an Elective Course. Elective courses may be of two types

2a. Discipline Specific Skill Elective (SEC) Course: Elective courses offered by the main subject of study are referred to as Discipline Specific Elective. The Institute may also offer discipline related Elective courses of interdisciplinary nature. An elective may be “Discipline Specific Electives (DSE)” gazing on those courses which add intellectual efficiency to the students.

2b. Generic Elective (GE) Course: An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.

Dissertation / Project: An Elective/Core course designed to acquire special / advanced knowledge, such as supplement study / support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher / faculty member is called dissertation / project.

3. Ability Enhancement Courses (AEC): The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC).

Ability Enhancement Compulsory Courses (AECC): “AECC” courses are the courses based upon the content that leads to knowledge enhancement.

Skill Enhancement Courses (SEC): SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, Indian and foreign languages etc. These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

10.4 Assigning Credit Hours per Course: While there is flexibility for the departments in allocation of credits to various courses offered, the general formula would be:

- All core courses will be restricted to a maximum of 4 credits
- All electives will be restricted to a maximum of 3 credits
- All ability enhancement courses will be restricted to a maximum of 2 credits
- Projects will be restricted to a maximum of 20-25 credits

Any course requiring more than 4 credit hours for covering the syllabus content will be divided into two courses i.e., 6 Credits Course 1 - 3 credits + Course 2 – 3 credits or 6 Credits Course 1 Theory - 4 credits + Course 2 Lab – 2 credits.

10.5 Assigning total Credits for a Program: The UGC, in its notification No.F.1-1/2015 (Sec.) dated 10/4/15 has provided a set of Model curricula and syllabi for CBCS programs. In conformation with this notification, the MPT program credits for 2 years duration will be 94 credits in total, inclusive of clinical rotation/clinical training and research project training.

XI. CREDIT VALUE PER COURSE & STRUCTURE OF SYLLABUS:

To ensure uniformity in assigning the credits to a course, a structured and unitized syllabus shall be observed. For PG Programs each course will be provided a structured syllabus in the following format:

- a) Title of the Course
- b) Learning Objectives
- c) Units for syllabus Content
- d) Learning Outcomes
- e) References
 - a. Text Books – 2
 - b. Reference Books –2
 - c. Web Resources – 2 Web Portals

Minimum credit allocation will be as per requirements of each course curriculum.

Structure of CBCS MPT Curriculum Community Physiotherapy

Semester I		Semester II	
Course Code	Core Course	Course Code	Core Course
MPT087	Ergonomics and Applied Biomechanics - Theory	MPT092	Early Growth and Development -
MPT088	Ergonomics and Applied Biomechanics - Practical	MPT093	Preventive and Community Physiotherapy- Applied Science - Theory
MPT089	International Classification of Function	MPT094	Preventive and Community Physiotherapy- Applied Science - Practical
MPT090	Exercise physiology in health and disease - Theory	MPT095	Applied Sociology and Psychology - Theory
MPT091	Exercise physiology in health and disease - Practical	MPT096	Applied Sociology and Psychology - Practical
Semester III		Semester IV	
Course Code	Core Course	Course Code	Core Course
MPT097	Physiotherapy for Geriatric Health-Theory	MPT102	Recent Advances in Preventive and Community Physiotherapy-Theory
MPT098	Physiotherapy for Geriatric Health-Practical	MPT103	Recent Advances in Preventive and Community Physiotherapy-Practical
MPT099	Preventive physiotherapy and health promotion-Theory	MPT104	Recent advances in Woman's Health-Theory
MPT100	Physiotherapy for Woman's Health-Theory	MPT105	Recent advances in Woman's Health-Practical
MPT101	Physiotherapy for Woman's Health-Practical	MPT106	Industrial Therapy-Theory
		MPT107	Industrial Therapy-Practical

XII. SELECTION OF ABILITY ENHANCEMENT ELECTIVE AND SKILLS ENHANCEMENT COURSES:

The students should apply in the prescribed format and should reach the CBCS coordinator before the start of the semester. All candidates must register for the courses of the said semester.

List of Ability Enhancement Compulsory Courses AECC				
Sr. No	Elective Code	Title	Credits	Semester
1	MPTAECC001	Cardiopulmonary Resuscitation	2	1
2	MPTAECC002	Research methods	2	1
3	MPTAECC003	Bioethics, Health management and Administration	3	1
4	MPTAECC004	Teaching technology	3	1
5	MPTAECC005	Legal issues and professional ethics	2	2
6	MPTAECC006	Intellectual property rights and publication ethics	2	4

List of Ability Enhancement Elective Courses				
Sr No	Elective Code	Title	Credits	Semester
1	MPTAEEC001	Strengthening and relaxation techniques	2	3
2	MPTAEEC002	Exercise Psychology	2	3
3	MPTAEEC003	Radiological diagnosis	2	4
4	MPTAEEC004	Clinical Nutrition	2	4
5	MPTAEEC005	Physiotherapy in oncology	2	4
6	MPTAEEC016	Vestibular Rehabilitation	2	4

List of Skill Enhancement Elective Courses				
Sr No	Elective Code	Title	Credits	Semester
1	MPTSEC008	Global Health care Issues	2	2
2	MPTSEC009	National Healthcare Policies	2	2
3	MPTSEC003	Applications of Yoga in Physiotherapy	2	3
List of Generic Elective Courses				
Sr No	Elective Code	Title	Credits	Semester
1	MPTGEC001	Medical Device Innovation	2	2
2	MPTGEC002	Scientific Writing	2	2

Elective courses from Swayam/ NPTEL platform [www. <https://swayam.gov.in> & <http://nptel.ac.in>] maybe included in the above pool as and when needed.

VII. Framework of Curriculum

(Applicable for academic batch 2019 – 2021 as per resolution no.63)

Semester I

MPT - Community Physiotherapy																					
Semester I (20 weeks teaching/ 40 hours/week)																					
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks				
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	L/S	P	T/RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total
MPT087	Ergonomics and Applied Biomechanics - Theory	Core Theory	3				3	3	2		60	60				60	20 *	80			100
MPT088	Ergonomics and Applied Biomechanics - Practical	Core Practical		1			1									40			20 *	80	100
MPT089	International Classification of Function	Core Theory	2				2	2			40	40	40			40	10 *	40			50
MPT090	Exercise physiology in health and disease - Theory	Core Theory	3				3	3	2		60	40				60	20 *	80			100
MPT091	Exercise physiology in health and disease - Practical	Core Practical		1			1					40				40			10*	40	50
MPTAECC001	Cardiopulmonary resuscitation	Ability Enhancement Compulsory Course	1	1			2	1	2		20	20	40			60	10*	40	10*	40	100
MPTAECC002	Research methods	Ability Enhancement Compulsory	2				2	2			40	40				40	10*	40			50
MPTAECC003	Bioethics, Health management and Administration	Ability Enhancement Compulsory	3				3	3			60	60				60	10*	40			50
MPTAECC004	Teaching Technology	Ability Enhancement Compulsory Course	2	1			3	2	2		40	40	40			80	10*	40	10*	40	100
MPTCLT001	Clinical Training I					5	5				15					300					40
MPTRP001	Research Protocol				1		1			2					40		40				20
		Total	15	5	5		25	15	10	15	300	300	160	300		800					760
*Internal Assessment(IA) will be conducted for 40 marks and be calculated out of 20 as applicable for the course																					
** Internal Assessment(IA) will be conducted for 20 marks and be calculated out of 10 as applicable for the course																					

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Semester II

MPT - Community Physiotherapy																					
Semester II (20 weeks teaching/ 40 hours/week)																					
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks				
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	T/S	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total
MPT092	Early Growth and development	Core Theory	2				2	2				40				40	10*	40			50
MPT093	Preventive and Community Physiotherapy-Applied Science- Theory	Core Theory	2				2	2				40				40	20 *	80			100
MPT094	Preventive and Community Physiotherapy-Applied Science- Practical	Core Practical		1			1		2			40				40			20 *	80	100
MPT095	Applied sociology and psychology -Theory	Core Theory	2				2	2				40				40	20 *	80			100
MPT096	Applied sociology and psychology - Practical	Core Practical		1			1		2			40				40			10*	40	50
MPTAECC005	Legal issues and Professional ethics	Ability Enhancement compulsory course	2				2	2				40				40	10*	40			50
MPTGEC001/002	Medical Device Innovation/ Scientific writing	General Elective Course	2				2	2				40				40	10*	40			50
MPTSEC001/002	Global health care issues /National Healthcare Policies	Skill Enhancement Elective Course	1	1			2	1	2			20	40			60	10*	40	10*	40	100
MPTRP002	Research Project				2		2			5						100				20	20
MPTCLT002	Clinical Training II					6	5				16			100	320	320				40	40
		Total	11	3	2	6	22	11	11	5	18	220	120	100	360	800					660
*Internal Assessment(IA) will be conducted for 40 marks and be calculated out of 20 as applicable for the course																					
** Internal Assessment(IA) will be conducted for 20 marks and be calculated out of 10 as applicable for the course																					

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Semester III

MPT - Community Physiotherapy																					
Semester III (20 weeks teaching/ 40 hours/week)																					
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks				
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	T/S	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total
MPT097	Physiotherapy for geriatric health-Theory	Core Theory	2				2	2					40				40	20 *	80		100
MPT098	Physiotherapy for geriatric health - Practical	Core Practical		2			2	4					80				80		10*	40	50
MPT099	Preventive physiotherapy and health promotion-Theory	Core Theory	2				2	2					40				40	10*	40		50
MPT100	Physiotherapy for women's health-Theory	Core Theory	2				2	2					40				40	20*	80		100
MPT101	Physiotherapy for women's health-Practical	Core Practical		2			2	4					80				80		20*	80	100
MPTAEEC001/002	Strengthening and relaxation techniques/Exercise Psychology	Ability Enhancement Elective Course	1	1			2	1	2				20	40			60	10*	40	10*	100
MPTSEC003	Application of Yoga in Physiotherapy	Skill Enhancement Course	1	1			2	1	2				20	40			60	10*	40	10*	100
MPTRP003	Research Data Collection and Analysis				2		2		4				80				80			40	40
MPTCLT003	Clinical Training III					5	5				16				320	320				40	40
		Total	8	6	2	5	21	8	12	4	16	160	240	80	320	800					680
**Internal Assessment(IA) will be conducted for 40 marks and be calculated out of 20 as applicable for the course																					
** Internal Assessment(IA) will be conducted for 20 marks and be calculated out of 10 as applicable for the course																					

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Semester IV

MPT - Community Physiotherapy																					
Semester IV (20 weeks teaching/ 40 hours/week)																					
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks				
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	TS	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total
MPT102	Recent advances in preventive and community Physiotherapy-Theory	Core Theory	2				2	2				40				40	20 *	80			100
MPT103	Recent advances in preventive and community Physiotherapy-	Core Practical		1			1		2			40				40			20 *	80	100
MPT104	Recent advances in women's health-Theory	Core Theory	2				2	2				40				40	20 *	80			100
MPT105	Recent advances in women's health-Practical	Core Practical		1			1		2			40				40			20 *	80	100
MPT106	Industrial Therapy - Theory	Core theory	2				2	2				40				40	10*	40			50
MPT107	Industrial Therapy - Practical	Core Practical		1			1		2			40				40			10*	40	50
MPTAEEC003/04	Radiological diagnosis/Clinical Nutrition	Ability Enhancement Elective Course	1	1			2	1	2			20	40			60	10*	40	10*	40	100
MPTAEEC005/06	Vestibular Rehabilitation /Physiotherapy in oncology	Ability Enhancement Elective Course	1	1			2	1	2			20	40			60	10*	40	10*	40	100
MPTAECC006	Intellectual property rights and publication ethics	Ability Enhancement Compulsory Course	2				2	2				40				40	10*	40			50
MPTRP003	Research Dissertation submission and manuscript preparation				2		2		4					80		80				40	40
MPTCLT003	Clinical Training IV					5	5				16				320	320				40	40
		Total	10	5	2	5	22	10	10	4	16	200	200	80	320	800					830

*Internal Assessment(IA) will be conducted for 40 marks and be calculated out of 20 as applicable for the course

** Internal Assessment(IA) will be conducted for 20 marks and be calculated out of 10 as applicable for the course

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(Applicable for academic batch 2020 – 2022 as per resolution no.3.7 of AC -41/ 2021 and 3.11 AC – 41/ 2021)

Semester I

MPT- Community Physiotherapy																						
Semester I (20 weeks teaching/ 40 hours/week)																						
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks					
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	T/S	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total	
MPT087	Ergonomics and Applied Biomechanics - Theory	Core Theory	3				3	3					60				60	20	80			100
MPT088	Ergonomics and Applied Biomechanics - Practical	Core Practical		1			1		2					40			40			20	80	100
MPT089	International Classification of Function	Core Theory	2				2	2					40				40	10	40			50
MPT090	Exercise physiology in health and disease - Theory	Core Theory	2				2	2					40				40	20	80			100
MPT091	Exercise physiology in health and disease - Practical	Core Practical		1			1		2					40			40			10	40	50
MPTAECC001	Cardiopulmonary resuscitation	Ability Enhancement Compulsory Course	1	1			2	1	2				20	40			60	10	40	10	40	100
MPTAECC002	Research methods	Ability Enhancement Compulsory Course	2				2	2					40				40	10	40			50
MPTAECC003	Bioethics, Health management and Administration	Ability Enhancement Compulsory Course	3				3	3					60				60	10	40			50
MPTAECC004	Teaching Technology	Ability Enhancement Compulsory Course	2	1			3	2	2				40	40			80	10	40	10	40	100
MPTCLT001	Clinical Training I					5	5				15				300	300					40	40
MPTRP001	Research Protocol				1		1			2					40		40				20	20
		Total	15	4	1	5	25	16	8	2	15	300	160	40	300	800						760

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Semester II

MPT - Community Physiotherapy																						
Semester II (20 weeks teaching/ 40 hours/week)																						
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks					
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	T/S	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total	
MPT092	Early Growth and development	Core Theory	2				2	2				40				40	10	40			50	
MPT093	Preventive and Community Physiotherapy-Applied Science-Theory	Core Theory	2				2	2				40				40	20	80			100	
MPT094	Preventive and Community Physiotherapy-Applied Science-Practical	Core Practical		1			1		2				40			40			20	80	100	
MPT095	Applied sociology and psychology - Theory	Core Theory	2				2	2				40				40	20	80			100	
MPT096	Applied sociology and psychology - Practical	Core Practical		1			1		2				40			40			10	40	50	
MPTAECC005	Legal issues and Professional ethics	Ability Enhancement compulsory course	2				2	2				40				40	10	40			50	
MPTGEC001/002	Medical Device Innovation / Scientific writing	General Elective Course	2				2	2				40				40	10	40			50	
MPTSEC001/002	Global health care issues / National Healthcare Policies	Skill Enhancement Elective Course	1	1			2	1	2			20	40			60	10	40	10	40	100	
MPTRP002	Research Project				2		2			5				100		100				20	20	
MPTCLT002	Clinical Training II					6	6				18				360	360				40	40	
		Total	11	3	2	6	22	11	11	5	18	220	120	100	360	800					660	

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Semester III

MPT - Community Physiotherapy																					
Semester III (20 weeks teaching/ 40 hours/week)																					
Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks				
			T/S	P	RP	CL T	Total Credits	T/S	P	RP	CL T	T/S	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total
MPT097	Physiotherapy for geriatric health-Theory	Core Theory	2				2	2				40				40	20	80			100
MPT098	Physiotherapy for geriatric health - Practical	Core Practical		2			2		4				80			80			10	40	50
MPT099	Preventive physiotherapy and health promotion-Theory	Core Theory	2				2	2				40				40	10	40			50
MPT100	Physiotherapy for women's health-Theory	Core Theory	2				2	2				40				40	20	80			100
MPT101	Physiotherapy for women's health-Practical	Core Practical		2			2		4				80			80			20	80	100
MPTAEEC001 / 002	Strengthening and relaxation techniques / Exercise Psychology	Ability Enhancement Elective Course	1	1			2	1	2			20	40			60	10	40	10	40	100
MPTSEC003	Application of Yoga in Physiotherapy	Skill Enhancement Course	1	1			2	1	2			20	40			60	10	40	10	40	100
MPTRP003	Research Data Collection and Analysis				2		2			4				80		80				40	40
MPTCLT003	Clinical Training III					5	5				16				320	320				40	40
		Total	8	6	2	5	21	8	12	4	16	160	240	80	320	800					680

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Semester IV

MPT - Community Physiotherapy

Semester IV (20 weeks teaching/ 40 hours/week)

Course Code	Course Title	Course Description	Credits per week					Hours per week				Hours per semester					Marks				
			T/S	P	RP	CLT	Total Credits	T/S	P	RP	CLT	TS	P	RP	CLT	Total hours	IA Theory	Semester Exam Theory	IA Practical	Semester Exam Practical	Total
MPT102	Recent advances in preventive and community Physiotherapy-Theory	Core Theory	2				2	2				40				40	20	80			100
MPT103	Recent advances in preventive and community Physiotherapy-Practical	Core Practical		1			1		2			40				40			20	80	100
MPT104	Recent advances in women's health-Theory	Core Theory	2				2	2				40				40	20	80			100
MPT105	Recent advances in women's health-Practical	Core Practical		1			1		2			40				40			20	80	100
MPT106	Industrial Therapy - Theory	Core theory	2				2	2				40				40	10	40			50
MPT107	Industrial Therapy - Practical	Core Practical		1			1		2			40				40			10	40	50
MPTAEEC003/004	Radiological diagnosis/Clinical Nutrition	Ability Enhancement Elective Course	1	1			2	1	2			20	40			60	10	40	10	40	100
MPTAEEC005/006	Vestibular Rehabilitation /Physiotherapy in oncology	Ability Enhancement Elective Course	1	1			2	1	2			20	40			60	10	40	10	40	100
MPTAEECC006	Intellectual property rights and publication ethics	Ability Enhancement Compulsory Course	2				2	2				40				40	10	40			50
MPTRP003	Research Dissertation submission and manuscript preparation				2		2		4				80			80				40	40
MPTCLT003	Clinical Training IV					5	5				16				320	320				40	40
		Total	10	5	2	5	22	10	10	4	16	200	200	80	320	800					830

VIII. Rules and Regulation for Examination of Master of Physiotherapy Program

- 1. Title of the courses offered: Master of Physiotherapy-Community Physiotherapy**
- 2. Duration of the course:** Two years
- 3. Medium of instruction:** The medium of instruction and examination shall be in English
- 4. Letter Grades and Grade Points:**

MGMSOP has adopted the UGC recommended system of awarding grades and CGPA under Choice Based Credit Semester System for all the UG/PG courses.

- 4.1 MGMSOP would be following the absolute grading system, where the marks are compounded to grades based on pre-determined class intervals.
- 4.2 The UGC recommended 10-point grading system with the following letter grades will be followed:

Table 1: Grades and Grade Points:

Letter Grade	Grade Point
O (Outstanding)	10
A+ (Excellent)	9
A (Very Good)	8
B (Good)	7
C (Above Average)	6
F (Fail)/ RA (Reappear)	0
Ab (Absent)	0
Not Completed (NC)	0
RC (<50% in attendance or in Internal Assessment)	

- 4.3 A student obtaining Grade F/RA will be considered failed and will require reappearing in the examination.
- 4.4 Candidates with NC grading are those detained in a course (s); while RC indicate student not fulfilling the minimum criteria for academic progress or less than 50% attendance or less than 50% in internal assessments (IA). Registrations of such students for the respective courses shall be treated as cancelled. If the course is a core course, the candidate has to re-register and repeat the course when it is offered next time.

5. CBCS Grading System - Marks Equivalence Table

5.1 Table 2: Grades and Grade Points

Letter Grade	Grade Point	% of Marks
O (Outstanding)	10	86-100
A+ (Excellent)	9	70-85
A (Very Good)	8	60 -69
B (Good)	7	55 -59
Passing criteria for MPTC (Above Average)	6	50- 54
F (Fail)/ RA (Reappear)	0	Less than 50
Ab (Absent)	0	-
NC- not completed	0	-
RC- Repeat the Course	0	-

5.2 Table 3: Cumulative Grades and Grade Points

Letter Grade	Grade Point	CGPA
O (Outstanding)	10	9.01 - 10.00
A+ (Excellent)	9	8.01 – 9.00
A (Very Good)	8	7.01 – 8.00
B (Good)	7	6.00 - 7.00
C (Above Average)	6	5.01 - 6.00

- 6. Assessment of a Course:** Evaluation for a course shall be done on a continuous basis. Uniform procedure will be adopted under the CBCS to conduct internal assessments (IA), followed by one end-semester university examination (ES) for each course.

6.1 For all category of courses offered (Theory, Practical, Ability Enhancement Courses [AE]; Skills Enhancement Courses [SE] Theory or P (Practical) & RP (Research Project), assessment will comprise of Internal Assessment (IA) and the end–semester (ES) examination as applicable.

Evaluation of elective courses and certain core courses will be carried out at the level of the constituent unit for academic batch admitted in 2019-2021. The pattern of examination is described in the curriculum.

Evaluation of all core and elective courses will be performed as End Semester University Exam from academic batch 2020-2021 onwards. Pattern of internal assessment and University Exam are described in the curriculum. As per resolution no.3.7 and 3.11 of AC -41/ 2021.

6.2 Courses in programs wherein Theory and Practical/Clinical are assessed jointly, the minimum passing head has to be 50% Grade each for theory and practicals separately. RA grade in any one of the components will amount to reappearing in both components. i.e., theory and practical.

6.3 Evaluation for a course with clinical rotation or clinical training will be done on a continuous basis.

7. Eligibility to appear for the end-semester examinations for a course includes:

7.1. Candidates having $\geq 75\%$ attendance and obtaining minimum 40% in internal assessment in each course, qualify for appearing in the end-semester university examinations **(Applicable for batch admitted in 2019-2020 and 2020-2021).**

Candidates having $\geq 75\%$ attendance and obtaining minimum 50% in internal assessment in each course, qualify for appearing in the end-semester university examinations **(Applicable for batch admitted from 2022-23 onwards as per Resolution no 10.4 of AC-42/2022 dated 26/04/2022)**

7.2 The students desirous of appearing for university examination shall submit the application form duly filled along with the prescribed examination fee.

7.3 Incomplete application forms or application forms submitted without prescribed fee or application form submitted after due date will be rejected and student shall not be allowed to appear for examination.

8. Passing Heads:

8.1 Courses where theory and practical are involved, the minimum passing head shall be 50% in total including the internal assessment.

8.2 Elective subjects – the minimum prescribed marks for a pass in elective subject will be 50%. The marks obtained in elective subjects will be communicated to the university before the commencement of university examination.

9 Detention: A student not meeting any of the above criteria maybe detained (NC) in that particular course for the semester. In the subsequent semester, such a candidate requires improvement in all, including attendance and/or IA minimum to become eligible for the next end-semester examination.

10 The maximum duration for completing the program will be 4 years (minimum duration of program x 2) i.e. (2x2) =4 years for PG program, failing which his/her registration will be cancelled. Full fees of entire program of 2 years as the case may be liable to be paid by the students.

11 Carry over benefit:

- 11.1 A student will be allowed to keep term for Semester II irrespective of number of heads of failure in Semester I.
- 11.2 A student will be allowed to keep term for Semester III if she/he passes each Semester I and II OR fails in not more than 2 courses combined in semester I and II.
- 11.3 Student will be allowed to keep term for Semester IV irrespective of number of heads of failure in Semester III. However, student must mandatorily have passed each course of Semester I and II in order to appear for Semester IV exam.

12 University End-Semester Examination

- 12.1 There will be one final university examination at the end of every semester.
- 12.2 A student must have minimum 75% attendance (Irrespective of the type of absence) in theory and practical in each subject to be eligible for appearing the University examination.
- 12.3 The Principal / Director shall send to the university a certificate of completion of required attendance and other requirements of the applicant as prescribed by the university, two weeks before the date of commencement of the written examination.
- 12.4 A student shall be eligible to sit for the examination only, if she / he has secured minimum 40% in internal assessment (individually in theory and practical as applicable) of that course. The internal examinations will be conducted at college/ department level (**Applicable for batch admitted in 2019-2020 and 2020-2021**).

A student shall be eligible to sit for the examination only, if she / he has secured minimum 50% in internal assessment (individually in theory and practical as applicable) of that course. The internal examinations will be conducted at college/ department level unit (**Applicable for batch admitted from 2022-23 onwards as per Resolution no 10.4 of AC-42/2022 dated 26/04/2022**).
- 12.5 Notwithstanding any circumstances, a deficiency of attendance at lectures or practical maximum to the extent of 10% - may be condoned by the principal / dean /director.
- 12.6 If a student fails either in theory or in practical, he/ she have to re-appear for both.
- 12.7 There shall be no provision of re-evaluation of answer sheets. Student may apply to the university following due procedure for recounting of theory marks in the presence of the subject experts.

12.8 Internal assessment shall be submitted by the Head of the Department to the University through Director of MGMSOP at least two weeks before commencement of University theory examination.

13. Supplementary examination: The supplementary examination will be held in the next semester. Eligibility to appear for supplementary examination will be as per rule number 11.1, 11.2 and 11.3.

14. Re-Verification

There shall be provision of re-totalling of the answer sheets; candidate shall be permitted to apply for recounting/re-totalling of theory papers within 8 days from the date of declaration of results.

15. Scheme of University Exam Theory PG Program: General structure / patterns for setting up question papers for Theory / Practical courses, for PG program of MGMSOP are given in the following tables. Changes may be incorporated as per requirements of specific courses.

15.1 Theory Question Paper Pattern for Core Courses in University Examinations Under CBCS - 80 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
				Total= 80

Theory Question Paper Pattern for Courses in University Examination Under CBCS- 40 marks

Question type	No of questions	Marks/ questions	Question X marks	Total Marks
Short answers	8 out of 9	5	8X5	40

Total	40
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15.2 University Examination Pattern (Practical): 80 Marks

Long Case	40
OSCE Station(4X10)	40
	Total = 80 M

University Examination Pattern (Practical): 40 Marks

Short Case	20
OSCE Station (2X10)	20
	Total = 40 M

15.3 Internal examination:

Internal assessment marks will include continuous comprehensive evaluation inclusive of seminars, case presentations, essays, open book exams, summative evaluation (and others) and mid semester examination marks and will be converted to as per weightage. For calculation of internal assessment, weightage for CCA will be 25% and for mid semester examination will be 75%.

15.4 Mid semester Examination Pattern:

Mid Semester Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Long essays	2 out of 3	10	2x10	20 marks
Short answers	4 out of 5	5	4x5	20 marks
Total				Total= 40 marks

Mid Semester Examination pattern (Theory): 20marks

Question type	No of questions	Marks/ questions	Question X marks	Total Marks
Short answers	4 out of 5	5	4X5	20
Total				20

Mid Semester Examination Pattern (Practical): 40 Marks

Short Case	20
OSCE station (2X10)	20

	Total = 40 M
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Mid-Semester Examination Pattern (Practical): 20 Marks

Short Case	10
OSCE station (2X5)	10
	Total = 20 M

Internal assessment would be calculated out of 20 for courses evaluated out of 80 marks at University Examination and out of 10 for courses evaluated out of 40 marks at University Examination.

15.5 Assessment of Seminar (100 Marks)

Description	Marks
Submission of seminar report	50
Subject knowledge	10
Concept and Methodology	10
Presentation	10
VIVA	20
	Total = 100

15.6 Clinical Evaluation:

- Students will be placed in clinical areas based on specialty on a rotator basis. Each clinical posting will be of 6 weeks duration with a minimum of 3 postings in each semester.
- Presentation of minimum 2 cases to the respective clinical supervisors and documentation in the Log book for each posting is mandatory, failing which the particular posting will be repeated.
- Attendance is mandatory at all clinical postings.

Clinical competency

Students should demonstrate clinical competency in assessment, functional diagnosis on ICF basis, plan of care and therapeutic interventions relating to the specific dysfunctions, in all settings (inpatient and outpatient), on all types of conditions (surgical, non-surgical, pediatric and geriatric). They should be able to document their findings in an efficient and organized manner.

During clinical practice, student should be able to demonstrate competency
A. in Assessment and Clinical Reasoning:

Student should be able to apply the ICF framework in selecting measurement tools to ensure a holistic approach to evaluation of body structure and function, activities, participation; and select and administer assessment/evaluation tools and techniques suitable for the patient's problems and condition(s) based on the best available evidence and interpret the information obtained demonstrating evidence-based decision-making and safe handling technique such as:

1. Risk factor screening (Red flags & Yellow flags).
2. Assessment of dysfunction.
3. Interpretation of radiological, electrophysiological, haematological and biochemical investigations.
4. Fitness and functional performance testing as appropriate
5. Identification and quantification of environmental and home barriers and facilitators
6. Identification and analysis of body mechanics during self-care, home management, work, community, tasks, or leisure activities.
7. Identification and analysis of ergonomic performance during work/school/play)
8. Assessment of Quality of Life through use of appropriate questionnaire and generic or disease-specific scales (nice to know)
9. Identification and prioritization of impairments in body functions and structures, and activity limitations and participation restrictions to determine specific body function and structure, and activities and participation towards which the intervention will be directed
10. State the evidence (patient/client history, lab diagnostics, tests and measures and scientific literature) to support a clinical decision.
11. Determine the predicted level of optimal functioning and the time required to achieve that level.
12. Recognize barriers that may impact the achievement of optimal functioning within a predicted time frame and ways to overcome them when possible.

B. In Developing Plan of Care:

Student should be able to:

1. Identify patient goals and expectations.
2. Design a Plan of Care with measurable functional goals (short-term and long-term) that are prioritized and time bound.
3. Consult patient and/or caregivers to develop a mutual agreement regarding the plan of care.
4. Identify indications/ additional needs for consultation with other professionals & appropriate referrals.
5. Select the interventions that are safe, realistic and meet the specified functional goals and outcomes in the plan of care: (a) identify precautions and contraindications, (b) provide evidence for patient-centred interventions that are identified and selected, (c) define the specificity of the intervention (time, intensity, duration, and frequency).
6. Measure and monitor patient response to intervention and modify elements of the plan of care and goals in response to changing patient/client status, as needed.

7. Establish criteria for discharge based on patient goals and current functioning and disability.

C. in Physiotherapy Intervention:

Important influences on Physiotherapy management choices may include but not limited to:

1. Diverse settings of care including critical, acute, long term, rehabilitation, and community care;
2. Lifespan issues ranging from the neonatal stage to those associated with aging
3. Life style modification for diseases and for prevention
4. Skill of application of physical and electrical agents
5. Facilitation, re-education and training of mobility, strength, endurance, motor control, posture, gait, balance, fitness through skilful use of various therapeutic exercise techniques with appropriate manual treatment techniques or therapeutic gymnasium equipment.
6. Functional training in self-care, home, work (job, school and play), community and leisure activities

Evaluation criteria for clinical cases

Sr No	Criteria	Score				
		5	4	3	2	1
1	Attitude –Towards patient, self-introduction Relevant history taken					
2	Physical Assessment Skills Choice of tests Testing of all functional impairments ICF					
3	Cognitive- problem solving clinical decision & reasoning					
4	Planning treatment- short term goals					
5	Long term goals – revaluation					
6	Explanation of home program to patient and relatives					
7	Skills of Treatment maneuvers					
8	Recent advances in Physiotherapy techniques					
9	Documentation of case					
10	Timely submission of assignment					
	Total Score/50					
	Total Score/10					

15.7 Performance evaluation:

An end semester performance report will be submitted to the Head of Department as per format provided.

15.8 Research Project report: -

MPT student should submit a suitable research project topic forwarded by the guide to MGM School of Physiotherapy by November in semester I. Following approval of ethics & scientific committee, work should be carried out in subsequent semesters. Completed dissertation, checked for plagiarism, accepted & signed by the guide should be submitted to MGMIHS as a mandatory requirement for completion of MPT program in Semester IV (January).

16 Research Project report evaluation guidelines for MPT program:

The research project report allows the student to develop and display in-depth understanding of a theme in International Studies, as well as an in-depth understanding of the appropriate research tools, approaches and theories applicable to that theme. The dissertation should be based on a well-defined and clear research question of scholarly significance, and that the dissertation develops a theoretically and methodologically informed and evidence-based answer to that question.

Criteria for evaluating a research project report: The following guidelines and criteria should be applied when assessing a dissertation.

Guidelines to Prepare Research Proposal

1. Selection of Research Problem:

Select your interest area of research, based on felt need, issues, social concern.

- a. State the problem in brief, concise, clear.
- b. State the purpose of selected study & topic.
- c. State the objectives of proposal/project.
- d. Prepare conceptual framework based on operational definition.
- e. Write scope of research proposal/project.

2. Organizing Review of Literature

- a. Study related and relevant literature which helps to decide conceptual framework and research design to be selected for the study.
- b. Add specific books, bulletins, periodicals, reports, published dissertations, encyclopaedia and text books.
- c. Organize literature as per operational definition.
- d. Prepare summary table for review of literature.

3. Research Methodology: To determine logical structure & methodology for research project.

- a. Decide and state approach of study i.e., experimental or non-experimental.
- b. Define/find out variables to observe effects on decided items & procedure.
- c. Prepare simple tool or questionnaire or observational checklist to collect data.
- d. Determined sample and sampling method
- e. Mode of selection ii) Criteria iii) Size of sample iv) Plan when, where and how will be collected.

- f. Test validity of constructed tool.
- g. Check reliability by implementing tool before pilot study (10% of sample size)
- h. Conduct pilot study by using constructed tool for 10% selected sample size.

4. Data collection: To implement prepared tool

- a. Decide location.
- b. Time
- c. Write additional information in separate exercise book to support inferences and interpretation.

5. Data analysis and processing presentation

- a. Use appropriate method of statistical analysis i.e., frequency and percentage.
- b. Use clear frequency tables, appropriate tables, graphs and figures.
- c. Interpretation of data:
- d. In relation to objectives
- e. Hypothesis
- f. Variable of study or project
- g. Writing concise report

6. Writing Research Report

a. Aims:

- i. To organize materials to write project report
- ii. To make comprehensive full factual information
- iii. To make appropriate language and style of writing
- iv. To make authoritative documentation by checking footnotes, references & bibliography
- v. To use computers & appropriate software

b. Points to remember

- i. Develop thinking to write research report
- ii. Divide narration of nursing research report
- iii. Use present tense and active voice
- iv. Minimize use of technical language
- v. Use simple, straightforward, clear & concise language
- vi. Use visual aids in form of table, graphs & figures
- vii. Treat data confidentially
- viii. Review & rewrite if necessary

Evaluation Criteria for Project Report

Sr. No	Criteria	Rating					Remark
		1	2	3	4	5	
I	Statement of the problem						
	1. Significance of the problem selected						
	2. Framing of title and objectives						
II	Literature Review						
	1. Inclusion of related studies on the topic and its relevance						
	2. Operational definition						
III	Research Design						
	1. Use of appropriate research design						
	2. Usefulness of the research design to draw the inferences among study variables/ conclusion						
IV	Sampling Design						
	1. Identification & description of the target population						
	2. Specification of the inclusion & exclusion criteria						
	3. Adequate sample size, justifying the study design to draw conclusions						
V	Data Collection Procedure						
	1. Preparation of appropriate tool						
	2. Pilot study including validity & reliability of tool						
	3. Use of appropriate procedure/ method for data collection						
VI	Analysis of Data & Interpretation						
	1. Clear & logical organization of the finding						
	2. Clear presentation of tables(title, table & column heading)						
	3. Selection of appropriate statistical tests						
VII	Ethical Aspects						
	1. Use of appropriate consent process						
	2. Use of appropriate steps to maintain ethical aspects & principles						
VIII	Interpretation of the finding						

	& appropriate discussion of the results						
IX	Conclusion						
	Summary & recommendations						
X	Presentation/ Report Writing						
	Organization of the project work including language & style of presentation						

Signature of the Evaluator

IX. Eligibility for award of degree

1. A candidate shall have passed in all the subjects of all semester's I-IV, completed and submitted dissertation to be eligible for award of Master's degree.
2. The performance of a candidate in a course will be indicated as a letter grade, whereas grade point will indicate the position of the candidate in that batch of candidates. A student is considered to have completed a course successfully and earned the prescribed credits if he/she secures a letter grade other than F/RA. A letter grade RA in any course implies he/she has to re-appear for the examination to complete the course.
3. The RA grade once awarded in the grade card of the student is not deleted even when he/she completes the course successfully later. The grade acquired later by the student will be indicated in the grade sheet of the subsequent semester in which the candidate has appeared for clearance in supplementary exams
4. If a student secures RA grade in the Project Work/Dissertation, he/she shall improve it and resubmit it, if it involves only rewriting / incorporating the revisions suggested by the evaluators. If the assessment indicates lack of student performance or data collection then the student maybe permitted to re-register by paying the prescribed re-registration fee and complete the same in the subsequent semesters.

A candidate shall be declared to have passed the examination if he/she obtains the following minimum qualifying grade / marks: -

- (a) For Core courses CT (Core Theory) and CP (Core Practical), student shall obtain Grade C (50 % of marks) in the University End Semester Examination (ES) and in aggregate in each course which includes both Internal Assessment and End Semester Examination.

- (b) For Elective Courses student shall obtain minimum Grade C (50 % of marks) in the college examination, clinical rotation, case studies, seminars, journal clubs, microteaching and research work.

X. Computation of SGPA and CGPA

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

- i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone & earned by a student, i.e.,

$$\text{SGPA (Si)} = \sum(C_i \times G_i) / \sum C_i$$

where C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.

- ii. The CGPA is also calculated in the same manner taking into account all the courses undergone & earned by a student over all the semesters of a programme, i.e.

$$\text{CGPA} = \sum(C_i \times S_i) / \sum C_i$$

where S_i is the SGPA of the i th semester and C_i is the total number of credits in that semester.

- iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

Illustration of Computation of SGPA and CGPA

Course	Credit	Grade Letter	Grade Point	Credit Point (Credit x Grade)
Course 1	3	A	8	3 X 8 = 24
Course 2	4	B+	7	4 X 7 = 28
Course 3	3	B	6	3 X 6 = 18
Course 4	3	O	10	3 X 10 = 30
Course 5	3	C	5	3 X 5 = 15
Course 6	4	B	6	4 X 6 = 24
	20			139
Illustration for SGPA				
Thus, SGPA = 139/20 = 6.95				

Semester 1	Semester 2	Semester 3	Semester 4
Credit: 20	Credit: 22	Credit: 25	Credit: 26
SGPA: 6.9	SGPA : 6.8	SGPA: 6.6	SGPA: 6.0
Semester 5	Semester 6		
Credit: 26	Credit: 25		
SGPA: 6.3	SGPA : 8.0		
Illustration for CGPA			

Thus,

$$20 \times 6.9 + 22 \times 6.8 + 25 \times 6.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0$$

CGPA= _____ = 6.75/B+

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- ii. Transcript: Based on the above recommendations on Letter grades, grade points and SGPA and CGPA, the transcript for each semester and a consolidated transcript indicating the performance in all semesters may be issued.

XI. Course Registration

17.1 After admission to a Program, a student identity number is generated. This PRN number may be used in the process of registration for a course.

17.2 The registration process is a registration for the courses in a semester. The registration card is generated after a student completes the choice of electives. Every student shall register for the stipulated number of Courses/Credits semester wise even if electives are not prescribed in their regulations for the said semester. Every student must register for Elective/Ability Enhancement Courses semester-wise for the courses he/she intends to undergo in that semester within two weeks of commencement of the semester.

The list of students registered for each elective will be communicated to the HODs/ Course Chairpersons. Students will be requested to authenticate the chosen electives by appending their signature in acceptance with approval by the HODs/ Course Chairpersons. A soft copy of the registered students will be submitted to the elective course offering departments for their official use.

XII. Re - Entry After Break of Study:

The University regulations for readmission are applicable for a candidate seeking re-entry to a program.

- a) Students admitted the program and absents for more than 3 months must seek readmission into the appropriate semester as per university norms.
- b) The student shall follow the syllabus in vogue (currently approved / is being followed) for the program.
- c) All re-admissions of students are subject to the approval of the Vice-Chancellor.

XIII. Ranking

The first two ranks of the programme will be decided on the basis of grades of CGPA in the courses (core and DE courses only). In case of a tie, marks % [of core and DE courses only] will be taken into account.

XX. CLASSIFICATION OF SUCCESSFUL CANDIDATES

Overall Performance in a Program and Ranking of a candidate is in accordance with the University regulations.

Consolidated Grade Card		
Letter Grade	CLASSIFICATION	CGPA RANGE
O	First Class with Distinction	9.01 – 10
A+	First Class	8.01 - 9.00
A	First Class	7.01 - 8.00
B+	First Class	6.01 - 7.00
B	Second Class	5.01- 6.00

A successful candidate will be:

- (i) Who secures not less than O grade with a CGPA of 9.01 – 10.00 shall be declared to have secured 'OUTSTANDING' provided he/she passes the whole examination in the FIRST ATTEMPT;
- (ii) Who secures not less than A+ grade with a CGPA of 8.01 – 9.00 shall be declared to have secured 'EXCELLENT' provided he/she passes the whole examination in the FIRST ATTEMPT;
- (iii) Who secures not less than A grade with a CGPA of 7.01 –8.00 and completes the course within the stipulated course period shall be declared to have passed the examinations with 'Very Good'
- iv) All other candidates (with grade B and above) shall be declared to have passed the examinations.

Master of Physiotherapy (MPT)
Specialty - Community Physiotherapy

Semester-I (0-6 months)

Course Code	Course Title	Course Description	Theory/ Seminar Hours	Practical/ Research Hours	Research Hours	Clinical Hours
MPT087	Ergonomics and applied biomechanics - Theory	Core Theory	60			
MPT088	Ergonomics and applied biomechanics - Practical	Core Practical		40		
MPT089	ICF- International classification of function	Core Theory	40			
MPT090	Exercise physiology in health and disease - Theory	Core Theory	40			
MPT091	Exercise physiology in health and disease - Practical	Core Practical		40		
MPTAECC001	Cardiopulmonary resuscitation	Ability Enhancement Compulsory Course	20	40		
MPTAECC002	Research methods	Ability Enhancement Compulsory Course	40			
MPTAECC003	Bioethics, Health management and Administration	Ability Enhancement Compulsory Course	60			
MPTAECC004	Teaching technology	Ability Enhancement Compulsory Course	40	40		
MPTCLT001	Clinical Training, I	Clinical training				300
MPTRP001	Research Protocol I	Research Protocol			40	

Name of the Programme	Master of Physiotherapy (MPT) Specialty - Community Physiotherapy
Name of the Course	Ergonomics & Applied Biomechanics – Theory
Course Code	MPT-087
Credit per Semester	3 credits
Hours per Semester	60 hours
Name of the Course	Ergonomics & Applied Biomechanics - Practical
Course Code	MPT-088
Credit per Semester	1 credit
Hours per Semester	40 hours

Course Learning Outcomes	
Student will be able to	
CO 1	Describe basic concept of ergonomics, importance of ergonomics, diagnose work related disorders, manage them and modify the work station accordingly, Provide advice about creation of healthy work environment, work station exercises, and home exercises.
CO 2	analyze basic and complex motions, perform posture and gait analysis, identify and co-relate normal movements and movement dysfunction
CO 3	asses movement dysfunction of various joints in upper extremity, lower extremity and spine, apply advance techniques /therapy to manage movement dysfunction

Unit	Topics	No. of Hrs.
1	Ergonomics Definition, principles, purpose and benefits of ergonomics. Anthropometric measurement Identifying work station Hazards Work station design, assessment and management Ergonomic Approach to lifting and handling, workspace and Environment. Recent advances in ergonomics	10
2	Work related musculoskeletal disorders Introduction Work related Fatigue and Stress, Chronic work-related musculoskeletal disorders Repeated movements and repeated trauma affecting the musculoskeletal system Assessment, prevention and management of work-related musculoskeletal disorders.	5
3	Basic Concept in Biomechanics <ul style="list-style-type: none"> Fundamental concepts of biomechanics Types of Motion, Structure and properties of Connective tissues, Joint Arthrokinematics and Osteokinematic, muscle structure Methods of kinetics and kinematics investigations Movement Analysis (Basic and advance techniques) 	15

	<ul style="list-style-type: none"> • Posture and Gait Analysis • Biomechanics of respiration 	
4	Application of biomechanics and outcome of movement impairments on Upper extremity joints <ul style="list-style-type: none"> • Basic biomechanics of Upper extremity joints • Movement impairments of Shoulder girdle: Scapular dyskinesia and akinesia, Shoulder medial and lateral rotation syndrome, Glenohumeral Hypomobility Syndrome. Elbow Complex- Elbow dislocation, tennis elbow, golfers' elbow and pulled elbow. Wrist Complex- Caprel tunnel syndrome, proximal and distal carpal bone mal-alignment • Applied biomechanics on Hand function 	10
5	Application of biomechanics and outcome of movement impairments on Lower extremity joints <ul style="list-style-type: none"> • Basic biomechanics of Lower extremity joints • Movement impairments of Hip: Femoral Anterior Glide Syndrome, Femoral Anterior Glide with medial and lateral rotation, Hip medial and lateral rotation. Knee: Patellofemoral, tibiofemoral joint dysfunction Ankle: Calcaneal eversion and inversion, flat foot, hallux valgus deformity. 	10
6	Application of biomechanics and outcome of movement impairments on Spinal joints <ul style="list-style-type: none"> • Basic biomechanics of spine • Movement impairments of Cervical Spine: Flexion-Extension syndrome, rotation, rotation with flexion, rotation with extension, forward head posture, excessive cervical lordosis, upper cross syndrome. Thoracic Spine: Flexion-Extension syndrome, rotation, rotation with flexion, rotation with extension, thoracic kyphosis, scoliosis. Lumbar Spine: Flexion-Extension syndrome, rotation, rotation with flexion, rotation with extension, exaggerated lordosis, flat back, scoliosis. 	10
Practical applications in ergonomics and biomechanics		40
Total		100

EXAMINATION SCHEME

University Examination Pattern (Theory): 80 marks

Question type	No. of questions	Marks/Question	Question X marks	Total marks
Section 1				
Short answer questions (2 from unit 1&2, 2 from unit 3-6)	4 out of 5	10	4 x 10	40
Section 2				
Long answer question (1 from unit 1&2, 1 from unit 3-6)	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answer questions (2 from unit 1&2, 2 from unit 3-6)	4 out of 5	5	4x5	20
Long answer question (1 from unit 1&2, 1 from unit 3-6)	2 out of 3	10	2x 10	20
Total				40

University Examination Pattern (Practical): 80 marks

Exercise	Description	Marks
Q No 1	Long Case	40
Q No 2	OSCE stations (10 X 4)	40
Total		80

Mid Semester Examination Pattern (Practical): 40marks

Question Type	Marks
Short Case	20
OSCE stations (2X10)	20
Total	40

Internal Assessment marks will be weighted out of 20 marks, for theory and practical each.

Recommended Text Books:

- Peter j Baxter, Tar Ching Aw, Anne Cockcroft, Paul Durrington. **Hunter's Disease of Occupation**-10th edition
- Robert B Wallace, Neal Kohatsu **Public Health and Preventive Medicine**-15th edition
- Sahrman, S. (2001). **Diagnosis and treatment of movement impairment syndromes**. Elsevier Health Sciences.2nd edition
- Magee, D. J. (2013). **Orthopedic physical assessment**. Elsevier Health Sciences-7th edition
- Carol A. Oatis, **Kinesiology: The Mechanics and Pathomechanics of Human Movement**-3rd edition

Name of the Programme	Master of Physiotherapy (MPT) Specialty –Community Physiotherapy
Name of the Course	ICF- International classification of function
Semester	Semester I
Course Code	MPT-089
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes	
Student will be able to	
CO 1	formulate plan of physiotherapy management based on ICF model
CO 2	outline functional impairments
CO 3	examine the different outcome measures
CO 4	prioritize treatment goals for management, identify strategies for cure, care and prevention; apply restorative & rehabilitative measures for maximum possible functional independence of a patient at home, work place and in the community following conservative or surgical management of cardiovascular disease.

Unit	Topics	No. of Hrs.
1	a. ICF 2000 biopsychosocial model of care Introduction Use of ICF model as clinical problem solving and others Development of ICF	5
2	a. Concepts of structural, functional impairment (musculoskeletal, neurological, cardiopulmonary etc.), contextual factors influencing function, b. evaluation of performance and assessment of capacity c. Measurement of activity limitations d. Measurement of participation restrictions e. Quality of life	15
3	Functional diagnosis in Musculoskeletal conditions, neurological conditions, cardiopulmonary conditions	20
Total		40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as End Semester University Examination. Evaluation will be carried out at the level of the constituent unit.

Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	8 out of 9	5	8x5	40
Total				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination pattern (Theory): 20marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for theory.

Recommended books-

- E-book. International Classification of Functioning, Disability and Health - Children and Youth Version. ICF-CY (PDF Format) , World Health Organization, ISBN-13 9789240682634
- ICIDH-2 , WHO 2001<https://unstats.un.org/unsd/disability/pdfs/ac.81-b4.pdf>

- ICF, WHO <https://www.who.int/classifications/icf/en/>

Name of the Programme	Master of Physiotherapy (MPT) Specialty - Community Physiotherapy
Name of the Course	Exercise physiology in health and disease - Theory
Semester	Semester I
Course Code	MPT-090
Credit per Semester	2 credits
Hours per Semester	40 hours
Name of the Course	Exercise physiology in health and disease - Practical
Course Code	MPT-091
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes	
Student will be able to	
CO 1	describe the physiology of different body systems while exercising.
CO 2	examine the role of heart and lung during exercise performance.
CO 3	compare /contrast between aerobic and anaerobic exercises
CO 4	describe and assess the effects of environment on exercises.
CO 5	describe, assess and analyze physiological response to acute and long-term exercise in health and disease.
	Expected Competencies: Student will be able to
EC1	perform prescreening of participants using Physical Activity Readiness Questionnaire, Health History Questionnaire, ACSM Risk Factor Profile, other appropriate screening tools – rule out contra indications/ red flags to exercise, identify yellow flags, end points of exercise
EC2	describe pre preparation for exercise, plan and design exercise prescription based on FIIT principle,
EC3	analyze physiological response to exercise using variables like heart rate, respiratory rate, BP, SaO2 prior to test, during, post exercise and during recovery period in healthy people and people with dysfunction
EC4	document and evaluate results of exercise sessions and provide clinical interpretation

Unit	Topics	No. of Hrs.
1	Exercise physiology <ol style="list-style-type: none"> Energy production, expenditure and transfer during exercise in cells. O₂ metabolism and transfer O₂ deficit and O₂ debt O₂ measurement during exercise and recovery Short term and long-term energy system. 	5
2	Role of pulmonary and cardiovascular systems during exercise performance <ol style="list-style-type: none"> Lung function and its role in exercise Ventilation and blood pressure during exercise CVS adjustments during exercise Muscle fibres and its role in aerobic and anaerobic BP response and cardiac output during exercise in trained and untrained Cardiovascular drift Fatigue assessment and organization of work rest regimes to control fatigue. 	5
3	Aerobic and anaerobic exercises <ol style="list-style-type: none"> Principals of training Anaerobic system changes with training Aerobic changes during exercise Factors affecting aerobic and anaerobic training Adaptations during aerobic and anaerobic exercises Methods of training, circuit training, detraining Effect of climate on exercise. 	10
4	Exercise physiology and exercise prescription for special population <ol style="list-style-type: none"> Children Elderly Obese Pregnant women Diabetes mellitus Hypertension Cardio-respiratory dysfunction Management of infectious disease such as COVID-19, severe acute respiratory syndrome, Middle East respiratory syndrome and others. 	20
Practical's– Monitoring physiological response to exercise in healthy people and people with cardiovascular pathology		40
Total		80

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

University Examination pattern (Theory): - 80 marks

Question type	No. of questions	Marks/Question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

This course will not be assessed as End Semester University Examination. Evaluation will be carried out at the level of the constituent unit.

#Internal Examination Pattern (Practical): 40 Marks

Question Type	Marks
OSCE 1	20
OSCE 2	20
	Total = 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination pattern (Theory): - 80 marks

Question type	No. of questions	Marks/Question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short case (1 X 10)	20
OSCE (2 X 10)	20
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Short case (1X10)	10
OSCE (2 X 5)	10
Total	20

Internal Assessment marks will be weighted out of 20 marks for theory and practical each.

Recommended books-

1. Plowman, S. A., & Smith, D. L. (2013). *Exercise physiology for health fitness and performance*. Lippincott Williams & Wilkins.-2nd edition
2. McArdle, W. D., Katch, F. I., & Katch, V. L. (1991). *Exercise physiology: energy, nutrition, and human performance*-8th edition

3. Roberg, R. A., & Roberts, S. O. (1996). Exercise physiology: exercise, performance, and clinical applications. *Boston: WBC McGraw-Hill*, 73.
4. Roberts, S., Robergs, R. A., & Hanson, P. G. (1997). *Clinical exercise testing and prescription: theory and application*. Informa HealthCare.

MGMSOP MGMIHS

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

Course Learning Outcomes Student should be able to	
CO 1	describe the importance of basic life support skills in case of emergency situation and to be able to give victims the best chance of survival, effect of high-quality CPR and its impact on survival
CO 2	describe signs of cardiac arrest, activate emergency response system early, and respond quickly and confidently
CO 3	describe steps of chain of survival and apply BLS concepts of chain of survival
CO 5	perform high quality CPR for an adult/ child/ infant
CO6	describe the importance of early use of Automated external defibrillator (AED)
CO7	demonstrate appropriate use of an Automated External Defibrillator AED
CO8	demonstrate use of effective ventilations by using a barrier device
CO9	demonstrate skills both as a single rescuer and a member of a multi rescuer team
CO10	demonstrate techniques of relief of foreign-body airway obstruction for an adult/child/infant

Unit	Topic	Hours
1	Course Introduction	2
2	Adult BLS, Adult chain of survival Scene safety and assessment Adult compressions, AED and Bag Mask Device	5
4	Successful Resuscitation teams	3
5	Infant and Child BLS, Pediatric chain of survival, AED for Infants and children less than 8 years age	3
6	Special considerations:	3

	Mouth to mouth breaths Breaths with an advanced airway Opioid associated life- threatening emergency	
7	Adult, infant and child choking Relief of choking in a responsive adult or child Relief of choking in a unresponsive adult or child	4
	Practical- Skills Practice on mannequin: Adult and child CPR	40
	Total	60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be performed at the level of constituent unit.

Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	8 out of 9	5	8x5	40
Total				Total= 40

Examination Pattern (Practical): 20 Marks

Short Case	20
	Total = 20 M

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	8 out of 9	5	8x5	40
Total				Total= 40

Mid Semester Examination pattern (Theory): 20marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4 x5	20
Total				Total= 20

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short case (2X20)	40
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Short Case(2X10)	20
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory & practical each

Recommended books-

1. Ellis, P. D., & Billings, D. M. (1980). *Cardiopulmonary resuscitation: procedures for basic and advanced life support*. CV Mosby.
2. Safar, P. (1977). *Advances in cardiopulmonary resuscitation* (pp. 263-275). J. O. Elam (Ed.). New York: Springer-2nd edition
3. Field, J. M., Gonzales, L., Hazinski, M. F., Ruple, J., Elling, B., & Drummonds, B. (2006). *Advanced cardiovascular life support: provider manual* (pp. 51-62). American Heart Association.

Name of the Programme	Master of Physiotherapy (MPT) Specialty - Community Physiotherapy
Name of the Course	Research methods
Semester	Semester I
Course Code	MPTAECC062
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Outcomes	
Student will be able to	
CO 1	apply basic concept of research, design, problems & sampling techniques of research.
CO 2	describe types of study designs and apply basic concepts of statistics & principles of scientific enquiry in planning and evaluating the results.
CO 4	analyze various methods of quantitative and qualitative data analyses
CO 5	describe the terminology in research, ethical issues and research process.
CO 6	use important sources, and explain steps in reviewing of literature.
CO 7	apply sampling technique, research process, data collection, biostatistics, correlation and statistical significance tests.
CO 8	conduct descriptive, explorative, survey studies in physical therapy practice with use of biostatistics.
	Expected Competencies: Student will be able to
EC1	formulate a research proposal with a relevant research question, with definition of PICO-population /problem under study, intervention /exposure, comparison or control group and outcome measures. Identify study design and use appropriate guidelines like PRISMA, STROBE etc
EC2	obtain ethical approval from designated ethics committee
EC3	critically analyze and review existing literature using available search engines and other legitimate sources
EC4	plan project budget and timeline
EC4	examine reliable and valid outcome measures relevant to the project
EC5	identify statistical methods to be employed in the project
EC6	apply ethics of research and publication

Unit	Topics	No. of Hrs.
1	Introduction Terminology in research, ethical issues in research, research process, importance, sources & steps in reviewing the literature Basic probability distribution and sampling distribution Standard error and confidence interval Skewness and Kurtosis	5
2	Research design Type of research – qualitative & quantitative. Experimental & non experimental, survey – advantages & disadvantages	5
3	Research process and sampling a. Research question, aim & objectives, assumptions, limitations & delimitations, variables, hypothesis – formation & testing b. Sampling technique, population, sample, sample size & determination, sampling methods, sampling error.	10
4	Data collection and analysis and interpretation & presentation of data, statistical analysis, tests of significance a. Data sources, technique of data collection, tools, reliability & validity, process of data collection, pilot study-method, Quantitative & qualitative analysis b. Graphical representation of data c. Conclusion & discussion d. Testing of hypothesis - Parametric tests-‘t’ tests, Tukeys following Oneway ANOVA, ANOVA (One way, two way – for parametric & nonparametric), ANCOVA, Multistage ANOVA e. Nonparametric tests-Chi-square test, Mann Witney U test, ‘Z’ test Wilcoxon’s matched pairs test. f. Correlation and regression analysis	10
5	Writing a research proposal Defining a problem, review of literature, formulating a question, inclusion exclusion criteria, operational definitions, methodology, forming groups, data collection, data analysis, informed consent	10
	Total	40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be performed at the level of the constituent unit.

Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	8	5	8x5	40
Total				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination pattern (Theory): 20marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Total				20

Internal Assessment marks will be weighted out of 10 for Theory examination

Recommended books-

1. Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
2. K. S. Negi. *Biostatistics*. Aitbs, 2002 - Biometry
3. Radhakrishna, R. C., & Bhaskara, R. M. (1998). *Matrix algebra and its applications to statistics and econometrics*. World Scientific.

Name of the Programme	Master of Physiotherapy (MPT) Specialty - Community Physiotherapy
Name of the Course	Bioethics, Health management and Administration
Semester	Semester I
Course Code	MPTAECC-003
Credit per Semester	3 credits
Hours per Semester	60 hours

Course Learning Outcomes	
CO 1	describe the nature, meaning and principals of bioethics, concepts related to administration and management with professional ethics.
CO 2	apply ethical codes of physical therapy practice as well as moral and legal aspects related to human dignity and human rights.
CO 3	describe the benefit and harm of patient's right & dignity in Health care settings.
CO 4	discuss the role of governing councils, constitutions and functions of W.H.O. and W.C.P.T and IAP.
CO 5	discuss role of management and administration, budget planning, leadership and teamwork, management skills in planning and implementing the administration in clinical practice.
CO 6	use information technology for documentation, record maintenance, data storage in professional practice.

Unit	Topics	No. of Hrs.
1	Introduction a. Meaning and nature of ethics, b. Concept of morality, Ethics & Legality, confidentiality and responsibility	10
2	Laws and responsibilities a. Councils for regulation of professional practice b. Constitution of India, & Rights of a citizen, c. responsibilities of the Therapist, & status in health care d. Self-regulatory role of Professional Association e. Consumer protection act f. Persons with Disability Act	10
3	Human dignity and human rights and benefit and harm of patient's right & dignity in health care settings a. Human dignity as an intrinsic value, respect, care and Equality in dignity of all human beings, human dignity in different cultural and moral traditions.	15

	b. The WHO definition, health benefit by physiotherapy, possible harm for a patient during physiotherapy.	
4	Role of W.C.P.T. IAP and W.H.O. a. Constitution & Functions of I.A.P. Role of W.C.P.T. and W.H.O.	10
5	Administration, management and marketing a. Management theories and their application to physiotherapy practice, service quality at various levels of the health delivery system, teaching institution & self-employment and principles and concepts. b. Personal policies – Communication & Contact, administration principles based on goal & functions at large hospital / domiciliary set up / private clinical / academic institution. c. Methods of maintaining records – Budget planning d. Quality control e. Budget planning.	15
	Total	60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be performed at the level of the constituent unit.

Theory question paper pattern - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination pattern (Theory)- 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
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Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination pattern (Theory)- 20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

Internal Assessment marks will be weighted out of 10 for Theory Examination.

Recommended books-

1. C S Ram, Pedagogy Physiotherapy Education.
2. Gabard, D. L., & Martin, M. W. (2010). *Physical therapy ethics*. FA Davis.

Name of the Programme	Master of Physiotherapy (MPT) Specialty - Community Physiotherapy
Name of the Course	Teaching Technology- Theory
Semester	Semester I
Course Code	MPTAECC-004
Credit per Semester	3 credits
Hours per Semester	80 hours

Course Learning Outcomes	
Student will be able to	
CO 1	describe the aims, philosophy and trend and issues in education.
CO 2	describe the role of education philosophy, current issues and trends in education.
CO 3	understand the concepts of teaching and learning with curriculum formation.
CO 4	describe methods of teaching, and conduct educational seminars and microteachings using new trends in education.
	Expected Competencies: Student will be able to
EC1	demonstrate basic teaching methods and use them for conducting micro teaching session- didactic class, problem-based learning session, experiential learning, on field learning
EC2	formulate MCQs, prepare OSPE and OSCE stations,
EC3	assist in conducting practical sessions for undergraduate students

Unit	Topics	No. of Hrs.
1	Introduction Aims, agencies, formal and in-formal education, philosophies of education (past, present & future)	5
2	Role of education philosophies with current new trends and issues in education	5
3	Concepts of teaching and learning a. Theories of teaching b. Relation between teaching and learning c. Dynamics of behavior	5

	d. Learning perception e. Individual differences	
4	Curriculum formation, principles and methods of teaching a. Development & types of curriculums b. Formation of philosophy & course objectives c. Master plans of courses d. Strategies and planning e. Organization and teaching methods - micro teaching f. Measurement and evaluation with steps of constructing test measurements, standard tools.	5
5	Role of an educator the environment, student teacher relationship	5
6	Teaching methods Educational objectives, Teaching learning media, Micro& small group teaching, integrated teaching, Skills in various types of teaching (including didactic, clinical etc), Learning methods of learning, problem-based learning, motivation& learning	5
7	Evaluation methods mechanics of paper setting, M.C.Q's S.A.Q's, viva, O.S.C.E & O.S.P.E	10
	Practical- Microteaching seminars which include didactic sessions using PowerPoint presentation and supervised hands-on assessment & management session for undergraduate students.	40
	Practical	40
	Total	80

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be performed at the level of the constituent unit.

Theory question paper pattern for College Examination under CBCS - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
				Total= 40

Examination Pattern (Practical): 20 Marks

Microteaching session	20
	Total = 20 M

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

Theory question paper pattern for University Examination under CBCS - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester examination pattern (Theory) 20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Microteaching session	4*10
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Microteaching session	2* 10
Total	20

Internal Assessment marks will be weighted out of 10 marks each for theory and practical each

Recommended Books:

1. C S Ram, Pedagogy Physiotherapy Education.
2. Gabard, D. L., & Martin, M. W. (2010). *Physical therapy ethics*. FA Davis- 2nd edition
3. Grayson, E. (1999). Ethics, injuries and the law in sports medicine.

MGMSOP MGMIHS

Master of Physiotherapy (MPT)
Specialty - Community Physiotherapy

Semester-II (7-12 months)

Course Code	Course Title	Course Description	Theory/ Seminar Hours	Practical/ Research Hours	Clinical Hours
MPT092	Early Growth and Development	Core Theory	40		
MPT093	Preventive and Community Physiotherapy- Applied Science – Theory	Core Theory	40		
MPT094	Preventive and Community Physiotherapy- Applied Science – Practical	Core Practical		40	
MPT095	Applied sociology and psychology – Theory	Core Theory	40		
MPT096	Applied sociology and psychology – Practical	Core Practical		40	
MPTAECC005	Legal issues and Professional Ethics	Ability Enhancement Compulsory Course	40		
MPTGEC001/ MPTGEC002	Medical Device Innovation/ Scientific Writing	General Elective Course	40		
MPTSEC001/ MPTSEC002	Global Health Care Issues/National Healthcare Policies	Skill Enhancement Elective Course	20	40	
MPTCLT002	Clinical Training II				360
MPTRP002	Research Project				100

Name of the Programme	Master of Physiotherapy (MPT) Specialty – Community Physiotherapy
Name of the Course	Early growth and Development
Semester	Semester II
Course Code	MPT092
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Students will be able to	
CO 1	explain the importance of Child Health in the context of the health needs of the community and national priorities in the health sector.
CO 2	explain normal development & growth of a child, importance of Immunization, breast-feeding & psychological aspect of development.
CO 3	explain importance of child development, and its impact on health and illness
CO 4	apply the skills necessary to perform a complete and accurate pediatric history including prenatal, birth, developmental, dietary, immunization, and psychosocial histories,
CO 5	apply the skills necessary to perform a complete and accurate pediatric physical examination including but not limited to an age-appropriate neurologic examination, and graph and interpret growth chart data.
CO 6	apply effective listening and communication skills with patients, families.
CO 7	advocate for their patients by helping families access appropriate medical specialties and ancillary services like developmental therapies as needed.

Unit	Topics	No. of Hrs.
1	Pre-natal Development	10
	<ul style="list-style-type: none"> Embryological and foetal development with special reference to Central Nervous System, Neuromuscular System, Cardiovascular Respiratory System Prenatal factors influencing growth and development of foetus, Genetic patterns of common paediatric disorders, chromosomal aberrations, genetic assessment and counselling legal and ethical aspects of genetic, screening and counselling role of Physiotherapist in genetic counselling <p>Importance of prenatal care and role of physiotherapist.</p>	
2	Growth and Development	10
	<ul style="list-style-type: none"> Principles of growth and development Concepts and theories of growth and development Developmental tasks and special needs from infancy to adolescence, developmental milestones 	

	<ul style="list-style-type: none"> Assessment of growth and development of paediatric clients <p>Factors affecting growth and development.</p>	
3	Epidemiology of Socio-Economical & Cultural Issues	10
	<ul style="list-style-type: none"> Infants: (Low Birth Weight, Breast feeding, Complimentary feeding, IYCN, IMNCI Vaccine preventable diseases, Immunization programmes, Infant and childhood mortality) Children: Child health, Growth monitoring under five clinics, ICDS, PEM School aged population health: Early detection and prevention of disabilities, behavioral problems <p>*Visit Community health centers: Urban & Rural</p>	
4	Preventive Child care	10
	<ul style="list-style-type: none"> Concept, aims and scope of preventive paediatrics Maternal health and its influence on child health antenatal aspects of preventive paediatrics Immunization, expanded program on immunization/ universal immunization program and cold chain Nutrition and nutritional requirements of children, changing patterns of feeding, baby- friendly hospital initiative and exclusive breast feeding Health education, nutritional education for children Nutritional programs National and international organizations related to child health Role of Physiotherapist in the hospital and community. 	
	Total	40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of the constituent unit

Theory question paper pattern- 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory)- 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory)- 20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

Internal assessment marks will be weighted out of 10 marks for theory

Recommended Books:

1. The development of the infant young child: Normal and Abnormal by R.S. Illingworth, 10th edition (Churchill Livingstone 2013)
2. Components of typical and atypical motor development, Lois Bly; 2011.
3. Ghai OP. GHAI essential paediatrics. Mehta Publishers; 2001.

Name of the Programme	Master of Physiotherapy (MPT) Specialty – Community Physiotherapy
Name of the Course	Preventive and Community Physiotherapy-Applied Science - Theory
Semester	Semester II
Course Code	MPT093
Credit per Semester	3credits
Hours per Semester	60 hours
Name of the Course	Preventive and Community Physiotherapy-Applied Science - Practical
Course Code	MPT094
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Students will be able to	
CO 1	Explain preventive measures for disease with disability in context with social, economical and cultural aspects
CO 2	Explain National Health Care delivery system, Public Health Administration system, National health program and immunization program
CO 3	apply concepts of institution-based rehabilitation services and multidisciplinary approach
CO 4	Explain role of governmental organizations, NGOs in CBR

Unit	Topics	Hours
1	Natural history of disease and influence of social, economical cultural aspects of disease	5
2	Preventive measures for disease with disability	5
3	National Health Care delivery system, Public Health Administration system	5
4	Health education- methods of communication	5
5	National health program and immunization program	5
6	Basic concept of rehabilitation and foundation of rehabilitation	5
7	Institution based rehabilitation services and multidisciplinary approach	5
8	Methodology of CBR with reference to National Health delivery system	5
9	Role of government in CBR, intersectoral program and coordination, implementation of act	5
10	Role of NGO in CBR	5
11	Scope of community physiotherapy	5
12	Physiotherapist as a master trainer	5
	Practical	40
	Total	100

EXAMINATION SCHEME

University Examination Pattern (Theory): 80 marks

Question type	No. of questions	Marks/ Question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40 marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

University Examination Pattern (Practical): 80 marks

Exercise	Description	Marks
Q No 1	Long Case	40
Q No 2	OSCE Stations (2 X 20)	40
		Total = 80

Mid Semester Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case	20
OSCE Stations (2X10)	20
	Total = 40 M

Internal Assessment marks will be weighted out of 20 marks for theory and practical each

Recommended Books:

1. Social and preventive medicine by Park & Park-24th edition
2. MANUAL FOR CBR planners- Maya Thomas & M.J. Thomas (2003)
3. Role of government in CBR- <https://asksource.info/cbr-book/cbr06.pdf>
4. Role of NGO in CBR <https://asksource.info/cbr-book/cbr11.pdf>
5. Textbook of Rehabilitation – S Sunder -3rd edition
6. Physiotherapy in Community Based Rehabilitation- Waqar Naqvi

Name of the Programme	Master of Physiotherapy (MPT) Specialty – Community Physiotherapy
Name of the Course	Applied Sociology and Psychology- Theory
Semester	Semester II
Course Code	MPT095
Credit per Semester	3 credits
Hours per Semester	60 hours
Name of the Course	Applied Sociology and Psychology- Practical
Course Code	MPT096
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Students will be able to	
CO 1	define the term Psychology & its importance in health delivery system, explain psychological maturation during human development & growth & alterations during aging process
CO 2	explain the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality
CO 3	apply skills required for good interpersonal communication
CO 4	describe various psychiatric disorders with special emphasis to movement / Pain & ADL
CO 5	describe social factors affecting health, influence of family, social groups, culture, community and governmental policies on health perspectives
CO 6	identify vulnerable population, role of social support systems and NGOs, legislations related to disability and role of medical social worker,
CO 7	describe the interaction between social problems, psychology and public health

Unit	Topics	No. of Hrs.
1	Psychology: Definition, understanding, nature & its fields and subfields.	5
2	Developmental psychology (childhood, adolescence, adulthood and old age) and its theories in brief	5
3	Learning and motivation: Theories of learning, Role of learning in human life	5
4	Stress, Anxiety, Depression – identification, methods of assessment & management	5
5	Effect of mental health on physical well-being	5
6	Biopsychosocial model of healthcare, Social factors affecting Health status, Decision Making in taking treatment.	5
7	Influence, of Social Factors, on Personality, Socialization in the Hospital & Rehabilitation of the patients.	5
8	Role of family and care-givers in health and disease	5

9	Rural & Urban communities in Public Health, Role of community in determining Beliefs, Practices & Home Remedies in Treatment	5
10	Impact of culture on human behavior, Role of community in determining beliefs, practices and health seeking behavior and home remedies	5
11	Human Adaptation, Stress, Deviance, Health Program Role of Social Planning in the improvement of Health & in Rehabilitation.	5
12	Definition, Role of norms, Folkways, Customs, Morals, Religion, Law & other means of social controls in the regulation of Human Behavior, Social Deviance & Disease	5
	Practical: Evaluation of health using the biopsychosocial model	40
	Total	100

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

University Examination Pattern (Theory): 80 marks

Question type	No. of questions	Marks/Question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

Practical examination will be conducted at the level of the constituent unit. (Practical Examination pattern): 40 Marks

Question Type	Marks
OSCE 1/Simulated case/Case	20
OSCE 2/Simulated case/ Case	20
	Total = 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 80 marks

Question type	No. of questions	Marks/ Question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
OSCE 1/Simulated case/Case	20
OSCE 2/Simulated case/ Case	20
Total	40

Mid Semester Examination pattern (Practical): 20 Marks

Question Type	Marks
OSCE 1/Simulated case/Case	10
OSCE 2/Simulated case/ Case	10
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended Books:

1. Applied Sociology by Vikas Ranjan
2. Applied Psychology by Rowan Bayne & Ian Horton

Name of the Programme	Master of Physiotherapy (MPT) Specialty –Community Physiotherapy
Name of the Course	Legal issues and professional ethics
Semester	Semester II
Course Code	MPTAEEC005
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Students will be able to	
CO 1	describe various medio-legal issues faced in the profession and laws and regulations governing them.
CO 2	discuss importance of seeking informed consent before any sort of communication or management is done for the patient / client.
CO 3	discuss rights of patient / client as well of the therapist, general ethical code of conduct as a practitioner as well as educator.

Unit	Topics	No. of Hrs.
1	Introduction to the legal system	2
2	Professional Issues a. Registration and the Role of the Statutory Bodies b. Professional Conduct Proceedings c. Education and the Physiotherapist	2
3	Client-Centered Care a. Rights of Clients b. Consent and Information Giving c. Confidentiality d. Access to Records and Information	4
4	The Physiotherapist as a Private Practitioner and professional	4
5	Physiotherapist as a educator and administrator	4
6	Contemporary practice issues	4
7	Professional development, Competence and expertise	5
8	Ethical principles as per WCPT	5
9	Professionalism in multiple contexts of the US health care system – APTA	10
	Total	40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of the constituent unit

Theory question paper pattern - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory):20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

Internal assessment marks will be weighted out of 10 marks for theory

Recommended books-

1. Dimond, B. C. (2009). *Legal aspects of Physiotherapy*. John Wiley & Sons-3rd edition
2. Dimond, B. (2016). *Legal Aspects of Health and Safety* (Vol. 1). Andrews UK Limited.
3. Swisher, L. L. D., & Page, C. G. (2005). *Professionalism in physical therapy: History, practice, and development*. Elsevier Health Sciences-edition 1

4. Gabard, D. L., & Martin, M. W. (2010). *Physical therapy ethics*. FA Davis

Name of the Programme	Master of Physiotherapy (MPT) Specialty –Community Physiotherapy
Name of the Course	Medical Device Innovation
Semester	Semester II
Course Code	MPTGEC-001
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Students will be able to	
CO 1	discuss steps involved in developing medical device from prototype designing to final product development and testing related to the same in order to improve healthcare among patients and general population
CO 2	discuss steps in technology innovation, product development, project and business management, intellectual property, regulatory affairs, clinical needs, entrepreneurship, emerging trends, globalization, reimbursement, and public policy
CO 3	apply a repeatable process for identifying and characterizing a significant unmet health need and inventing and evaluating a new technology to address it, discuss unmet health needs, inventing and evaluating a new technology to address local and national needs
CO 4	discuss and evaluate risks and challenges that are unique to medical device innovation and develop strategies for assessing and managing them, work effectively in a multidisciplinary team

Unit	Topics	No. of Hrs.
1	Introduction to Medical Device Innovation <ul style="list-style-type: none"> • Orientation to the curriculum • Approaches in Device Innovation • Future scope 	2
2	Clinical Foundations of Medical Device Innovation <ul style="list-style-type: none"> • Identifying need for device innovation: A problem-solution based approach to understand unmet healthcare needs 	2
3	Product Innovation and Development Management <ul style="list-style-type: none"> • Concept of prototype and design development • Framework for conceptualization, design, development and the commercialization process for medical products, with a survey of key steps in innovation from an engineering and business perspective. 	4
4	Quality, Regulatory, and Manufacturing Management	4

	<ul style="list-style-type: none"> Examine process validations, Good Laboratory Practice (GLP), Good Manufacturing Practice (GMP), appropriate management of Standard Operating Procedures (SOPs) and knowledge sharing across the value chain. 	
5	Role of IPR in device innovation <ul style="list-style-type: none"> Understanding various policies and steps for safeguarding newly designed devices through filing of copyright and patent 	4
6	Technical Writing <ul style="list-style-type: none"> Develop the professional skills required to communicate technical information to a broad audience in an effective manner 	4
7	Visit to Healthcare centers <ul style="list-style-type: none"> Interviews, Surveys among clinicians to identify problem 	5
8	Visit to Macro environment of Technology incubation centers: <ul style="list-style-type: none"> Understanding basics of mechanics, availability, functioning and cost of resources 	5
9	Development of Product design <ul style="list-style-type: none"> Multi-disciplinary team building to develop prototype, work on fabrication, making of final product and plan for commercialization 	10
	Total	40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of the constituent unit.

Theory question paper pattern - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

Internal assessment marks will be weighted out of 10 marks for theory

Recommended books-

1. Yock, P. G., Zenios, S., Makower, J., Brinton, T. J., Kumar, U. N., Watkins, F. J., ... & Kurihara, C. Q. (2015). *Biodesign: the process of innovating medical technologies*. Cambridge University Press.
2. Timmermann, C., & Anderson, J. (Eds.). (2006). *Devices and designs: medical technologies in historical perspective*. Springer-3rd edition
3. Ogrodnik, P. (2012). *Medical Device Design, Innovation from concept to market*. Academic Press/Elsevier-2nd edition
4. Dr. Jagdish Chaturvedi. Medical device innovation- Perspective from India. 2018. Notion press.

Name of the Programme	Master of Physiotherapy (MPT) Specialty – Community Physiotherapy
Name of the Course	Scientific Writing
Semester	Semester II
Course Code	MPTGEC-002
Credits per semester	2 credits
Hours per semester	40 hours

Course Learning Outcomes Students will be able to	
CO 1	Discuss factors influencing quality of writing and dissemination with a view to improve readability, maximize the contribution of the research done and improve the opportunities for publishing.
CO 2	discuss the role of author, responsibility, ethics administration issues and accountability of the scientific content.
CO 3	apply scientific writing process, components of a research paper, methods of literature search, skills of organizing and composing a scientific paper, discuss types of articles and methods of literature search through search engines.
CO4	reflect on what constitutes a research problem to be addressed in a scientific paper, , organizing and composing a scientific paper, journal selection, use of software used in scientific writing.
CO5	comprehend ethics of scientific writing, analyze and review scientific papers in terms of key message, consistency and justification; reflect on the benefits of working in teams in scientific writing and describe the rules of co-authorship; publication ethics.
CO6	understand the editorial process for publication.

Sr. No.	Topics	No. of Hrs.
1	Introduction to medical writing	3
2	Overview of types of articles	3
3	Methods of literature search and Pubmed search	3
4	Concept of understanding research problem, article writing and editorial process	3
5	Journal Selection	3
6	Reviewing, Editing and Publishing	3
7	Software used in Medical writing a. Referencing software b. Plagiarism Software	4
8	Guidelines for scientific writing Duties of Author, Authorship dispute, Editor, Reviewer, etc.	4

	<ul style="list-style-type: none"> Guidelines of ICMJE and other bodies Guidelines and Checklists of relevant to medical writing in diverse medical fraternities Publication Ethics Journal quality and impact assessment of article 	
9	Documents in Clinical Research <input type="checkbox"/> Clinical study report <input type="checkbox"/> Grant proposal writing	14
		40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of the constituent unit.

Theory question paper pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Section 1				
Short answer questions	8 out of 10	5	8x5	40
Total= 40				

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4x5	20
Total				20

Internal assessment marks will be weighted out of 10 marks for theory

Reference Books:

1. Day, R.A. and Gastel, B. 2006. How to write and publish a scientific paper. 6th edition. Cambridge University Press, Cambridge.
2. American Psychological Association, 2009. Publication Manual of the American Psychological Association, 6th ed. American Psychological Association, Washington, DC.

Name of the Programme	Master of Physiotherapy (MPT) Specialty- Community Physiotherapy
Name of the Course	Global health care issues
Course Code	MPTSEC001
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Learning Outcomes Student should be able to	
CO 1	Analyze the current professional & legal policies pertaining to culture competence and global health care
CO 2	Distinguish between the varied health care system of multiple countries including close examination of political, economic & cultural influences
CO 3	Determine the impact of infectious and chronic disease, mental health, and nutrition upon various populations across the globe.
CO 4	Evaluate the management of life span health issues across the globe (from neonatal development through death).
CO 5	Appraise the efficacy of local and international initiatives to address various health care issues across the globe.
CO 6	Compile evidence-based information about various global health care topics to effectively share with peers.
CO7	Examine the role that core values/ethical behaviors and professional communication play in relation to conflict resolution, negotiation skills, and networking

Unit	Topic	Hours
1	Why study global health care	1hr
2	Global health in developed & developing countries	3hr
3	Economics & Politics of health care global perspective	4hr
4	Mental health	4hr
5	Infectious & chronic disease	4hr
6	Life span health issues	4hr
	Practical	40 hours
	Total	60 hours

EXAMINATION SCHEME

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2X20	20	40	40
Total				40

Mid Semester Examination Pattern (Practical): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2 X10	10	20	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended books-

1. Global Health Care-issues & Policies by Carol Holtz
2. Preventive & Community Medicine by K.Park

Name of the Programme	Master of Physiotherapy (MPT) Specialty- Community Physiotherapy
Name of the Course	National Healthcare Policies
Course Code	MPTSEC002
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Learning Outcomes Student should be able to	
CO 1	Introduce students to different types of health systems existing in the world, their merits and demerits
CO 2	Familiarize students with concepts relating to health systems such as coverage, financing, quality of care, regulation, insurance etc
CO 3	Impart a general understanding of the logic and process of public policy-making in health
CO 4	To enable students to undertake preliminary analysis of health policy issues and decisions based on this understanding
CO 5	Introduce students to some analytical tools used in policy studies.
CO 6	Enable students to understand the role of consultancy in the policy process, with emphasis on the value of communication skills.

Unit	Topic	Hours
1.	Health Policy and Health Systems- Introducing Health Policy, Health superstructure key institutions	1hr
2.	Health Services overview, Globalization and Health	3hr
3.	Contemporary themes in National Health, Governance in Health	3hr
4.	Policy making - Foundations of health policy making, Theories of policy process	2hr
5.	Equity, Access and Quality, Health Financing 5. Policy Analysis	2hr
6.	Health Systems- Comparative Health Systems, National Health Policy and Programmes	2hr
7.	Human Resources in Health, Private Sector and Health 5. Regulating Pvt Health Sector	2hr
8.	Health Sector Reform, Public-Pvt Partnerships / Civil Society and Health 8. Pharmaceuticals and Health	3hr
9.	Primary Health 10. International health agreements 11. International health actors and processes	2hr
	Practical	40
	Total	60

EXAMINATION SCHEME

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2X20	20	40	40
Total				40

Mid Semester Examination Pattern (Practical): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2 X10	10	20	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended books-

1. Park's Textbook of Preventive and Social Medicine
2. Mary-Jane Schneider, Introduction to Public Health, 2nd Ed... Jones and Bartlett, 2006.
3. Essentials of Public Health - BJ Turnock. Jones & Bartlett, 2007
4. Oxford Textbook of Public Health, 4th edn Maxcy's Textbook of Public Health.

MGMSOP MGMIHS

Master of Physiotherapy (MPT)
Specialty - Community Physiotherapy

Semester-III (13-18 months)

Course Code	Course Title	Course Description	Theory/ Seminar Hours	Practical	Research Hours	Clinical Hours
MPT097	Physiotherapy for Geriatric Health	Core Theory	40			
MPT098	Physiotherapy for Geriatric Health	Core Practical		80		
MPT099	Preventive Physiotherapy and Health Promotion	Core Theory	40			
MPT100	Physiotherapy for Women's Health	Core Theory	40			
MPT101	Physiotherapy for Women's Health	Core practical		80		
MPTAEEC001/ MPTAEEC002	Strengthening and Relaxation Techniques/ Exercise Psychology	Ability Enhancement t Elective Course	20	40		
MPTSEC003	Application of Yoga in Physiotherapy	Skill Enhancement t Elective Course	20	40		
MPTRP003	Research data collection & analysis				80	
MPTCLT003	Clinical Training III					320

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Physiotherapy for Geriatric Health -Theory
Course Code	MPT-097
Credit per Semester	2 credits
Hours per Semester	40 hours
Name of the Course	Physiotherapy for Geriatric Health-Practical
Course Code	MPT-098
Credit per Semester	2 credits
Hours per Semester	80 hours

Course Learning Outcomes	
Cognitive	
At the end of the course, the candidate will be able to:	
CO 1	explain physiology of aging process and its influence on physical function
CO 2	apply measures to improve physical function of elderly
Psychomotor	
CO 3	identify contextual {e.g., environmental and psycho-social cultural} factors serving as risk factors responsible for dysfunction and morbidity related to elderly and describe strategies to combat dysfunction at community level.
CO 4	collaborate with other health professionals for effective service delivery & community satisfaction
Affective	
CO 5	develop as an empathetic health professional, especially for individuals with no access to health care

Sr. No	Topics	Hours
1	Aging	2
	1. Classification and theories of aging 2. Physiology of ageing: Musculoskeletal, Neurological, Cardio respiratory, metabolic, visual, auditory, sensory and other systems	
2	Geriatric Conditions	8
	1. Osteoporosis 2. Degenerative conditions 3. Alzheimer disease 4. Dementia	

	5. Parkinsonism 6. Incontinence 7. Chronic obstructive pulmonary disease 8. Diabetes Mellitus 9. Hypertension	
3	Geriatric Assessment: WHO ICF model <ul style="list-style-type: none"> • Assessment of Body Functions and Structures: • Anthropometric measurement, Vital sign assessment. • Musculoskeletal assessment: Muscle strength and range of motion assessment. • Neurological assessment: Cranial nerve examination, sensory & coordination assessment, Four stage step test and star excursion test • Cardiopulmonary assessment: Pulmonary function test, Peak expiratory flow rate, respiratory strength measurement and chest wall mobility • Cognitive assessment: Mini Mental Scale • Activity limitation: • Sit to stand & Transfers: Arm Curl, 30 sec Chair-Stand test, Back-Scratch test and Chair Sit and Reach test • Balance & Gait: Tinetti Performance-oriented Scale • Aerobic endurance: Six-minute walk test or Two minutes walk-in place test • Stair-climbing: Stair climb test • Participation restriction: • World Health Organization Quality of Life instrument (WHOQoL), Geriatric Depression scale and Barthel Index. 	8
4	Falls Assessment, Management and Prevention in Elderly <ol style="list-style-type: none"> 1. Epidemiology of falls 2. Consequences of falls 3. Risk factors of falls 4. Fall prevention and Management 	8
5	Role of Physiotherapy in Geriatric Care Institutionalized & Community dwelling elders, Hospital based care, Half way homes	8
6	NGO's and Health related Legal rights and benefits for the elderly. <ol style="list-style-type: none"> 1. National policy for senior citizen 2. National old age pension schemes 3. Insurance scheme 4. Jan Arogya 5. National council for older person 6. Annapurna policy 	4
7	Senior citizens in India	2
	Practical: Geriatric Assessment and treatment methods	80

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

University Examination Pattern (Theory): 80 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x10	20
Total				40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 80 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x10	20
Total				40

University Examination Pattern (Practical): 40 Marks

Question type	Marks
OSCE 1/Case	20
OSCE 2/Case	20
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question type	Marks
OSCE 1/Case	10
OSCE 2/Case	10
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended Books –

1. World Health Organization 2001. The International Classification of Functioning, Disability and Health (ICF). Geneva: WHO. <http://www.who.int/classifications/icf/en/>
2. Advanced Fitness Assessment and Exercise Prescription- Vivian. H. Heyward-7th edition
3. Physical Rehabilitation-Susan B O’Sullivan, Thomas. J. Schmitz-6th edition

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Preventive Physiotherapy and Health Promotion- Theory
Course Code	MPT-099
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes	
Student will be able to	
CO 1	explain health and its components, - five approaches to health promotion: medical; behavioral change; educational; client-centered, and societal change, principles of broad and positive health concept; participation and involvement; action competence; settings perspective and equity in health.
CO 2	explain levels of health promotion categorized in three levels: primary, secondary and tertiary prevention, purpose, strategies, approaches and principles of health promotion and WHO guidelines for health promotion, morbidity and mortality due to non-communicable diseases, health promotion strategies in child, women and geriatrics, Health Policies
CO 3	assess and counsel for smoking cessation (or at least its initiation), identify risk factors for noncommunicable diseases basic nutritional assessment and counseling, recommend physical activity and exercise, stress assessment and basic stress reduction, sleep assessment and basic sleep hygiene recommendations
CO 4	plan strategies for health promotion in child, women and geriatric population
CO 5	recommend pre-rehabilitation and work ergonomics for preventing musculoskeletal and cardiovascular – respiratory problems
CO 6	apply behavioral skills and humanitarian approach while communicating with patients and care givers, and inter disciplinary team members while promoting health education in community

Unit	Topics	No. of Hrs.
1	Definition of Health, Components & Prerequisites for Health	4
2	Purpose, Strategies, Approaches & Principles of Health promotion	4
3	WHO Guidelines for health promotion Health Policies	4
4	Risk factors for Non-communicable diseases (WHO)	4
5	Counseling for smoking and smoking cessation (or at least its initiation), basic nutritional assessment and counseling, recommendations for physical activity and exercise, stress assessment and basic stress reduction recommendations, and sleep assessment and basic sleep hygiene recommendations.	6
6	PRE-Rehabilitation and work ergonomics for preventing Musculoskeletal problems	4
7	Health Promotion in Child	4

8	Health Promotion in Women	
9	Health Promotion in Geriatrics	4
10	Community visit -Health Education	6
Total		40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit

Theory question paper pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Section 1				
Short answer questions	8 out of 10	5	8x5	40
Total= 40				

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Section 1				
Short answer questions	8 out of 10	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	5	4x5	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for theory

Recommended books-

1. Smith, B. J., Tang, K. C., & Nutbeam, D. (2006). WHO health promotion glossary: new terms. *Health promotion international*, 21(4), 340-345.
2. Global recommendations on physical activity for health. World Health Organization. ISBN 978 92 4 159 997 9.
3. Porter, S. (2013). *Tidy's Physiotherapy E-Book*. Elsevier Health Sciences.
4. Sapsford, R., Bullock-Saxton, J., & Markwell, S. (Eds.). (1998). *Women's health: a textbook for physiotherapists*. WB Saunders.
5. Sharma, A. (2007). Textbook of physiotherapy for obstetric and gynecological conditions. *Indian Journal of Physiotherapy and Occupational Therapy-An International Journal*, 1(2), 24-24.
6. Guccione, A. A., Avers, D., & Wong, R. (2011). *Geriatric Physical Therapy-eBook*. Elsevier Health Science

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Physiotherapy in women's health- Theory
Course Code	MPT-100
Credit per Semester	2 credits
Hours per Semester	40 hours
Name of the Course	Physiotherapy in women's health-Practical
Course Code	MPT-101
Credit per Semester	2 credits
Hours per Semester	80 hours

Course Learning Outcomes: The student will be able to	
CO 1	describe neuromuscular, musculoskeletal, cardio-vascular & respiratory conditions, immunological conditions, nutritional deficiencies, infectious diseases, & genetically transmitted conditions in women
CO 2	assess function of women with respect to neurological, musculoskeletal & respiratory function
CO 3	describe normal & abnormal physiological events, complications and management during puberty, pregnancy and menopause
CO 4	describe uro-genital dysfunction (Antenatal, Postnatal, during menopause)
CO 5	apply skill of clinical examination of pelvic floor,

Unit	Topics	Hours
1	Anatomical and Physiological Variations Associated with Puberty – Physical and Psychological health of adolescent girls	3
2	Anatomical and Physiological Variations Associated with Pregnancy Development of the foetus, Normal/ Abnormal / multiple gestations, Common Complications during pregnancy: Anaemia, PIH, Eclampsia, Diabetes, Hepatitis, TORCH infection or HIV	4
3	Physiology of Labour <ul style="list-style-type: none"> • Normal – Events of Ist, IInd & IIIrd Stages of labour • Complications during labour & management • Caesarean section- elective/ emergency & post-operative care 	4
4	Ante natal and Post Natal Physiotherapy	6
5	Infertility - Management with emphasis on PCOS/PCOD	2
6	Urogenital Dysfunction Uterine prolapse – Classification & Management (Conservative / Surgical) Cystocoele, Rectocoele, Enterocoele, Urethrocoele Incontinence, malignancy and their therapeutic interventions.	4
7	Gynecological Surgeries (Pre- and Post-Surgical Management)	3
8	Physiotherapy for Pre, Peri, Post-Menopausal Women	5

	<ul style="list-style-type: none"> Anatomical and Physiological variations associated with Menopause Complications, Management 	
9	Pelvic Inflammatory Diseases - special emphasis to low back pain due to Gynecological / Obstetrical conditions	2
10	Women in India	2
11	Social issue having impact on physical Function	2
12	Legal rights and benefits related to health	2
	Practical	80

EXAMINATION SCHEME

University Examination Pattern (Theory): 80 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x10	20
Total				40

University Examination Pattern (Practical): 80 Marks

Exercise	Description	Marks
Q No 1	Long Case (2 X 20)	40
Q No 2	OSCE stations (2 X 20)	40
Total		80

Mid Semester Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case	20
OSCE stations (2X10)	20
Total	40

Internal Assessment marks will be weighted out of 20 marks, for theory and practical each

Recommended Books -

1. Text book of Gynaecology – Datta – New Central Book Agency-9th edition
2. Text book of Obstetrics --Datta – New Central Book Agency- 9th edition
3. Physiotherapy in Gynaecological& Obstetrical conditions –Mantle
4. Therapeutic Exercise – Kisner-6th edition
5. Text of Physiotherapy for obstetrics and Gynecology – G.B. Madhuri &Pruthvish

Recommended Reference Books

1. Women's Health – Ruthsapsford

Name of the Programme	Master of Physiotherapy Specialty- Community Physiotherapy
Name of the Course	Strengthening and relaxation Techniques
Course Code	MPTAEEC001
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Learning Outcomes Student should be able to	
CO 1	apply physical principles of various strengthening techniques like Pilates, resistant band, vestibular ball and relaxation exercises like Jacobson, Mitchell. Biofeedback, PNF.
CO 2	analyze effects, advantages disadvantages of various strengthening and relaxation techniques.
CO 3	apply and evaluate breathing movements for relaxation techniques and positions for strengthening different muscle groups.
CO 4	design treatment programs using equipment's like bands, tubes, mats, reformer, vestibular ball, biofeedback.
CO5	describe safety precautions while using various techniques and equipment
CO6	describe and apply techniques used for recruitment of various muscle groups while strengthening and relaxation for respiratory, neurological, orthopedic conditions and for fitness training

Unit	Topic	Hours
1	Introduction of various strengthening and relaxation exercises including Pilates, resistant band, vestibular ball, Jacobson, Mitchell, biofeedback and PNF	2
2	Principles, effects and advantages of strengthening and relaxation techniques	2
3	Equipment's used -bands, tubes, Mats, vestibular ball, reformer, biofeedback	2
4	Assessment of skills related to thoracic mobility, different breathing patterns and musculoskeletal disorders.	2
5	Application of exercises of Jacobson, Mitchell, PNF for relaxation and TheraBand's, Pilates on mat and vestibular ball for strengthening of respiratory and musculoskeletal disorders.	4
6	Application of exercises of Theraband's, Pilates on mat and vestibular ball for fitness.	4
7	Detailed Safety Precautions while using instruments	2
	Practical	40
	Total	60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit

Internal Examination Pattern (Theory): 40 Marks

SAQ (8 out of 10 x 5 marks)	40
	Total = 40 M

Internal Examination Pattern (Practical): 40 Marks

Short Case (fitness evaluation)	20
OSPE Stations (2)	20
	Total = 40 M

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
SAQ	8 out of 9	5	8X5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
SAQ	4 out of 5	5	4X5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case (fitness evaluation)	20
OSPE Stations (2 X 10)	20

Total	40
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Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Short Case (fitness evaluation)	10
OSPE Stations (1 X 10)	10
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended Books-

1. Page, P., & Ellen becker, T. S. (2019). *Strength band training*. Human Kinetics Publishers-2nd edition
2. Spector-Flock, N. (2002). *Get Stronger by Stretching with Thera-Band*. Dance Horizons-2nd edition

Name of the Programme	Master of Physiotherapy (MPT) Specialty- Community Physiotherapy
Name of the Course	Exercise Psychology
Course Code	MPTAEEC-002
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Outcomes At the end of the course, the candidate will be able to	
CO 1	discuss psychological aspects concerned with promotion of physical activity and exercise; psychological and emotional benefits linked with physical activity, exercise and sport and consequences of lack of exercise on behavior, inter personal skills and mental well-being, discuss how psychological factors that influence exercise behavior.
CO 2	describe factors influencing and serving as barriers to sustaining positive health behavior - self-esteem, depression, body image, anxiety, motivation, social support, and perceived control influence exercise behavior.
CO 3	apply methods to encourage positive health behavior, importance of understanding psychology of a person in designing sustainable programs to initiate and maintain positive health behavior
CO 4	discuss benefits of physical activity and exercise on mental health and well being
CO 5	discuss psychological factors influencing high skill performance and sports engagement
CO6	apply methods that can be used for psychological skills training

Unit	Topics	No. of Hrs.
1	Introduction to exercise psychology	5
2	Psychological issues affecting performance: anxiety, depression, self-esteem, motivation, body image	5
3	Barriers and facilitators for adherence to positive health behavior: social factors, cultural factors	5
4	Group dynamics	5
5	Psychological skills training – relaxation, yoga, positive reinforcement, mental imagery	20
	Practical: Management Techniques/ Questionnaire based Assessment / Case studies	40
	Total	60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit

Theory question paper pattern for College Examination under CBCS - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
				Total= 40

Practical paper pattern - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2	20	40	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

University Examination Pattern (Practical): 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2	20	40	40
Total				40

Mid Semester Examination Pattern (Practical): 20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2	10	20	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for practical & theory each

Recommended books-

1. Buckworth, J., & Tomporowski, P. (2013). *Exercise psychology*. Human kinetics-2nd edition
2. Willis, J. D., & Campbell, L. F. (1992). *Exercise psychology*. Human Kinetics Publishers
3. Berger, B. G., Pargman, D., & Weinberg, R. S. (2002). *Foundations of exercise psychology*. Fitness Information Technology, Inc-3rd edition
4. Van Raalte, J. L., & Brewer, B. W. (1996). *Exploring sport and exercise psychology* (pp. xxix-487). American Psychological Association-2nd edition
5. Moran, A. (2013). *Sport and exercise psychology: A critical introduction*. Routledge-2nd edition
6. Weinberg, R. S., & Gould, D. S. (2014). *Foundations of sport and exercise psychology*. Human Kinetics.

Name of the Programme	Master of Physiotherapy (MPT) Specialty- Community Physiotherapy
Name of the Course	Application of Yoga in Physiotherapy
Course Code	MPTSEC003
Credit per Semester	2 credits
Hours per Semester	60 hours

Course Learning Outcomes Student should be able to	
CO 1	describe origin of Yoga & its brief development and apply principles of Yoga for patient care in musculoskeletal, neurological and cardio-respiratory disorders
CO 2	demonstrate effective communication skills for understanding effect of yoga on health condition
CO 3	describe types of Yoga- Hatha Yoga, Raja Yoga, Laya Yoga, Bhakti Yoga, Gyan Yoga, Karma Yoga, compare and contrast differences in philosophies, plan appropriate program for patient care
CO 4	demonstrate and apply pranayama, techniques for patients (Anulom-vilom, Bhastrika, Bhramri, Nadishuddhi, Kapalbharti, Omkar, Suryabhedana) , analyze difference between Pranayama and deep breathing and its implications, explain meaning of meditation and its types and principles.
CO 5	demonstrate different types of asanas, principles, effects. limitations to performing asanas, biomechanical implications of asanas and recommend modifications that can be used by patients
CO 6	conduct basic yoga session for patients with musculoskeletal, neurological, cardio-respiratory disorders, women's health- antenatal post-natal health, geriatrics

Unit	Topic	Hours
1	Origin of Yoga & its brief development.	3
	Principles of Yogic Practices.	
	Meaning of meditation and its types and principles.	
	Classification of Yoga/Types of Yoga Hatha Yoga, Raja Yoga, Laya Yoga, Bhakti Yoga, Gyan Yoga, Karma Yoga	
2	Meaning of Pranayama, its types and principles. (Anulom-vilomBhastrika, Bhramri, Nadishuddhi, Kapalbharti, Omkar, Suryabhedana), Difference between Pranayama and deep breathing	5
3	Yoga Asana- types, principles, muscle work and kinematics	5
4	Yogic Diet.	2
5	Yoga for musculoskeletal, neurological and cardio-respiratory conditions, women's health- antenatal post-natal health, geriatrics	5
	Practical	40
	Total	60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit

Theory question paper pattern for College Examination under CBCS - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 10	5	8 x 5	40
				Total= 40

Practical paper pattern - 40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2	20	40	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8 x 5	40
Total				40

Mid Semester Examination Pattern (Theory):20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4 x 5	20
Total				20

University Examination Pattern (Practical):40 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2	20	40	40
Total				40

Mid Semester Examination Pattern (Practical): 20 marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE /Simulated case	2	10	20	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for practical & theory each

Recommended Books-

1. Field, T. (2009). *Complementary and alternative therapies research*. American Psychological Association. Illustrated Edition (January 1, 2009)
2. Mahajan, A. S., & Babbar, R. (2003). *Yoga: A Scientific Lifestyle. JOY: The Journal of Yoga*, 2(10) 10th edition
3. Dutta Ray, *Yogic Exercises* (2003). 1st Edition. Jaypee Publications.

Master of Physiotherapy (MPT)
Specialty - Community Physiotherapy

Semester-IV (19-24 months)

Course Code	Course Title	Course Description	Theory/ Seminar Hours	Practical	Research Hours	Clinical Hours
MPT102	Recent Advances in Preventive and Community Medicine	Core Theory	40			
MPT103	Recent Advances in Preventive and Community Medicine	Core Practical		40		
MPT104	Recent Advances in Women's Health	Core Theory	40			
MPT105	Recent Advances in Women's Health	Core practical		40		
MPT106	Industrial Therapy	Core Theory	40			
MPT107	Industrial Therapy	Core practical		40		
MPTAEEC003/ MPTAEEC004	Radiological Diagnosis/Clinical Nutrition	Ability Enhancement Elective Course	20	40		
MPTAEEC016/ MPTAEEC005	Vestibular Rehabilitation/ Physiotherapy in Oncology	Ability Enhancement Elective Course	20	40		
MPTAECC006	Intellectual Property Rights and Publication Ethics	Ability Enhancement Compulsory Course	40			
	Clinical Training				320	
	Research Dissertation Submission and manuscript preparation			80		

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Recent Advances in Preventive and Community Medicine-Theory
Course Code	MPT-102
Credit per Semester	2 credits
Hours per Semester	40 hours
Name of the Course	Recent Advances in Preventive and Community Medicine -Practical
Course Code	MPT-103
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Student should be able to	
CO 1	review literature for recent advances in health promotion in community, self-empowerment programs, vocational programs, CBR
CO 2	demonstrate skills related to health promotion in community, self-empowerment programs, vocational programs and CBR
CO 3	correlate clinical observations with investigations and be able to follow the ICF pattern for identification of structural and functional impairments, analyze difference in capacity and performance and factors affecting performance, analyze positive contributors and influence of negative barriers to treatment.
CO 4	apply relevant techniques for health promotion in community, self-empowerment programs, vocational programs, CBR

Unit	Topic	Hours
1	Recent advances in Principles of fitness training for health promotion in community.	9
2	Recent concepts in Home and self-help programs in community physiotherapy.	9
3	Recent advances in Vocational management of vocational problems.	9
4	New trends in Research in community physiotherapy	9
5	Evidence based physiotherapy in CBR	4
	Practical	40
	Total	80

EXAMINATION SCHEME

University Examination Pattern (Theory): 80 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

University Examination Pattern (Practical): 80 Marks

Question Type	Marks
Long Case (2 X 20)	40
OSCE Stations (2 X20)	40
Total	80

Mid Semester Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case (1 X20)	20
OSCE Stations (2X10)	20
Total	40

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended books:

1. TB of preventive & social medicine. By Gupta & Mahajan JP-3rd edition.
2. Park's T.B. of preventive & social medicine. By K. Park, 15th edition.
3. Rehabilitation surgery for deformities due to Poliomyelitis. Techniques for the district hospital.
4. Physical rehabilitation –Outcome measures 2nd edition Finch. Brooks. Stratford. Mayo (Lippincott, Williams & Wilkins)
5. Innovation in community care & primary health the marylebone experiment by Patrick Pietroni, Christopher Pietroni. Churchill Livingstone.
6. Essential readings in rehabilitation outcomes measurement, application, Methodology & Technology. Edward A Dobrzykowski; Aspen Publications.
7. Community care for health professionals by Ann Compton & Mary Ashwin 2nd edition (Butterworth Heinemann).
8. Rehabilitation / restorative care in the community. Shirley P Hoeman C.V. Mosby Company-6April 1990

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Recent Advances in Women's health -Theory
Course Code	MPT-104
Credit per Semester	2 credits
Hours per Semester	40 hours
Name of the Course	Recent Advances in Women's health Practical
Course Code	MPT-105
Credit per Semester	2 credits
Hours per Semester	40 hours

Course Learning Outcomes Student should be able to	
CO 1	review literature for recent advances in obstetric and gynaecological Physiotherapy and Women's health with emphasis on fitness, mental health, musculoskeletal health, strength of pelvic floor and core muscles
CO 2	demonstrate skills related to obstetric and gynaecological Physiotherapy and Women's health with emphasis on fitness, mental health, musculoskeletal health, strength of pelvic floor and core muscles
CO 3	correlate clinical observations with investigations and be able to follow the ICF pattern for identification of structural and functional impairments, analyze difference in capacity and performance and factors affecting performance, analyze positive contributors and influence of negative barriers to treatment.
CO 4	apply evidence-based techniques for obstetric and gynaecological Physiotherapy and Women's health with emphasis on fitness, mental health, musculoskeletal health, improving strength of pelvic floor and core muscles
CO 5	explain alternative therapies in obstetric and gynaecological conditions

Unit	Topic	Hours
1	Recent advances in Outcome measures used in obstetric and gynaecological Physiotherapy	5
2	EBP and recent advances of Electrotherapy in obstetric and gynaecological Physiotherapy	5
3	EBP and recent advances of Exercise therapy in obstetric and gynaecological Physiotherapy	5
4	EBP and recent advances of Hydrotherapy in obstetric and gynaecological Physiotherapy	5
5	EBP of Nutrition and mental health in women from adolescence to menopause	5
6	Recent advances in evaluation and treatment of maternal	5

	musculoskeletal disorders in Obstetrics and Gynaecology, strength of pelvic floor and core muscles	
7	Alternative therapies in obstetric and gynaecological conditions	5
8	Alternate approaches to fitness in antenatal & postpartum period	5
	Practical's	40
	Total	80

EXAMINATION SCHEME

University Examination Pattern (Theory): 80 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Section 1				
Short answer questions	4 out of 5	10	4 x 10	40
Section 2				
Long answer question	2 out of 3	20	2 x 20	40
Total				80

Mid Semester Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/question	Question X marks	Total marks
Short answers	4 out of 5	5	4x5	20
Long answers	2 out of 3	10	2x 10	20
Total				40

University Examination Pattern (Practical): 80 Marks

Question Type	Marks
Long Case (1 X 40)	40
OSCE Stations (2 X 20)	40
Total	80

Mid Semester Examination Pattern (Practical): 40 Marks

Question Type	Marks
Long Case (1 X 20)	20
OSCE Stations (2 X 10)	20
Total	40

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Recommended books-

1. Gray, Henry. 1918. Anatomy of the Human Body, 20th ed.
2. C. Guyton, John E. Hall, Textbook of medical physiology, W.B.Saunders company- Harcourt Brace Jovanovich, Inc- 3rd edition
3. D.K.James et al. High Risk Pregnancy-management options, Saunders-An imprint of Elsevier.
4. Margaret Polden, Jill Mantle, Physiotherapy in obstetric and gynecology, Butterworth-Heinemann, Linacre house, Jordan Hill, Oxford, 1990.
5. Ann Thomson, Tidy's physiotherapy, Varghese publishing House, Bombay-3rd edition
6. Ruth Sapsford, Joanne Bullock-Saxton, Sue Markwell. Women's Health: A Textbook for Physiotherapists, 1997.
7. Scientific basis of human movement –Gowitzke, Williams and Wilkins, Baltimore, 1988, III edition.
8. Clinical biomechanics of spine – White A, and Panjabi- J, B. Lippincot, Philadelphia 1978.
9. Physiotherapy in Obstetrics and Gynaecology- 2nd edition- Jill Mantle, Jeanette Haslam, Sue Bartom. Forwarded by Professor Linda Cardow
10. Physiotherapy in Obstetrics & Gynaecology – Polden& Mantle, Jaypee Brothers, New Delhi, 1994.
11. D.C Datta -Textbook of Gynaecology. 1st edition
12. Women's Health- A textbook for Physiotherapists. R.Sapsford J. Bullock. Saxton. S, Markwell.- (W.B. Saunders)
13. Obstetrics & Gynaecologic care in Physical Therapy- 2nd edition-Rebecca.C. Stephenson, Linda.J.O'contuor
14. Clinical Cases in Obstetereics & Gynaecology- Haresh U. Doshi, published by Arihant publisher

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Industrial Therapy Theory
Course Code	MPT-106
Credit per Semester	2 credits
Hours per Semester	40 hours
Name of the Course	Industrial Therapy Practical
Course Code	MPT-107
Credit per Semester	1 credit
Hours per Semester	40 hours

Course Learning Outcomes Student should be able to	
CO 1	review literature for recent advances in industrial therapy, injury prevention, ergonomics, job analysis, work hardening and conditioning, return to work and vocational rehabilitation
CO 2	demonstrate skills related to industrial therapy, injury prevention, ergonomics, job analysis, work hardening and conditioning, return to work and vocational rehabilitation
CO 3	correlate clinical observations with investigations and be able to follow the ICF pattern for identification of structural and functional impairments, analyze difference in capacity and performance and factors affecting performance, analyze positive contributors and influence of negative barriers to treatment.
CO 4	apply relevant techniques for industrial therapy, injury prevention, ergonomics, job analysis, work hardening and conditioning, return to work and vocational rehabilitation
CO 5	explain international and national regulations, regulatory agencies and guidelines, monitoring client safety, legal aspects of industrial therapy and marketing of industrial therapy

Unit	Topic	Hours
1	Introduction to industrial therapy	10
	<ul style="list-style-type: none"> a. What is Industrial therapy b. The industrial therapy team c. The impact and outcomes of industrial therapy d. Data collection and use in industrial therapy 	
2	Injury prevention	8
	<ul style="list-style-type: none"> a. Job analysis b. Job placement assessment and pre-employment screening c. Back injury prevention d. Upper extremity injury prevention e. Employee fitness program 	

3.	Returning the worker to productivity a. Acute care and functional treatment b. Functional capacity assessment c. Work hardening and work conditioning d. Flexibility, mobility, strength and aerobic conditioning e. Job stimulation f. Educating the worker for maximum productivity g. Vocational rehabilitation h. Onsite therapy i. Assessing physical impairment	12
4	Management of industrial therapy	4
	a. Regulations and regulatory agencies b. Ensuring and monitoring client safety c. Economic consideration of industrial therapy d. Transition to industrial therapy	
5	Legal issues in industrial therapy	3
6	Marketing industrial therapy services	3
	Practical	40
	Total	80

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit.

Theory question paper pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 10	5	8x5	40
				Total= 40

Practical exam pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE/ Simulated case/case/Ergonomic evaluation	2	20	2x20	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4x5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
OSPE/Simulated case/case/Ergonomic evaluation	2	20	2x20	40
Total				40

University Examination Pattern (Practical): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
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OSPE/Simulated case/case/Ergonomic evaluation	2	10	2x10	20
Total				20

Internal Assessment marks will be weighted out of 10 marks each for practical & theory each

Reference Books:

1. **Industrial Therapy by Glenda Key**

Name of the Programme	Master of Physiotherapy Specialty –Community Physiotherapy
Name of the Course	Radiological Diagnosis
Course Code	MPTAEEC003
Credits per semester	2 credit
Hours per semester	60 hours

Course Outcomes	
Student will be able to	
CO 1	describe significance of radiology in the field of Physiotherapy and importance of radiology as an adjunct to the confirmation of clinical diagnosis of the patient.
CO 2	describe various modalities in the field of radiology and applications in the management of patients.
CO 3	identify abnormalities in radiographs related to cardiorespiratory, musculoskeletal systems
CO 4	Outline findings of MRI, CT scans and correlate the findings to functional impairments of cardio respiratory, musculoskeletal and neurological systems

Sr. No.	Topics	Hours
1	Radiology as an adjunct to clinical examination and diagnosis.	2
2	Introduction to basic radiology and its principles	2
3	Radiograph – Reading and interpretation, emphasis on cardiorespiratory and musculoskeletal systems	4
4	High resolution Computed tomography (HRCT) of cardio-respiratory, musculoskeletal and neurological systems- Reading, interpretation	4
5	Cardiac Magnetic resonance imaging	2
6	Difference between adult and pediatric radiography.	3
7	Recent advances in radiology	3
Practical		40
Total		60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit.

Theory question paper pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 10	5	8x5	40
				Total= 40

Practical exam pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Spots	4	10	4x10	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
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Short answer questions	4 out of 5	5	4x5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Spots	4	10	4x10	40
Total				40

Mid Semester Examination Pattern (Practical): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Spots	2	10	2x10	20
Total				20

Internal Assessment marks will be weighted out of 10 marks each for practical & theory each

Reference Books:

1. Corne, J., & Kumaran, M. (2015). *Chest X-Ray Made Easy E-Book*. Elsevier Health Sciences-4th edition
2. Joarder, R., & Crundwell, N. (2009). *Chest X-ray in clinical practice*. Springer Science & Business Media
3. De Lacey, G., Morley, S., & Berman, L. (2012). *The Chest X-Ray: A Survival Guide E-Book*. Elsevier Health Sciences

Name of the Programme	Master of Physiotherapy (MPT) Specialty –Community Physiotherapy
Name of the Course	Clinical Nutrition
Course Code	MPTAEEC004
Credits per semester	2 credit
Hours per semester	60 hours

Course Outcomes	
Student will be able to	
CO 1	explain importance of clinical nutrition in enhancing capability of patients with special nutritional requirements in pathological conditions.
CO 2	explain the importance of nutrition, healthy diet and malnutrition.
CO 3	explain role and importance of different types of diets and malnutrition.

Units	Topics	Hours
1	Role and importance of nutrition and diet; <ul style="list-style-type: none"> Nutritional problems confronting our country Concept of Community Nutrition Methods of assessment of nutritional status 	2
2	Diet Therapy: <ul style="list-style-type: none"> Routine hospital diet, Types of diet - Regular diet, Light diet, Soft Diet, Full liquid diet. 	2
3	Malnutrition & Infection: <ul style="list-style-type: none"> Strategies to combat Nutritional problems – Fortification, supplementation, - Immunization Programme 	2
4	Diet in fevers and infections – Typhoid, Malaria and Tuberculosis.	2
5	Diet in gastro intestinal disorders: Diarrhea, Constipation, Peptic ulcer	2
6	Diet in Diabetes mellitus – Classification, predisposing factors, Diagnosis, Dietary management.	2
7	Diet in Cardiovascular diseases – Dietary management in Atherosclerosis and hypertension.	2
8	Diet in diseases of liver and gall bladder.	2
9	Diet in Renal diseases	2
10	Nutritional Education - Importance of nutrition education. Nutrition education methods: - Posters, Charts, Audio visual aids, lectures	2
Practical- Questionnaire based evaluation of nutrition		40
Total		60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit.

Theory question paper pattern - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
				Total= 40

Practical exam pattern- 40 Marks

Internal Examination Pattern (Practical): 40 Marks

Short Case	20
OSCE Stations (2)	20
Total = 40 M	

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4x5	20

Total	20
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University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case (1 X 20)	20
OSCE Stations (2 X 10)	20
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Short Case (1 X 10)	10
OSCE Stations (2 X 5)	10
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Reference Books-

1. Sri lakshmi, B. (2007). *Dietetics*. New Age International-7th edition
2. Sri lakshmi, B. (2003). *Food science*. New Age International-6th edition
3. Joshi, S. A. (1995). *Nutrition and dietetics*. McGraw-Hill Education-4th edition

Name of the Programme	Master of Physiotherapy Specialty-Community Physiotherapy
Name of the Course	Vestibular Rehabilitation
Course Code	MPTAEEC005
Course Description	Ability Enhancement Elective Course
Credits per semester	2 credit
Hours per semester	60 hours

Course Learning Outcomes	
Cognitive	
At the end of the course, the candidate will be able to:	
CO 1	explain anatomy and physiology of the vestibular system
CO 2	explain clinical significance of diagnostic studies, physical assessment and clinical history
CO 3	explain signs, symptoms and co-existing problems of the patient
CO 4	describe disorders that may affect the vestibular system but are not appropriate for treatment by physical therapists
Psychomotor	
CO 5	perform clinical evaluation and plan rationale for appropriate evaluation procedures
CO 6	Apply therapeutic measures to treat vestibular dysfunction
Affective	
CO 7	communicate with the patient and care-giver regarding precautions to be followed following therapy, preventive measures

Sr. No.	Topics	Hours
1	Anatomy & Physiology of Vestibular System	2
2	Role of vestibular system in postural control	2
3	Assessment of Balance and vestibular ocular reflex	2
4	Balance and Gait Assessment	2
5	Oculomotor Examination	2
6	Assessment of Subjective Complaints	2
7	Vestibular Function Tests: Caloric & Vestibular Evoked Potential	2
8	Benign Paroxysmal Positional Vertigo, Unilateral Vestibular Loss, Bilateral Vestibular Disorder– Assessment and management of Posterior Canal, Anterior Canal, Horizontal Canal	4
9	Treatment theory, goals of management and progression	2
10	Practical: Assessment and management of disorder	40
Total		60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit.

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
				Total= 40

Internal Examination Pattern (Practical): 40 Marks

Short Case	20
OSCE Stations (2)	20
Total = 40 M	

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4x5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case (1 X 20)	20

OSCE Stations (2 X 10)	20
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Short Case (1 X 10)	10
OSCE Stations (2 X 5)	10
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Reference Books-

1. Herdman SJ, Clendaniel R. Vestibular rehabilitation. FA Davis; 2014 Jul 24.

Name of the Programme	Master of Physiotherapy (MPT) Specialty – Community Physiotherapy
Name of the Course	Physiotherapy in Oncology
Course Code	MPTAEEC 006
Credits per semester	2 credit
Hours per semester	60 hours

Course Learning Outcomes	
Student will be able to	
CO 1	explain current management strategies in oncology, related surgeries, sequelae to chemotherapy and radiotherapy, clinical overview of exercise prescriptions in oncology and post-operative physiotherapy care of the patient.
CO 2	Explain physiological effects of cancer treatments and its side effects.
CO 3	plan exercise prescription protocol for oncology rehabilitation.
CO 4	explain scope and importance of physiotherapy in Oncology.
CO 5	demonstrate treatment techniques and apply recent evidences in patient care.

Sr. No.	Topics	Hours
1	Cancer – Pathophysiology, Medical and surgical management, Staging of cancer, various investigations and tumor markers.	2
2	Foundation of oncology rehabilitation	2
3	Head and neck cancer rehabilitation	2
4	Breast cancer – surgeries, management and complications	2
5	Post-operative care for oncology patients	3
6	Physiotherapy management of shoulder and scapulothoracic dysfunction in the breast cancer population	3
7	Pelvic, GI and digestive system cancer rehabilitation	2
8	Chemo induced cognitive impairment	2
9	Chemotoxicity and cancer exercise management	2
Practical's		40
Total		60

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit.

Theory question paper pattern for internal assessment under CBCS - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total= 40				

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4x5	20
Total				20

University Examination Pattern (Practical): 40 Marks

Question Type	Marks
Short Case (1 X 20)	20

OSCE Stations (2 X 10)	20
Total	40

Mid Semester Examination Pattern (Practical): 20 Marks

Question Type	Marks
Short Case (1 X 10)	10
OSCE Stations (2 X 5)	10
Total	20

Internal Assessment marks will be weighted out of 10 marks for theory and practical each

Reference Books-

1. O'Dell, M., & Stubblefield, M. (2009). *Cancer rehabilitation: principles and practice*. Demos Medical Publishing-1st edition
2. Rankin, J., Robb, K., Murtagh, N., Cooper, J., & Lewis, S. (Eds.). (2009). *Rehabilitation in Cancer Care*. John Wiley & Sons-1st edition
3. Ward, E. C., & van As-Brooks, C. J. (Eds.). (2014). *Head and neck cancer: treatment, rehabilitation, and outcomes*. Plural Publishing.

Ability Enhancement Compulsory Course	
Name of the Program	Master of Physiotherapy (MPT) Specialty – Community Physiotherapy
Name of the Course	Intellectual property rights and publication ethics
Course Code	MPTAEEC006
Credits per semester	2 credit
Hours per semester	40 hours

Course Outcomes	
Student will be able to	
CO 1	describe types of intellectual property, copyright, patent, laws and rights based on intellectual property
CO 2	apply ethics of publication in journals, different methods of misconduct carried out during publication

Unit	Topics	Hours
1	Introduction to Intellectual property rights	4
2	Patents and Trademarks	5
3	Copyright and related laws	4
4	Introduction to Publication ethics – Aim and Scope	4
5	Categories of publication / scientific misconduct – Falsification, Fabrication of data, Plagiarism, Unjustified authorship, Duplicate publication, Redundant publication. (Salami publication), Sanctions	5
6	Research ethics in journal articles – Human rights, privacy & confidentiality, Cultural heritage, Biosecurity	5
7	Ethical Standards and Process – Authorship, authorship disputes, Funding, Peer review, Conflicts of interest	5
8	Appeals and corrections	4
9	Data protection legislation	4
Total		40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2019-2020

This course will not be assessed as Semester University Examination. Evaluation will be conducted at the level of constituent unit.

Theory question paper pattern for internal assessment under CBCS - 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
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Short answer questions	8 out of 9	5	8x5	40
				Total= 40

EXAMINATION SCHEME

Examination pattern applicable for batch admitted in academic year 2020-2021 onwards as per Resolution 3.7 & 3.11 of AC 41/2021

University Examination Pattern (Theory): 40 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	8 out of 9	5	8x5	40
Total				40

Mid Semester Examination Pattern (Theory): 20 Marks

Question type	No. of questions	Marks/ question	Question X marks	Total marks
Short answer questions	4 out of 5	5	4x5	20
Total				20

Internal Assessment marks will be weighted out of 10 marks for theory

Reference Books-

1. Campbell, R., Pentz, E., & Borthwick, I. (Eds.). (2012). Academic and professional publishing. Elsevier-1st edition
2. Mayer, T., & Steneck, N. (2012). Promoting research integrity in a global environment. World Scientific



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