

Department of Physiotherapy
Era University, Lucknow
Course Outline
Effective From: 2023-24

Name of the Program	MPT			Year/ Semester:	1 st year/2 nd Sem
Course Name	BIOMECHANICS AND CLINICAL KINESIOLOGY	Course Code:	MPT-204 MPP-204	Type:	Theory & Practical
Credits	04+01			Total Sessions Hours:	60 Hours
Evaluation Spread	Internal Continuous Assessment	30 Marks		End Term Exam:	70 Marks
Type of Course	Compulsory	• Core		Creative	Life Skills
Course Objectives	1. Comprehend the structure & function of parts of the system in relevance to Physiotherapy 2. Correlate the knowledge gained, in understanding the biomechanical dysfunction				
<i>Course Outcomes (CO): After the successful course completion, learners will develop following attributes:</i>					
CO1	Analyze the Mechanical Principles of Human Movement				
CO2	Evaluate Musculoskeletal Disorders Using Biomechanical Models				
CO3	Develop Evidence-Based Intervention Strategies for Movement Dysfunction				
CO4	Assess the Impact of Biomechanical Forces in Injury Prevention				
CO5	Utilize Advanced Kinesiological Assessment Tools for Clinical Decision-Making				
Pedagogy	Interactive, discussion-bases, student-centered, presentation.				
Internal Evaluation Mode	1. Attendance: 2. Project/Assignment 3. Class Participation 4. Presentations 5. Bedside Behavior/Class discipline 6. Written Exam:				
Session Details	Topic			Hours	Mapped CO
UNIT 1	JOINT FUNCTION: UPPER EXTREMITY a. Shoulder Complex – SC, AC, ST, GH - Articulating Surfaces, Motions, Stability, Stress Tolerance, Resting Position & Motions of the Scapula, Static & Dynamic Stabilization. Integrated Functions: ST and GH Contributions, SC and AC Contributions b. Elbow Complex: Functions - Humeroulnar and Humeroradial Articulations. Functions: Superior and Inferior Radioulnar Articulations, Functional Activities Relationship to the Hand and Wrist c. Wrist and Hand Complex: Wrist Complex: Radiocarpal & Midcarpal - Functions of the			14	CO1 CO2

	Radiocarpal and Midcarpal Joints, Wrist Instability. d. Hand Complex: Functions of the CMC, MCP, IP Joints of the Fingers, Palmar Arches, Extensor Mechanism, Functions of the CMC, MCP and IP Joints of the Thumb, Prehension									
UNIT 2	JOINT FUNCTION: LOWER EXTREMITY a. Hip Joint: Function of the Hip Joint: Motion of the Femur on the Acetabulum Motion of the Pelvis on the Femur, Coordinated Motions of the Femur, Pelvis, and Lumbar Spine, Bilateral Stance & Unilateral Stance, Compensatory Lateral Lean of the Trunk, Use of a Cane Ipsilaterally & Contralaterally, Adjustment of a Carried Load b. The Knee: Tibiofemoral Joint Kinematics, Patellofemoral Joint - Joint Congruence, Motions of the Patella Patellofemoral Joint Stress, Frontal Plane Patellofemoral Joint Stability c. The Ankle and Foot Complex: Function - Ankle Joint, Subtalar Joint, Transverse Tarsal Joint, Tarsometatarsal Joint, Metatarsophalangeal Joint, Function of the Arches						13	CO1 CO2 CO3		
UNIT 3	INTEGRATED FUNCTION a. Vertebral Column: Kinematics & Kinetics - Cervical Region, Thoracic Region, Lumbar Region, Sacral Region, Intervertebral Disks b. Posture: Static and Dynamic Postures & Control, Kinetics and Kinematics of Posture, Analysis of Standing Posture, Analysis of Sitting Posture, Analysis of Lying Posture c. Gait: Kinematics & Kinetics, Kinematics and Kinetics of the Trunk and Upper Extremities, Stair and Running Gaits, Abnormal Gait						13	CO5 CO2 CO4 CO3		
Practical: a. Identification of Joint Axis b. Identification of Articulating Surfaces c. Identification of Specific Biomechanical Dysfunctions of Major Articulations of Upper and Lower Extremity										
CO-PO and PSO Mapping										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	-	-	-	3	3	2	-	-	-	1
CO2	-	-	-	-	1	1	-	-	-	1
CO3	-	-	-	3	1	2	-	-	-	1
CO4	-	-	-	-	1	1	-	-	-	2
CO5	-	-	-	3	2	2	-	-	-	1
<i>Strong contribution-3, Average contribution-2, Low contribution-1,</i>										
Suggested Readings:										
Text- Books	1. Joint Structure & Function - Cynthia Norkins									
Reference Books	1. Basic Biomechanics Explained – John Low & Ann Reed 2. Basic biomechanics of the musculoskeletal system – Margareta Nordin & Victor H. Frankel									

Para Text	https://www.youtube.com/watch?v=GkC5q6mcohk	
Recapitulation & Examination Pattern		
Internal Continuous Assessment:		
Component	Marks	Pattern
Mid Semester	12	As per University Pattern
Class Test	04	
Class Presentation/Discipline	04	
Assignment/ Project	04	
Bedside Behavior	02	
Attendance	04	As per Policy
Total Marks	30	

Department of Physiotherapy
Era University, Lucknow
Course Outline
Effective From: 2023-24

Name of the Program	MPT			Year/ Semester:	1 st year/2 nd Sem
Course Name	COMMUNITY BASED REHABILITATION	Course Code:	MPT-203 MPP-203	Type:	Theory & Practical
Credits	04+01			Total Sessions Hours:	60 Hours
Evaluation Spread	Internal Continuous Assessment	30 Marks		End Term Exam:	70 Marks
Type of Course	Compulsory	• Core		Creative	Life Skills
Course Objectives	1. Incorporate evidence based practice into clinical decisions of patient care and Management.				
Course Outcomes (CO): <i>After the successful course completion, learners will develop following attributes:</i>					
CO1	Understand CBR Framework				
CO2	Design and Implement Programs				
CO3	Conduct Needs Assessments				
CO4	Collaborate and Advocate				
CO5	Evaluate and Ensure Sustainability				
Pedagogy	Interactive, discussion-bases, student-centered, presentation.				
Internal Evaluation Mode	<ol style="list-style-type: none"> 1. Attendance: 2. Project/Assignment 3. Class Participation 4. Presentations 5. Bedside Behavior/Class discipline 6. Written Exam: 				
Session Details	Topic			Hours	Mapped CO
UNIT 1	Introduction to Community Based Rehabilitation a. Community: Definition of Community, Multiplicity of Communities, The Community based approach, Community Entry strategies, CBR and Community development, Community initiated versus community oriented programme, Community participation and mobilization Introduction to Community Based Rehabilitation: b. Definition, Historical review, Concept of c. CBR, Need for CBR, Difference between Institution based and Community based d. Rehabilitation, Objectives of CBR, Scope of CBR, Members of CBR team, Models of CBR e. Principles of Community based Rehabilitation.			14	CO1

	<p>W.H.O.'s policies-about rural health</p> <p>f. Care concept of primary /tertiary health centers-district hospitals etc-Role of P.T.-Principles of a</p> <p>g. team work of Medical person/P.T./O.T. audiologist/speech therapist /P.&O./vocational guide</p> <p>h. in C.B.R. of physically handicapped person , Agencies involved in rehabilitation of physical</p> <p>i. handicapped - Legislation for physically handicapped. Concept of multipurpose health worker.</p> <p>j. Role of family members in the rehabilitation of a physically handicapped.</p> <p>k. Planning and management of CBR Programmes, CBR Programmed planning and management,Ownership and Governance, Decentralization and CBR, Management of CBR, Programmed sustainability, Communication and Coordination, Community participation, mobilization and awareness, CBR programme influence on promoting and developing public policies.</p>		
UNIT 2	<p>CBR Programmes</p> <p>a. Disability: Definition of Impairment, Handicap and Disability, Difference between impairment, handicap and disability, Causes of disability, Types of disability, Prevention of disability, Disability in developed countries, Disability in developing countries. Disability Surveys: Demography. Screening: Early detection of disabilities and developmental disorders, Prevention of disabilities- Types and levels. Disability Evaluation Introduction.</p> <p>b. Role of Government in CBR: Laws, Policies, Programmes, Human Rights Policy, Present rehabilitation services, Legal aspects of rehabilitation</p> <p>c. Role of Social work in CBR: Definition of social work, Methods of social work, History of social work, Role of social worker in rehabilitation.</p> <p>d. Role of voluntary Organizations in CBR: Charitable Organizations, Voluntary health agencies National level and International NGO's, Multilateral and Bilateral agencies. International Health Organizations: WHO, UNICEF, UNDP, UNFPA, FAO, ILO, World bank, USAID, SIDA, DANIDA, Rockefeller, Ford foundation, CARE, RED CROSS.</p>	13	CO2 CO3
UNIT 3	<p>Screening and rehabilitation of pediatrics disorders in the community</p> <p>a. National District Level Rehabilitation Programme: Primary rehabilitation unit, Regional training center, District rehabilitation center, Primary Health center, Village rehabilitation Worker, Anganwadi worker.</p> <p>b. Role of Physiotherapy in CBR: Screening for disabilities, Prescribing exercise programme, Prescribing</p>	13	CO5 CO2 CO4

	<p>and devising low cost locally available assistive aids, Modifications physical and architectural barriers for disabled, Disability prevention, Strategies to improve ADL, Rehabilitation programmes for various neuromusculoskeletal and cardiothoracic disabilities.</p> <p>c. Screening and rehabilitation of pediatric disorders in the community: Early detection of high-risk babies, Maternal nutrition and education, Rehabilitation of Cerebral Palsy, Polio, Down's syndrome, Muscular Dystrophies etc., Prevention and rehabilitation of mental retardation And Behavioral disorders, Immunization programmes, early intervention in high risk babies, Genetic counseling.</p> <p>d. Extension services and mobile units: Introduction, Need, Camp approach.</p> <p>e. Vocational training in rehabilitation: Introduction, Need, Vocational evaluation, Vocational rehabilitation services.</p>		CO3
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CO-PO and PSO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	-	-	-	3	3	2	-	-	-	1
CO2	-	-	-	-	1	1	-	-	-	1
CO3	-	-	-	3	1	2	-	-	-	1
CO4	-	-	-	-	1	1	-	-	-	2
CO5	-	-	-	3	2	2	-	-	-	1

Strong contribution-3, Average contribution-2, Low contribution-1,

Suggested Readings:

Text- Books	1. Textbook of rehabilitation – Sunder
Reference Books	1. Rehabilitation Medicine by Howard A Rusk. 2. Rehabilitation Medicine by Joel A De Lisa.
Para Text	• https://www.youtube.com/watch?v=IW85btn4XnA

Recapitulation & Examination Pattern

Internal Continuous Assessment:

Component	Marks	Pattern
Mid Semester	12	As per University Pattern
Class Test	04	
Class Presentation/Discipline	04	
Assignment/ Project	04	
Bedside Behavior	02	
Attendance	04	As per Policy
Total Marks	30	

Name of the Program	Master of Physiotherapy			Year/Semester:	1st year/1st sem
Course Name	PEDAGOGY IN PHYSIOTHERAPY EDUCATION - II	Course Code:	MPT-105	Type: theory	
Credits	04			Total Sessions Hours:	60
Evaluation Spread	Internal Continuous Assessment:			End Term Exam:	
Type of Course	Compulsory	✓ Core		Creative	Life Skill
Course Objectives	<p>On completion of the study of this subject the student should be able to</p> <ul style="list-style-type: none"> • Understand the Dynamics of teaching & learning • Plan effective teaching sessions in Physiotherapy 				
Course Outcomes(CO): <i>After the successful course completion ,learners will develop following attributes:</i>					
CO1	Learners will develop the ability to select, design, and effectively utilize traditional and modern teaching aids, such as digital tools, visual aids, and hands-on resources, to enhance the teaching-learning process				
CO2	Learners will acquire the skills to analyze evaluation data to identify learning gaps, improve instructional strategies, and enhance overall educational outcomes.				
CO3	Learners will develop the ability to use continuous feedback mechanisms to foster students' critical thinking, creativity, and self-reflection for sustained academic and personal growth.				
Pedagogy	Interactive, discussion-based, student-centered, presentation.				
Internal Evaluation Mode	Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 Bed Side behavior or Interaction in Class: 02				
Session Details	Topic	Hours	Mapped CO		
Unit1	TEACHING METHODOLOGY & TEACHING AIDS Aims, Philosophy and Trend and Issues in education including – Aims, agencies, formal and in-formal education, philosophies of education (past, present & future), Role of education philosophy, Current issues and trends in education, Methods of teaching- Lecture, Demonstration, micro teaching, Discussion, Seminar, Assignment, Project, Case study. Planning for teaching- Bloom’s taxonomy of instructional objectives, Writing instructional objectives I behavioral terms, Unit planning, Lesson planning. Teaching Aids- Types of teaching aids, Principles of selection, preparation and use of audio-visual aids	13	CO1		

Unit2	MEASUREMENT AND EVALUATION Concept & Types of Measurement and Evaluation, Functions & Methods of Measurement, Characteristics of Evaluation, Types of Measuring Scales, Need for Measurement and Evaluation in Education, Placement, Diagnostic, Formative and Summative Evaluation, Specification of Objectives Steps in the Process of Evaluation. Standardized Tests Classification & its Characteristics, Psychological Testing in the Area of Intelligences, Attitude and Personality tests, Examination System: Current Strategies, Statistics in Measurement and Evaluation - Statistical Treatment of Data, Frequency Distribution and Graphic Representation of Data, Measures of Central Tendency and Variability, Co-efficient of Correlation, Percentile and Percentile Rank, Normal Probability Curve, Derived Scores (Z-score, Standard Score and T-score)	14	CO2
Unit3	CONTINUOUS AND COMPREHENSIVE EVALUATION Concept of Continuous Comprehensive Evaluation(CCE), Need, Nature, Purposes for CCE, Evaluation for Holistic Development of Children, Scholastic and Co-Scholastic Assessment, Tools for Assessing Student Performance in Scholastic Area, Miscellaneous Tools of Assessment, Tools for Assessing Co-Scholastic Aspects, Recording the Students Results, Reporting and Need of Reporting Results to Students, Parents and other Stakeholders, Awareness programmes	13	CO3

CO-PO and PSOMapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	1	1	2	2	3	2	1	2	1	1	2	2	1	2
CO2	1	1	2	2	3	2	1	2	1	2	2	1	1	2
CO3	1	1	2	2	3	2	1	2	2	1	1	1	1	2

Strong contribution-3, Average contribution-2, Low contribution-1,

Suggested Readings:

1. Developing a Pedagogy of Teacher education: Understanding Teaching and Learning about Teaching.
2. Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators
3. Language, Culture and community in Teacher Education.
4. Ebel, R.L. *Essentials of Educational Measurement*. New Jersey: Englewood Cliff.

Reference Books	Handbook of Technological pedagogical content knowledge (TPCK) for educators
ParaText	https://www.bing.com/videos/riverview/relatedvideo?&q=Developing+a+Pedagogy+of+Teacher+education

Recapitulation & Examination Pattern

Internal Continuous Assessment:

Component	Marks	Pattern
Class test	12	Contains 01 long question. question carries 04 Marks. 02 Short questions. Each question carries 02 Marks 04 multiple choice questions. Each question carries 01 Marks
Class participation or any other	04	This to be made on activities and instruction given by subject teacher.
Marks Assignments/Project:	04	Assignment to be made on topics and instruction given by subject teacher
Class Presentation:	04	This to be made on topics and instruction given by subject teacher
Bed Side behavior or Interaction in Class	02	This to be made on activities and instruction given by subject teacher.
Attendance	04	As per policy
Total Marks	30	

Name of the Program	MPT			Year/ Semester:	I year/II Sem
Course Name	Administration & Management	Course Code:	MPT-201	Type:	Theory
Credits	04			Total Sessions Hours:	60 Hours
Evaluation Spread	Internal Continuous Assessment:	30 Marks		End Term Exam:	70 Marks
Type of Course	<input type="radio"/> Compulsory	<input checked="" type="radio"/> Core	<input type="radio"/> Elective	<input type="radio"/> Life Skill	
Course Objectives	<ol style="list-style-type: none"> 1. To understand the core concepts, functions, and processes involved in effective management. 2. To learn the principles of personnel and quality management, including staffing, performance evaluation, and hospital quality assurance. 3. To understand the principles and applications of hospital administration with a focus on physiotherapy services. 4. To develop skills in strategic planning, financial management, and quality management for effective healthcare administration. 5. To learn hospital management, focusing on the planning and quality management of the physiotherapy department and hospital services. 				
Course Outcomes (CO): <i>After the successful course completion, learners will develop following attributes:</i>					
Course Outcome(CO)	Attributes				
CO1	Students will apply management functions like planning, organizing, directing, and controlling in healthcare settings.				
CO2	Students will implement quality control and assurance measures, aligning with international standards for healthcare excellence.				
CO3	Students will apply administrative principles to plan, organize, and manage physiotherapy and hospital services effectively.				
CO4	Students will develop strategies for budgeting, income generation, and designing supportive and medical services within healthcare facilities.				
CO5	Students will manage resources, ensure quality care, and implement effective staffing and record-keeping systems in a hospital setting.				
Pedagogy	Interactive, discussion-bases, student-centered , presentation.				
Internal Evaluation Mode	Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 marks				

	Bed Side behavior or Interaction in Class: 02 marks									
Session Details	Topic								Hours	Mapped CO
UNIT 1	INTRODUCTION TO MANAGEMENT Concept of management, Functions of management, Management process – planning, organization, direction, controlling decision making. Personnel management: Staffing Recruitment selection Performance appraisal, Job satisfaction. Total Quality Management: Basics of quality management Quality control & Quality assurance programme in hospitals & medical audit International quality system								12 hrs	CO1 & CO2
UNIT 2	ADMINISTRATION Principles of hospital administration and its applications to Physiotherapy, Nature and scope of administration, How to be an effective administrator, Strategic planning under hospital administration. Planning and organization, Quality management, Planning change – innovation. Financial issues-Budgeting and income generation. Planning and designing supportive services. Planning and designing ancillary and medical services. Financial / Management of a hospital.								14 hrs	CO3 & CO4
UNIT 3	HOSPITAL MANAGEMENT Planning and developing a hospital (emphasis on physiotherapy department). Organization of a hospital. Responsibilities and planning under human resource management. Staffing Recruitment selection Performance appraisal, Quality Management, Quality care delivery from:- The staff, Material management, Pharmacy, Hospital waste disposal, Hospital acquired infection, Methods of maintaining records, Quality assurance through record review and medical audit.								14 hrs	CO5

CO-PO Mapping

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	-	1	-	3	2	3	1	1	-	2
CO2	-	1	-	3	2	3	1	1	-	2
CO3	-	1	-	3	2	3	1	1	-	2
CO4	-	1	-	3	2	3	1	1	-	2
CO5	-	1	-	3	2	3	1	1	-	2

Strong contribution-3, Average contribution-2, Low contribution-1,

Suggested Readings:

Text-Books	1. Medical Ethics by C M Francis.
Reference Books	1. George V Lobo – Current Problems in Medical Ethics
Para Text	2. https://youtu.be/cYmqzdI1XOI 3. https://youtu.be/RBlhzeXpB3A 4. https://youtu.be/Szzqo_bv7SE 5. https://youtu.be/Zan5d6j0s5A?list=PLim9gWjsjN-PrliJxhTAX2H93rJi1vLNm

Recapitulation & Examination Pattern		
Internal Continuous Assessment:		
Component	Marks	Pattern
Class test	12	Contains 01 long question. question carries 04 marks 02 short questions. each question carries 02 marks 04 multiple choice questions. each question carries 01 marks
Class participation or any other	04	This to be made on activities and instruction given by subject teacher
Marks assignments/project	04	Assignment to be made on topics and instruction given by subject teacher
Class presentation	04	This to be made on topics and instruction given by subject teacher
Bed side behavior or interaction in class	02	This is to be made on activities and instruction given by subject teacher
attendance	04	As per policy
Total marks	30	

Name of the Program	MPT			Year/ Semester:	I year/II Sem
Course Name	Exercise Testing & Prescription	Course Code:	MPT-202 MPP-202	Type:	Theory & Practical
Credits	04+01			Total Sessions Hours:	80 Hours
Evaluation Spread	Internal Continuous Assessment:	30 Marks		End Term Exam:	70 Marks
Type of Course	<input type="radio"/> Compulsory	<input checked="" type="radio"/> Core		<input type="radio"/> Crd	<input type="radio"/> Life Skill
Course Objectives	<ol style="list-style-type: none"> To understand the benefits, risks, and health implications of physical activity and exercise in various populations. To learn methods for fitness testing, health screening, and risk stratification to ensure safe and effective exercise participation. To understand the principles and components of exercise prescription tailored to individual needs and environmental factors. To learn exercise prescription guidelines for special populations, including children, adolescents, geriatric individuals, and pregnant women. To understand and develop safe and effective exercise testing and prescription strategies for individuals with specific diseases and chronic health conditions. 				
Course Outcomes(CO): <i>After the successful course completion, learners will develop following attributes:</i>					
Course Outcome(CO)	Attributes				
CO1	Students will identify and mitigate risks associated with exercise, including cardiac events, and promote safe physical activity practices.				
CO2	Students will conduct and interpret health-related fitness assessments to guide exercise recommendations and interventions.				
CO3	Students will design and implement effective exercise programs using FITT principles for aerobic, muscular, and flexibility training.				
CO4	Students will adapt exercise prescriptions for diverse populations and environmental conditions, ensuring safety and efficacy.				
CO5	Students will design tailored exercise programs to improve health and quality of life for patients with cardiac, pulmonary, metabolic, neurological, and other chronic conditions.				
Pedagogy	Interactive, discussion-bases, student-centered , presentation.				
Internal Evaluation Mode	Mid-term Examination: 30 Marks Class test: 12 Marks Class participation or any other : 04 Marks Assignments/Project: 04 Marks Attendance: 04 Marks Class Presentation: 04 marks Bed Side behavior or Interaction in Class: 02 marks				

Session Details	Topic	Hours	Mapped CO
UNIT 1	<p>FITNESS TESTING AND INTERPRETATION</p> <p>Benefits and risks associated with physical activity Public health perspective for current recommendation, Health benefits of improving muscular fitness, Risk associated with physical activity and exercise, Exercise testing and the risk of cardiac events, Risks of cardiac events during cardiac rehabilitation, Prevention of exercise related cardiac events</p> <p>Exercise pre-participation health screening Health screening, Risk stratification for patients in cardiac rehabilitation and medical fitness</p> <p>Pre-Exercise evaluation: Assessment and participation instruction</p> <p>Health related physical fitness testing and interpretation: Basic Principles and Guidelines, Health Fitness Evaluation, Body Composition Assessment, Cardio-Respiratory Fitness Testing</p>	20 hrs	CO1 & CO2
UNIT 2	<p>GENERAL CONSIDERATION FOR EXERCISE PRESCRIPTION</p> <p>Clinical Exercise Testing and Interpretation: Indication, Conducting the test, Interpreting tests General principles of exercise prescription: General consideration, Components of exercise training session, Aerobic exercise – FITT, Muscular fitness – FITT, Flexibility exercise- FITT</p> <p>Exercise Prescription with Special Consideration: Adolescents Children, Geriatric, Pregnancy</p> <p>Environmental consideration for exercise prescription: Exercise in High Altitude, Exercise in Hot and Cold Environment</p>	20 hrs	CO3 & CO4
UNIT 3	<p>EXERCISE TESTING AND PRESCRIPTION FOR SPECIAL CONDITION</p> <p>Exercise Prescription for Patients with Specific Disease Exercise prescription for Cardiac disease – Inpatient and Outpatient Rehabilitation, Heart Failure, Pacemaker, Cardiac Transplantation, Peripheral Artery Disease, Exercise Prescription in Stroke, Exercise Prescription for Pulmonary Diseases – Asthma & COPD</p> <p>Exercise Prescription for Metabolic Disease Diabetes mellitus, Hypertension, Obesity</p> <p>Exercise Testing and Prescription for Population with Chronic Disease and Health Conditions Arthritis, Multiple sclerosis, Cancer, Cerebral palsy and down syndrome, Parkinson disease, Spinal cord injury, Kidney disease, HIV</p>	20 hrs	CO5

PRACTICALS	Health Screening, Health Fitness Evaluation, Body Composition Assessment, CardioRespiratory Fitness Testing, Exercise Testing and Prescription of Cardiac Diseases, Metabolic Diseases and Chronic Diseases and Health Conditions.							20		
CO-PO Mapping										
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	-	3	-	1	2	3	3	3	1
CO2	3	-	3	-	1	2	3	3	3	1
CO3	3	-	3	-	1	2	3	3	3	1
CO4	3	-	3	-	1	2	3	3	3	1
CO5	3	-	3	-	1	2	3	3	3	1
<i>Strong contribution-3,</i>			<i>Average contribution-2,</i>			<i>Low contribution-1,</i>				
Suggested Readings:										
Text-Books	<ol style="list-style-type: none"> 1. American College of Sports Medicine (2017). ACSM's Guidelines for Exercise Testing and Prescription, 10th Ed. Philadelphia: Lippincott, Williams & Wilkins. 2. Exercise Testing & Prescription by David C. Neiman, Mc. Graw Hill. 									
Reference Books	<ol style="list-style-type: none"> 1. Exercise training and exercise prescription for special cases. Theoretical basis and clinical application by James A. Skinner, Lippincott Williams and Wilkins 									
Para Text	<ol style="list-style-type: none"> 1. https://youtu.be/fp73b9J9hgs 2. https://youtu.be/0Kqo3FHKKKw 3. https://youtu.be/yAIK5xEKRA8 4. https://youtu.be/yAIK5xEKRA8 5. https://youtu.be/HfZ4YlqLSHw 									
Recapitulation & Examination Pattern										
Internal Continuous Assessment:										
Component	Marks	Pattern								
Class test	12	Contains 01 long question. question carries 04 marks 02 short questions. each question carries 02 marks 04 multiple choice questions. each question carries 01 marks								
Class participation or any other	04	This to be made on activities and instruction given by subject teacher								
Marks assignments/project	04	Assignment to be made on topics and instruction given by subject teacher								
Class presentation	04	This to be made on topics and instruction given by subject teacher								
Bed side behavior or interaction in class	02	This is to be made on activities and instruction given by subject teacher								
attendance	04	As per policy								
Total marks	30									