



INTEGRAL UNIVERSITY, LUCKNOW
INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHYSIOTHERAPY

**MASTER OF PHYSIOTHERAPY
(MPT)
CARDIOPULMONARY**

SYLLABUS

YEAR/ SEMESTER: II/III



Integral University, Lucknow

Effective from Session: 2016-17							
Course Code	PT601	Title of the Course	MANAGEMENT, EDUCATION & PROFESSIONAL ETHICS	L	T	P	C
Year	II	Semester	III	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	<p>This course deals with basic issues of management to assist the practitioner in efficiently addressing issues related to the organization and administration of a Physiotherapy Department.</p> <p>The education module of this course will provide students information on improving their teaching skills in the classroom and clinical setting. Educational theory is presented. Students develop and present educational units to audiences that may include Bachelor of Physiotherapy students or peers. It provides the student with an introduction to ethical issues facing physiotherapists. Specific topics include documentation. A variety of current issues affecting the physiotherapy profession are addressed in this course. The science of management is presented as it relates to the essential functions of the business of physiotherapy. Following are the topics to be included but not limited to:</p>						

Course Outcomes	
CO1	The students will understand about basic marketing management.
CO2	The students will understand about hospital administration in various health care setups.
CO3	The students will understand about the Philosophy of Education, curriculum and basic concept of teaching & learning.
CO4	The students will understand about the basics of pedagogy.
CO5	The students will understand about the Rules of Professional Conduct and responsibilities.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	MANAGEMENT	<ol style="list-style-type: none"> 1. Management - Functions of Management, Evolution of Management Through Scientific Management Theory, Classical Theory - Systems Approach - Contingency Approach. 2. Management Process - Planning, Organization, Direction, Controlling Decision Making 3. Introduction to Personal Management - Staffing Recruitment Selection, Performance Appraisal, Collective Bargaining, Discipline, Job Satisfaction 4. Quantitative Methods of Management - Relevance of Statistical and / or Techniques in Management. 5. Marketing - Market Segmentation, Marketing Research Production Planning Pricing, Channels of Distribution, Promotion, Consumer Behavior, and Licenses 6. Total Quality Management- Basis of Quality Management - Acid for Quality Control Quality Assurance Program in Hospitals, Medical Audit, and International Quality Systems. 	8	CO1
2	ADMINISTRATION	Hospital as an Organization - Functions and types of Hospitals selected clinical supportive and ancillary services of a Hospital, Emergency Department, Nursing, Physical Medicine & Rehabilitation, Clinical Laboratory, Pharmacy and Dietary Department. Roles of Physiotherapist, Physiotherapy Director, Physiotherapy Supervisor, Physiotherapy Assistant, Physiotherapy Aide, Occupational Therapist, Home Health Aide, Volunteer. Direct care and Referral Relationships and Confidentiality.	8	CO2
3	EDUCATION	<ol style="list-style-type: none"> 1. Philosophy of Education and Emerging issues in Education. 2. Formal, Informal and Non-Formal Education, Agencies of Education, Current issues and trends in Higher Education (Issue of Quality in Higher Education, Autonomy and Accountability, Privatizations, Professional Development of Teachers, Education of Persons with Disabilities), Need for Educational Philosophy (Some Major Philosophies, Idealism Naturalism, Pragmatism and their Implications for Education). 3. Concept of Teaching and Learning: Meaning and Scope of Educational Psychology, meaning and relationship between teaching and learning. 4. Curriculum: Meaning and Concept, Basis of Curriculum Formulation Development, Framing Objectives for Curriculum, Process of Curriculum Development and Factors Affecting Curriculum Development, Evaluation of Curriculum. 	8	CO3
4	GUIDANCE AND COUNSELING PLANNING FOR TEACHING CLINICAL EDUCATION	<ol style="list-style-type: none"> 1. Guidance and Counseling: Meaning and Concepts of Guidance and Counseling, Principles, Guidance and Counseling Services for Students and Faculty Members, Faculty Development and Development of Personnel for P.T. Services. 2. Method and Techniques of Teaching: Lecture, Demonstration, Discussion, Seminar, Assignment, Project and Case Study. 3. Planning for Teaching: Bloom's Taxonomy of Instructional Objectives, Writing Instructional Objectives in Behavioral Terms. Unit Planning and Lesson Planning. 4. Teaching Aides: Types of Teaching Aides, Principles of Selection, Preparation, and Use of Audio-Visual Aides. 5. Clinical Education: Awareness and Guidance to the Common People about Health and Diseases and Available Professional Services, Patient Education, Education of the Practitioners. 	8	CO4
5	LEGAL PROFESSIONAL ETHICAL ISSUES	<ol style="list-style-type: none"> 1. The Implications & Conformation to the Rules of Professional Conduct. 2. Code of Ethics. 3. Legal Responsibility for Their Actions in the Professional Context and Understanding the Physiotherapist's Liability And Obligations In The Case of Medical Legal Action. 4. A Wider Knowledge of Ethics Relating to Current Social and Medical Policy in the Provisions of Health Care. 5. The Role of the International Health Agencies Such as the World Health Organizations. 6. Standards of Practice for Physiotherapists, Current Issues. 	8	CO5

Reference Books:

1. Basic Management. Trivedi
2. Market Segmentation Theory. P Cotler
3. Hospital Administration. Sundaran
4. Byelaws of the Delhi Council for Physiotherapy and Occupational Therapy
5. Principles of Education – Soti Shivendra Chandra and Rajendra K. Sharma
6. Philosophical Foundation of Education – Srinibas Bhattacharya
7. Sociological Foundation of Education – Srinibas Bhattacharya
8. Psychological Foundation of Education – Srinibas Bhattacharya

e-Learning Source:

1. <https://youtu.be/scZVLCB1aX0>
2. <https://youtu.be/FpQEwbAV3Qw>
3. <https://youtu.be/D6gRTHzE2XQ>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO- PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	-	1	-	-	1	-	-	-	3	2	-	-	1	-	-	2
CO2	-	-	1	-	-	1	-	-	-	3	2	-	-	1	-	-	2
CO3	-	-	1	-	-	1	-	-	-	3	2	-	-	1	-	-	2
CO4	-	-	1	-	-	1	-	-	-	3	2	-	-	1	-	-	2
CO5	-	-	1	-	-	1	-	-	-	3	2	-	-	1	-	-	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs Common for all branches / Disciplines

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
PT601	MANAGEMENT, EDUCATION & PROFESSIONAL ETHICS	√	√	√			√	√	3,4,17



Integral University, Lucknow

Effective from Session: 2016-17							
Course Code	PT602	Title of the Course	BIOMECHANICS AND KINESIOLOGY-II	L	T	P	C
Year	II	Semester	III	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Students will be able to identify and apply principles of biomechanics while setting up individualized treatment protocols.						

Course Outcomes	
CO1	Students must know about the kinematics and kinetics of upper limb and its Pathomechanics.
CO2	Students will understand about the kinematics and kinetics of lower limb and its Pathomechanics.
CO3	Students will understand about the kinematics and kinetics of axial skeletal and its Pathomechanics.
CO4	Students will able to learn about gait and posture during human body assessment leading to various musculoskeletal disorders.
CO5	Students will understand about the Prescriptions Checkouts & Proper Fittings of orthosis and prosthesis.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	KINESIOLOGY OF UPEER LIMB	Arthrology and Arthrokinematics, Kinetics, Pathokinesiology 1. Shoulder 2. Elbow 3. Wrist and Hand	8	CO1
2	KINESIOLOGY OF LOWER LIMB	Arthrology and Arthrokinematic, Kinetics, Pathokinesiology 1. Hip 2. Knee. 3. Ankle and Foot	8	CO2
3	KINESIOLOGY OF SPINE	Arthrology and Arthrokinematic, Kinetics, Pathokinesiology 1. Cervical 2. Thoracic 1. Lumbar-sacral.	8	CO3
4	GAIT AND POSTURE	1. Gait Parameter- Kinetic, Kinematic, Time – Space, Pathological Gait –Running, Stair Climbing, Changes in Gait Following Various Surgeries /Diseases / Disorders. 2. Posture- Standing, Sitting, Pathokinesiology	8	CO4
5	BIOMECHANICS OF ORTHOSIS & PROSTHESIS	1. Orthosis of Upper Limb, 2. Orthosis of Lower Limb, 3. Orthosis of Spine, 4. Bioengineering of Prosthesis, Prescriptions Checkouts & Proper Fittings, Biomechanical Principles governing them of Prosthetics, Aids used in Management of Disability.	8	CO5

Reference Books:	
1.	Biomechanics & Clinical Kinesiology-Cynthia Norkin
2.	Basic Biomechanics. Nordin.
3.	Basic Biomechanics & clinical Kinesiology. Otis
4.	Biomechanics of Human Movement. D Winter
5.	Kinesiology: Application to Pathological Motion. GL Soderberg
e-Learning Source:	
1.	https://www.youtube.com/watch?v=r7_TMkY9I2g
2.	https://www.youtube.com/watch?v=y2JZEzTG_BI
3.	https://www.youtube.com/watch?v=6-nSvntEANY
4.	https://www.youtube.com/watch?v=cvZaIVARWpk
5.	https://www.youtube.com/watch?v=0vvpn9cCVNI

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	2	2	2	1	2	1	-	-	-	3	3	2	2	2
CO2	3	3	2	2	2	2	1	2	1	-	-	-	3	3	2	2	2
CO3	3	3	2	2	2	2	1	2	1	-	-	-	3	3	2	2	2
CO4	3	3	2	2	2	2	1	2	1	-	-	-	3	3	2	2	2
CO5	3	3	2	2	2	2	1	2	1	-	-	-	3	3	2	2	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs Common for all branches / Disciplines

Course Code	Course Title	Attributes							SDGs No.	
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics		
PT602	BIOMECHANICS AND KINESIOLOGY-II	√	√	√				√	√	3,4,9



Integral University, Lucknow

Effective from Session: 2016-17							
Course Code	PT 603C	Title of the Course	PHYSIOTHERAPY-II (CARDIOPULMONARY SPECIFIC PHYSICAL THERAPY AND REHABILITATION)	L	T	P	C
Year	II	Semester	III	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	<p>1. After a review of the latest theories of cardiopulmonary conditions, and recovery of function, students are provided with a conceptual framework for clinical practice and a practical framework for understanding and examining Impairments in patients with cardiopulmonary conditions deficits.</p> <p>2. Armed with a solid foundation, students then build a thorough understanding of motor control issues as they relate to posture and balance, mobility, and upper extremity function. For each of these three key areas, the authors discuss normal control processes, age-related issues, abnormal function, and the clinical applications of current research.</p>						

Course Outcomes	
CO1	An overview of Cardiopulmonary anatomy & Physiology: Understanding and importance of cardiopulmonary anatomy and physiology about structure, course and function of alveoli, different tracts of respiratory pathways and regulations of cardiopulmonary system.
CO2	Congenital & Childhood Disorders: Understanding about etiology, clinical presentation and management of congenital & pediatric disease of cardiopulmonary conditions.
CO3	Pulmonary conditions: Understanding about etiology, clinical presentation and management of respiratory & infectious disease of pulmonary system & its complications.
CO4	Diseases of the Cardiopulmonary system and its management: Understanding about etiology, clinical presentation and management of Cardiopulmonary & neuromuscular diseases.
CO5	Cardiothoracic Surgery: Understanding about traumatic injury of lungs and Heart with its complication and their management.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	PRE-TEST CLINICAL EVALUATION IN EXERCISE TESTING	<ol style="list-style-type: none"> 1. Medical history, physical examination, and laboratory tests 2. Alternative stress tests 3. Blood pressure 4. Cholesterol and lipoproteins 5. Blood profile analyses 6. Pulmonary function 7. Contraindication of exercise testing 8. Informed consent 9. Patient instruction 	8	CO 1
2	CARDIOPULMONARY FITNESS TESTING AND INTERPRETATION	<ol style="list-style-type: none"> 1. Purpose of fitness testing 2. Basic principles and guidelines 3. Body composition 4. Concept of maximal oxygen uptake 5. Maximal verses submaximal exercise testing 6. Modes of testing 7. Cardiopulmonary test sequence and measures 8. Test termination criteria 	8	CO 2
3	MAJOR MANIFESTATIONS OF HEART DISEASE & CARDIAC REHABILITATION	<p>Development, Intervention, and Prevention of Coronary Artery Disease.</p> <ol style="list-style-type: none"> 1. Atherosclerosis <ol style="list-style-type: none"> a) Process of Plaque Formation b) Acute Coronary Syndromes 2. Contemporary Revascularization Procedures <ol style="list-style-type: none"> a) Coronary Arteries and CAD b) Coronary Artery Bypass Surgery c) Percutaneous Coronary Interventions 3. Efficacy of Secondary Prevention and Risk Factor Reduction <ol style="list-style-type: none"> a) Cardiac Rehabilitation b) Prescription Drug Therapies c) Smoking d) Dyslipidemia e) Diabetes Mellitus f) Obesity g) Hypertension h) Sedentary Lifestyle i) Psychosocial Dysfunction j) Other Risk Factors k) Optimizing Secondary Prevention 4. Psychosocial Issues and Strategies <ol style="list-style-type: none"> a) Psychosocial Evaluation b) Psychosocial Interventions c) Promoting Adherence. 	8	CO 3
4	ROLE OF EXERCISE IN HEART DISEASE	<ol style="list-style-type: none"> 1. Exercise and the Coronary Heart Disease Connection <ol style="list-style-type: none"> a) Observational Data b) Cardiorespiratory Fitness and Coronary Death c) Exercise Training in Established Coronary Disease d) Risks of Acute Exercise e) Potential Mechanisms of Exercise Benefit 2. Cardiovascular and Exercise Physiology <ol style="list-style-type: none"> a) Energy Systems and Cellular Respiration b) Cardiopulmonary Response c) Perturbation of the Exercise Response in CVD d) Adaptations to Exercise Training. 	8	CO 4
5	ELECTROCARDIOGRAPHY IN HEART DISEASE	<p>Electrocardiography in Heart Disease</p> <ol style="list-style-type: none"> a) Electrodes and Leads b) Supraventricular Arrhythmias c) Ventricular Arrhythmias. d) Atrioventricular (AV) Blocks e) Bundle Branch Blocks . f) Myocardial Infarction and Ischemia. g) ST Segment Deviations During Exercise. h) ECG Monitoring Issues During Exercise. 	8	CO 5

Reference Books:

1. Physiotherapy for Respiratory and Cardiac Problems - by Jennifer A. Pryor, S. Ammani Prasad
2. Lifestyle Management for Patients With Coronary Heart Disease; by Houston Miller
3. Training Techniques In Cardiac Rehabilitation; by Fardy, Paul
4. Exercise Prescription for the High-Risk Cardiac Patient; by Squires, Ray
5. Physical Activity and Cardiovascular Health; by Leon, Arthur,
6. Advances in Cardiopulmonary Rehabilitation: by Jobin, Jean
7. Coronary Artery Disease; Author: Brubaker, Peter
8. Advancing the Frontiers of Cardiopulmonary Rehabilitation; by Jobin, Jean
9. Exercise and Circulation in Health and Disease; by Saltin, Bengt

e-Learning Source:

1. https://www.youtube.com/watch?v=AOYChv_270Q
2. https://youtu.be/gtAdlc_uTvA
3. <https://youtu.be/UfnKkdcvCMg>
4. https://youtu.be/T3ua_XrIomk

Course Articulation Matrix: (Mapping of COs with POs and PSOs)

PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	3	3	3	2	2	1	1	-	-	-	2	1	1	2	2
CO2	2	3	3	3	3	2	2	1	-	-	-	-	3	2	1	2	2
CO3	3	3	2	2	3	2	2	1	1	-	1	-	3	1	2	3	2
CO4	2	3	3	2	3	2	2	1	2	1	2	1	2	3	1	2	2
CO5	2	2	3	1	3	2	1	-	-	-	-	-	2	1	-	1	1

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation**Attributes & SDGs**

Course Code	Course Title	Attributes							SDGs No.
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
PT603C	PHYSIOTHERAPY –II (C)	√	√	√	√		√	√	3,4



Integral University, Lucknow

Effective from Session: 2016-17							
Course Code	PT607	Title of the Course	CLINICAL POSTING	L	T	P	C
Year	II	Semester	III	0	0	14	7
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	Students will engage in clinical practice in Physiotherapy departments in the musculoskeletal, neurology, cardiopulmonary, sports settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.						

Course Outcomes	
CO1	To learn the punctuality and interaction with colleague and supporting staff during clinical training.
CO2	To develop assessment skills.
CO3	To develop appropriate treatment protocol.
CO4	To understand the importance of documentation of the case record and case presentation.
CO5	To develop discipline and improve overall quality of clinical work.

CLINICAL POSTING ASSESSMENT FORM

Name of Student:		Session:	
Enrolment Number:		Date:	
Name of Subject:	Clinical Posting	Subject code:	PT607
Topics:			

S. No.	Point to be Considered	Max. Marks	Marks Obtained
1.	Punctuality	5	
2.	Interaction with colleagues and supporting staff	5	
3.	Maintenance of case records	5	
4.	Presentation of case during rounds	5	
5.	Investigation work up	5	
6.	Bedside Manners	5	
7.	Rapport with patients	5	
8.	Treatment approach & technique	5	
9.	Discipline	5	
10.	Overall quality of clinical work	5	
TOTAL SCORE		50	

(Name and signature of Incharge)

(Head, Physiotherapy)

GUIDELINES FOR CLINICAL TRAINING PROGRAM

The students of Post Graduate Physiotherapy program must spend above mentioned allotted time period in the hospital based clinical training for specified clinical experiences to meet the objectives of the training program. This period of practical and theoretical experience will enable the students to acquire competency and experience to perform as an independent practice and will enable to adjust to the real practical life in different units in the hospital settings.

S.No.	Program Name	Year/Semester	Duration of Training
1.	MPT	Ist Year/ Ist Semester	4 Months
2.		Ist Year/ IInd Semester	4 Months
3.		IInd Year/ 3rd Semester	4 Months
4.		IInd Year/ 4th Semester	4 Months

By the successful completion of this clinical training period, the student is expected to fulfil the objectives of the program and will be examination as given below:

S.No.	Program Name	Year/Semester	Case file	Practical on Case	Voice/Viva	Attendance
1.	MPT	Ist Year/ Ist Semester	20 Marks	25 Marks (1 Long Case and 2 Short Case)	50 Marks	5 Marks
2.		Ist Year/ IInd Semester				
3.		IInd Year/ 3rd Semester				
4.		IInd Year/ 4th Semester				

EVALUATION OF CLINICAL POSTING

MPT- Students has to prepare 1 long case and 2 short cases during their clinical posting. The evaluation for internal clinical examination of 100 marks will be distributed:

Cases during clinical posting=**45 marks**.

Viva voce =**50 marks**

Attendance=**5 marks**

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																		
PO-PSO CO	POs												PSOs					
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	2	3	3	2	3	2	3	1	2	1	-	-	3	2	3	3	2	
CO2	3	3	3	3	2	2	3	2	1	3	-	-	2	2	3	2	3	
CO3	3	3	3	3	2	2	3	2	1	3	-	-	3	2	2	2	3	
CO4	3	3	3	3	2	2	3	2	1	3	-	-	2	3	2	2	3	
CO5	3	3	3	3	2	2	3	2	1	3	-	-	3	2	3	3	2	

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs Common for all branches / Disciplines

Course Code	Course Title	Attributes							SDGs No.
PT607	CLINICAL POSTING	Emplo yability	Entrepre neurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4,11
		√	√	√	√		√	√	



INTEGRAL UNIVERSITY, LUCKNOW

INTEGRAL INSTITUTE OF ALLIED HEALTH SCIENCES

DEPARTMENT OF PHYSIOTHERAPY

MASTER OF PHYSIOTHERAPY

(MPT)

CARDIOPULMONARY

SYLLABUS

YEAR/ SEMESTER: II/IV



Integral University, Lucknow

Effective from Session: 2016-17							
Course Code	PT 608C	Title of the Course	PHYSIOTHERAPY-III (CARDIOPULMONARY REHABILITATION & HEALTH PROMOTION)	L	T	P	C
Year	II	Semester	IV	3	1	0	4
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	<p>1. After a review of the latest theories of cardiopulmonary conditions, and recovery of function, students are provided with a conceptual framework for clinical practice and a practical framework for understanding and examining Impairments in patients with cardiopulmonary conditions deficits.</p> <p>2. Armed with a solid foundation, students then build a thorough understanding of motor control issues as they relate to posture and balance, mobility, and upper extremity function. For each of these three key areas, the authors discuss normal control processes, age-related issues, abnormal function, and the clinical applications of current research.</p>						

Course Outcomes	
CO1	Understanding about the assessment, diagnosis, exercise prescription and resistance training of cardiopulmonary diseases.
CO2	Understanding and special considerations for evaluations, exercise testing, prescriptions and training of cardiopulmonary conditions.
CO3	Pulmonary rehabilitation: understanding about the rehabilitations and psychosocial assessment of respiratory conditions.
CO4	Specific pulmonary rehabilitation: Understanding about Specific approaches for pulmonary rehabilitations of respiratory diseases.
CO5	Post surgical pulmonary rehabilitation: Understanding about the post surgical rehabilitative support of respiratory diseases.

Unit No.	Title of the Unit	Content of Unit	Contact Hrs.	Mapped CO
1	INTERPRETATION OF CLINICAL TEST DATA	1.Exercise testing as a screening tool for coronary artery disease 2.Interpretation of response to graded exercise testing 3.Maximal oxygen uptake: Heart rate response, Blood pressure response, ECG wave forms. 4.Diagnostic value of exercise testing: Sensitivity, Specificity, Predictive value, Comparisons with imaging stress tests, Prognostic application of exercise test5.Interpretation of exercise tests in pulmonary patients. 6.Exercise prescription in cardiovascular rehabilitation: Mode, Intensity, Frequency, Duration, Rate of Progression, Training Specificity, Arm Exercise Prescription, and Resistance Training. 7.Exercise testing as a screening tool for coronary artery disease	8	CO 1
2	OUTCOME MEASURES IN CARDIAC REHABILITATION	Special Considerations 1.Women: Treatment of Coronary Heart Disease, Evaluation of Chest Pain, Cardiac Risk Factors, Non-invasive stress testing, Exercise Benefits, Enrollment and Adherence in Exercise Programs. 2. Older Patients: Cardiovascular Physiologic Changes of Aging, Coronary Heart Disease Risk Factor Management, Exercise Training. 3. Diabetes Mellitus: Classification, Diagnosis, and Screening, Complications, Medical Management, Exercise Prescription 4. Chronic Heart Failure: Exercise Benefits, Exercise Testing, Exercise Training. 5. Heart Transplantation: Physiology of the Denervated Heart, Exercise Responses, Evidence for Reinnervation, Exercise Training.	8	CO 2
3	PULMONARY REHABILITATION	1.Overview: Definition and Scope of Pulmonary Rehabilitation, The Burden of Chronic Respiratory Disease, A Brief History of Pulmonary Rehabilitation, Essential Components of Pulmonary Rehabilitation, Prevention, Patient Goals, Program Goals. 2. Selection and Assessment of the Pulmonary Rehabilitation Candidate: Patient Selection, Patient Assessment, Goal Development, Rehabilitation Potential. 3.Patient education and skills training: Education process, Focus and Scope of Educational and Skills Training 4.Exercise Assessment and Training: Exercise Assessment, Functional Performance Assessment, Exercise Training, Emergency Procedures 5.Psychosocial Assessment and Intervention: Adjustment Process, Psychosocial Assessment, Psychosocial Interventions.	8	CO 3
4	SPECIFIC PULMONARY REHABILITATION	Disease-Specific Approaches in Pulmonary Rehabilitation-1.Asthma 2.Cystic Fibrosis 3.Interstitial Lung Disease 4.Obesity-Related Respiratory Disorders 5.Pulmonary Hypertension 6.Neuromuscular and Chest Wall Disorders	8	CO 4
5	POST SURGICAL PULMONARY REHABILITATION	Mode, Intensity, Frequency, Duration, Rate of Progression Training Specificity, Arm Exercise Prescription, Resistance Training- 1.Lung Volume Reduction Surgery 2.Lung Transplantation 3.Lung Cancer and Thoraco-abdominal Surgery 4.Mechanical Ventilation 5.Pediatric Patients With Respiratory Disease	8	CO 5

Reference Books:

1. Physiotherapy for Respiratory and Cardiac Problems - by Jennifer A. Pryor, S. Ammani Prasad
2. Lifestyle Management for Patients With Coronary Heart Disease; by Houston Miller
3. Training Techniques In Cardiac Rehabilitation; by Fardy, Paul
4. Coping With Heart Illness Video Pkg (NTSC); by Human Kinetics
5. Exercise Prescription for the High-Risk Cardiac Patient; by Squires, Ray
6. Physical Activity and Cardiovascular Health; by Leon, Arthur,
7. Advances in Cardiopulmonary Rehabilitation: by Jobin, Jean
8. Coronary Artery Disease; Author: Brubaker, Peter
9. Advancing the Frontiers of Cardiopulmonary Rehabilitation; by Jobin, Jean

e-Learning Source:

1. <https://www.youtube.com/watch?v=BLEk148T-gk>
2. <https://youtu.be/wNuzCsJXvnk>
3. <https://youtu.be/bE33Wmcz9zQ>
4. <https://youtu.be/NHNSB3q4x2g>

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	2	1	1	1	-	-	-	3	1	1	2	2
CO2	2	2	3	3	3	2	3	2	-	-	-	-	2	1	1	2	2
CO3	3	3	3	3	3	2	3	3	2	-	2	2	3	3	2	1	2
CO4	3	3	3	3	3	2	3	3	2	-	2	2	3	3	2	1	2
CO5	3	3	3	3	3	2	3	3	2	-	2	2	3	3	2	1	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation
Attributes & SDGs

Course Code	Course Title	Attributes							SDGs No.
PT608C	PHYSIOTHERAPY-III (C)	Empl yability	Entrep neurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	3,4
		√	√	√	√		√	√	



Integral University, Lucknow

Effective from Session: 2016-17							
Course Code	PT610	Title of the Course	Dissertation	L	T	P	C
Year	II	Semester	IV	0	9	0	9
Pre-Requisite	Nil	Co-requisite	Nil				
Course Objectives	The main objective of this course is to develop independence in the research skills and to develop the research interpretation skill. To promote education and research in physiotherapy and provide academic and professional excellence for immediate productivity in hospital, governmental, or clinical settings for an ultimate benefit of society and environment.						

Course Outcomes	
CO1	The students will be able to perform literature review, identify state of the art in that field.
CO2	The students will be able to define the problem and develop synopsis of a defined research problem
CO3	The students will be able to establish a methodology using advanced tools / techniques for solving the problem including project management and finances.
CO4	The students will be able to prepare the research report and its oral demonstrations.
CO5	The students will be gain practical experience in project management in biotechnological industry, be able to use various techniques in contemporary research for project, perform numerical analysis and interpret the results

Name of Student:		Session:	
Enrollment Number:		Date:	
Name of Subject:	Dissertation	Subject code:	PT610
Topics:			

S. No.	Evaluation	Point to be Considered	Max. Marks	Marks Obtained
1.	On the basics of continuous assessment (10 Marks)	Periodic Consultation with Guide	2	
2.		Regular collection of Data with the consultation of guide.	2	
3.		Command of the topic & presentation skill	2	
4.		Methods, analysis, dissuasion and Conclusions	2	
5.		Contribution to knowledge and thesis structure	2	
Review all heading				
1.	On the basics of External Evaluators at the time of End Sem Examination.	Introduction	3	
2.		Aims, objectives & research hypothesis	3	
3.		Review of literature	3	
4.		Material & Methods	3	
5.		Data analysis & results	3	
6.		Discussion, lamination & future study	3	
7.		Conclusion, signification.	3	
8.		Bibliography	3	
9.		Tables, graph, diagram & Annexure (if any) Statistical Analysis Master Chart	3	
10.		The deface of study	3	
Total Score			40	

Note: Evaluation of Dissertation of MPT- Students has to prepare oral presentation; each student will be assessed in a 20 minutes time (15 min for presentation & 5 min for discussion). The evaluation of dissertation by external examiner with proper approval of concern authorities. The end semester examination will be 40 marks as external evaluations and 60 marks will be by the internal examiner (continuous assessment):

Comments/Suggestions:

(Name and signature of Incharge)

(Head, Physiotherapy)

Course Articulation Matrix: (Mapping of COs with POs and PSOs)																	
PO-PSO CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4	PSO5
	CO1	2	3	3	2	3	2	3	1	2	1	-	-	3	2	3	3
CO2	3	3	3	3	2	2	3	2	1	3	-	-	2	2	3	2	3
CO3	3	3	3	3	2	2	3	2	1	3	-	-	3	2	2	2	3
CO4	3	3	3	3	2	2	3	2	1	3	-	-	2	3	2	2	3
CO5	3	3	3	3	2	2	3	2	1	3	-	-	3	2	3	3	2

1- Low Correlation; 2- Moderate Correlation; 3- Substantial Correlation

Attributes & SDGs Common for all branches / Disciplines

Course Code	Course Title	Attributes						SDGs No.	
		Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value		Professional Ethics
PT610	Dissertation	√	√	√	√	√	√	√	3,4,9, 17

