

Branch Name:	I MPT
Program Code:	PT203
Course Title:	Physical and Functional Diagnosis in Cardio Respiratory Condition
Course Code:	2PT2030101
Pre-requisite Course:	Physical and Functional Diagnosis

Teaching and Examination Scheme:

Teaching Scheme				Evaluation Scheme (Marks)				
Lecture (L)	Practical (P)	Credit	Total Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
120	120	8+4	12	100	-	-	-	100

Course Outcomes:

1. Elicit and interpret clinical signs and symptoms of cardio-vascular and pulmonary diseases & interpret clinical tests and special investigations commonly used in the diagnosis of conditions.
2. Generate a primary diagnosis and a list of differential diagnoses consistent with typical presentations.
3. Identify normal & pathological anatomy on diagnostic images in various cardio-vascular and pulmonary disorders.

Contents: MPT (R) 104: Clinical, Physical and Functional diagnosis in Cardio- Pulmonary Physiotherapy (CCPFD)

SECTION A

CCPFD 1.1. ICF conceptual frame work

CCPFD 1.2. Importance of assessment & evaluation, Outlines of principles and Methods of evaluation Need and types of Documentation

CCPFD 1.3. Critical decision making and selection of outcome measures in cardiopulmonary Physiotherapy.

CCPFD 1.4. GENERAL: Review of Anatomy, Embryology and Epidemiology of cardio-vascular, pulmonary and lymphatic pulmonary system.

CCPFD 1.5. Role of cardio respiratory therapist in patient assessment.

1. Patient clinician interaction and communication with assessment findings.
2. Confidentiality, concern and universal precautions.
3. A detailed and comprehensive cardio-respiratory health history.
4. Assessment standards, common scales, questionnaire indices used for patients with cardio-pulmonary dysfunction.

CCPFD 1.6. Detailed assessment of cardio- vascular and pulmonary symptoms (dyspnea, Cough, sputum production, hemoptysis, clubbing, cyanosis, chest pain, syncope, fever, night sweating, headaches, altered sensorium, personality changes.

CCPFD 1.7. Vital signs assessment

1. Obtaining vital signs, clinical impressions
2. General clinical presentation
3. Temperature
4. Pulse including the peripheral pulses
5. Blood pressure
6. Respiratory rate

CCPFD 1.8. Fundamentals of physical examination with diagnosis in cardiovascular and respiratory Physiotherapy

1. Examination of head and neck
2. Lung topography – thoracic cage landmarks
3. Examination of Thorax/ pulmonary system
4. Examination of Precordium/cardiac system
5. Examination of Abdomen
6. Examination of Extremities

CCPFD 1.9. Assessment of neonatal and paediatrics patients – new born, critically ill infants, older infants and child

CCPFD 1.10. Comprehensive geriatric assessment – age related sensory deficits, cardio-respiratory deficits and diagnostic tests, standard scales and questionnaires used in geriatric assessment

CCPFD 1.11. Nutritional assessment of patients with cardio- respiratory diseases

CCPFD 1.12. Fitness assessment

1. Anthropometric and biophysical measurement and body composition
2. Flexibility tests and standards
3. Muscle strength and standard
4. Endurance tests and standards
5. Agility tests and coordination tests

CCPFD 1.13. Exercise testing and standardization and interpretation

1. TMT protocols- Maximal and submaximal protocols
2. Field protocols
3. Bicycle protocols
4. Step test protocols
5. Six minute walk test
6. Protocols for pediatric and geriatric population

CCPFD 1.14. Interpretation and clinical relevance of investigations in cardio- pulmonary Physiotherapy

1. Clinical laboratory studies – hematology, microbiology, urine analysis, histology, pathology
2. Pulmonary function tests – normal values
3. Spirometry, arterial blood gas analysis and its interpretation in cardio – respiratory Physiotherapy, capnography and pulse oximetry and its relevance in cardio-pulmonary Physiotherapy
4. Clinical application of chest radiograph – chest x-ray, examination, views; computed tomography, magnetic resonance imaging, lung scans - PET scan. Evaluation of chest radiography – clinical and radiographic findings in cardiopulmonary disorders and its relevance cardio-pulmonary Physiotherapy
5. Laboratory and bedside interpretation of ECG findings – interpretation of normal and abnormal ECGs and its importance in cardio-respiratory physiotherapy. and various ECG patterns in cardiac and lung disease

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| <p>6. Cardio respiratory monitoring in critically ill patients including patients with artificial airways</p> <ul style="list-style-type: none">I. Ventilator assessment and evaluation of oxygenation in ICUII. Assessment of cardiac output in ICUIII. Assessment of haemodynamic pressures in ICUIV. Clinical diagnosis in cardio- respiratory disorders in intensive care. |
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SECTION -B:

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| <p>CCPFD 2.1. Blood flow studies-arteriography, venography, Color Doppler, ANS testing and Interpretation used in cardio- respiratory Physiotherapy and edema evaluation and interpretation.</p> <p>CCPFD 2.2. Cardio respiratory assessment and diagnosis of patient on mechanical ventilator and interpretation of graphical forms, weaning modes and indices</p> <p>CCPFD 2.3. Risk factor stratification, disability evaluation with reference to cardio vascular and pulmonary disorders</p> <p>CCPFD 2.4. Psychological evaluation with reference to stress and anxiety in cardio-pulmonary disorders, Evaluation of stress and anxiety using various scales and questionnaires</p> <p>CCPFD 2.5. Outcome measures used in Cardio – vascular and pulmonary Physiotherapy</p> <p>CCPFD 2.6. Cardio-pulmonary Exercise Testing, VO₂ max, METs – its importance in calculating energy expenditure and physical activities</p> <p>CCPFD 2.7. Calculating energy expenditure using calorimetry method, various formulae and equations with emphasis on its importance in prescribing exercise in various patient population</p> <p>CCPFD 2.8. Evaluation and diagnosis of sleep and breathing disorders.</p> |
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Recommended books for CCPFD:

1. O'Sullivan, S. B., Schmitz, T. J., & Fulk, G. D. Physical Rehabilitation, 7th Edition, F.A. Davis Company.
2. Frownfelter, D., & Dean, E. Cardiovascular and Pulmonary Physical Therapy: Evidence and Practice, 5th Edition, Elsevier.
3. Hillegass, E. (Ed.) Essentials of Cardiopulmonary Physical Therapy, 5th Edition, Elsevier.
4. Pal, P. M., & Jain, R. K. Textbook of Cardiopulmonary Physiotherapy, Jaypee Brothers Medical Publishers.
5. Jain, M. K., & Singh, R. P. Cardiorespiratory Physiotherapy, CBS Publishers & Distributors.
6. Courtney, K., & Pryor, J. Cardiorespiratory Physiotherapy: Adults and Paediatrics, 5th Edition, Elsevier.
7. Guyton, A. C., & Hall, J. E. Textbook of Medical Physiology, 14th Edition, Elsevier.
8. West, J. B. Respiratory Physiology: The Essentials, 10th Edition, Wolters Kluwer.
9. Harrison's Principles of Internal Medicine, 20th Edition, McGraw-Hill Education.
10. American College of Sports Medicine (ACSM) Guidelines for Exercise Testing and Prescription, 11th Edition.

List of Open-Source Software/learning website:

- k-hub.in e library/A single platform for all e resources (K-hub, E Resource)
 - User Name- KB4605VNG
 - Password- BL@69BX!
- knowledgegainer.delnet.in (Delnet, E Resource)
 - User Name-gjspum
 - Password- spu10924