

Subject Title:	PT in Cardio Respiratory Condition (ELECTIVE II)
Subject Code:	1PT2030202
Year:	Second Year MPT
Pre-requisite Subject	- NONE -

Objectives of course:

1. The extension of knowledge, expertise and skills towards the Cardio-Respiratory Conditions in improvement of professional practice.
2. It provides advanced study and reflection on practice in various Cardio-Respiratory Conditions in the physiotherapy practice by both drawing on a student's professional experience and expertise, and extending it.

Subject Contents (150 Hours)

Clinical Cardio-Pulmonary Conditions

Causes, clinical features, pathophysiology, general investigation, Medical and surgical management of the below mentioned conditions

1 Respiratory Conditions:

- a. Obstructive lung disease: Asthma, Chronic bronchitis, emphysema, Bronchiectasis, Cystic fibrosis, etc.
- b. Restrictive lung disease: Atelectasis, pneumonia, Pleural effusion, Pneumothorax, ARDS,
- c. Suppurative lung diseases like lung abscess, etc.
- d. Occupational lung diseases-occupational asthma, inhalation injuries, etc.
- e. Chest trauma
- f. Chest wall deformities
- g. Lung cancers
- h. Pediatric/Neonatal Pulmonary diseases
- i. Sleep apnea
- j. Respiratory failure

2 Cardio Vascular Conditions:

- a. Pediatric Cardio-vascular disorder:

Fallot's tetralogy, Co-arcuation of aorta, Patent ductus arteriosus, Arterial septal defect, ventricular septal defect, Transposition of great vessels.

- b. Acquired heart diseases:

Coronary Artery Diseases, Cardiac arrhythmias, Valvular heart diseases, Cardiomyopathies,

- c. Myocardial infarction

- d. Hypertension and diabetes
- e. Diseases of the myocardium
- f. Pericardial diseases
- g. Tumors of the heart
- h. Peripheral vascular diseases: Definition, Etiology, Clinical features, signs and symptoms, complications, management and treatment of following diseases : Arteriosclerosis, Atherosclerosis, Aneurysm, Buerger's disease, Raynaud's Disease, Thrombophlebitis, Deep Vein Thrombosis, Pulmonary Embolism, Varicose Veins.
- i. Cardiac arrest.

3 Physiotherapy Interventions in Cardio-Pulmonary Conditions:

Student should be able to plan appropriate treatment regime based on the knowledge of various subjects learned during the two year programme for the below mentioned conditions. Additionally, emphasis should be on special techniques/ approaches like Suctioning, Chest PNF, Inhalation and Humidification therapy, FET's. Student should update himself/ herself with latest advancement in the therapeutic approaches.

- 1. Cardio respiratory physiotherapy management principles, pre and post surgical intervention including critical care.
- 2. Cardio-Respiratory physiotherapeutic techniques in adult and pediatric:
 - a. To improve lung volumes
 - b. To decrease work of breathing
 - c. To clear secretions
 - d. To Increase exercise tolerance
 - e. To improve ventilation and gas exchange
 - f. To Improve ADL demands
- 3. Physiotherapy management in Obstructive and Restrictive lung diseases.
- 4. Post operative management of Respiratory conditions
- 5. Pulmonary rehabilitation
- 6. Adjuncts to chest PT
- 7. Post operative management of cardiac conditions
- 8. PT management in acquired and congenital heart diseases
- 9. Cardiac rehabilitation

10. CPR
11. PT management in Peripheral vascular diseases
12. Cardiac transplantation
13. Lung transplantation
14. Respiratory and cardiology pharmacology in brief.
15. Surgical interventions in brief: Cardio-Respiratory and Peripheral Vascular Disorder.

4 ICU Management

1. Intensive Care unit: concept and set up, equipments for advanced methods of resuscitation, monitoring and patient management
2. Artificial airways, ventilators, pulse oximetry, O₂ therapy
3. PT management in ICU
4. Transfer and turning of patient
5. Common complications in ICU
6. PICU and NICU management