

Course Title	CARDIOVASCULAR AND PULMONARY SCIENCE II
Course Code	PT704
Course Credit	Lecture:4
	Practical/Clinical Training:2
	Total: 6

Course Objective

1. Understand clinical aspects of various pulmonary conditions
2. Evaluate and manage various cases of pulmonary conditions.
3. Design pulmonary rehabilitation for the cases.
4. Appreciate role of cardiovascular and pulmonary fitness in musculoskeletal and neuromuscular sciences

Detailed Syllabus

Sr. No.	Name of chapter & Contents	Hours Allotted
Section – I		
1.	Introduction to Pulmonary System diseases and disorders	2
2.	Definition, Classification, etiology, pathogenesis, clinical features, clinical investigation and complications of the following conditions. Medical, surgical and physiotherapy management (assessment and treatment) including Pulmonary Rehabilitation of...	
	Inflammatory lung disease	
	Asthma	4
	Idiopathic pulmonary fibrosis, Cystic Fibrosis	2

Emphysema, Chronic Bronchitis , (Chronic Obstructive Pulmonary Disorder)	6
Acute Respiratory Distress Syndrome	4
Restrictive lung diseases,	
Pneumoconiosis , Asbestosis	3
Radiation fibrosis rheumatoid arthritis, Hypersensitivity pneumonitis	3
Idiopathic interstitial pneumonia, Sarcoidosis	2
Upper respiratory tract infection	
Pharyngitis and Laryngitis	2
Common Cold, Sinusitis,	5
Tonsillitis, Otitis Media,	3
Lower respiratory tract infection	
Pneumonia, Streptococcus Pneumonia and Pneumocystis Pneumonia.	6
Tuberculosis Severe Acute Respiratory Syndrome	5
Malignant and Benign tumors	
Small cell lung cancer, Non-small cell lung cancer, carcinoid, Kaposi's sarcoma, melanoma,	3
Lymphoma, Pleural Mesothelioma, Pulmonary hematoma	3
Pleural cavity disease	
Pneumothorax, Tension Pneumothorax	3
Pleural Mesothelioma, Pleural Effusion,	3
Pulmonary vascular diseases,	
Pulmonary embolism, Pulmonary arterial hypertension,	1
Pulmonary oedema, Pulmonary haemorrhage	1
Pulmonary haemorrhage , Wegener's Granulomatosis	1
Goodpasture's syndrome	1
Neonatal diseases	3

	Pulmonary diseases may also impact newborns, such as pulmonary hyperplasia	
	SECTION-II	
3.	Pulmonary Rehabilitation - Various phases, protocol, selection of exercises, etc....	12
4.	Introduction to Cardiovascular and Pulmonary Fitness assessment and training including Exercise prescription for various populations with or without diseases and disorders	
	Sedentary, Normal, Athlete,	8
	Children, including Obesity, DM, COPD, etc...	6
	Adolescent, Adult	4
	Women	4
	Geriatric	6
5.	Importance of Cardiovascular and Pulmonary fitness in musculoskeletal, neuromuscular Rehabilitation program.	8
6.	Advance skills of assessment and treatment in CVP e.g. biofeedback, high altitude training, underwater training, etc...	6
7.	Recent advances in Cardio respiratory physiotherapy Outcome / evidence based practice	8

Instructional Method:

1. Teaching and training sessions will be carried out through active learning. Active participation and contribution in group discussion and seminars are mandatory for students
2. Lectures to be conducted with the help of black board and/or audio-visual aids that includes multi-media projector, OHP, etc.
3. Problem based and/or case based assignments based on course content will be given to the students at the end of each unit/topic and will be evaluated at regular interval.
4. The course includes a laboratory where the students have an opportunity to build and appreciation for the concepts being taught in lectures.
5. Instruction method will be integrated with clinical training, bedside / class room teaching and tutorials as necessary.

Text Books:

1. Manual of Clinical Surgery, S. Das, 6th Edition, S.B. Publications.
2. Pryor JA, Webber BA. Physiotherapy for Respiratory and Cardiac Problems. Adults and Paediatrics. 3rd ed., London: Churchill Livingstone, 2002.
3. Practical medicine. 16th edition. P J Mehta, NBD Mumbai Publication
4. Textbook of Surgery by Bailey and Love, 25th Edition, Butterworth and Heinmann.
5. Irwin S, Techlin JS. Cardiopulmonary Physical Therapy: a guide to practice. St. Louis, Mo. : Mosby Co., 2004

Reference Books:

1. Principles and practice of medicine by – Davidson, 20th Edition, Churchill Livingston.
2. Medicine for students. 14th edition. Golwalla A F. National Book Depot- mumbai

