

Course Title	PHARMACOLOGY	
Course Code	PT305	
Course Credit	Lecture: 4	
	Practical/ Clinical Training: 0	
	Total: 4	
Course Objective		
<p>On completion of unit students should be able to</p> <ol style="list-style-type: none"> 1. Understand pharmacokinetics and pharmacodynamics of drugs. 2. Understand the mechanism of action, therapeutic effects and adverse effects of drugs acting on various system of human body. 3. relate the knowledge of pharmacology with physiotherapy. 		
Detailed Syllabus		
Sr. No.	Name of chapter & details	Hours Allotted
Section – I		
1	PHARMACOLOGY FOR PHYSIOTHERAPISTS; NEED AND APPLICATION	1
	GENERAL PHARMACOLOGY	
	Introduction, Sources of drugs	1
	Routes of drug administration, Distribution of drugs	1
	Pharmacokinetics, Pharmacodynamics	2
	Drug Receptor interaction & adverse drug reaction	1
	Factors modifying the effects of a drug	1
2	DRUG ACTING ON AUTONOMIC NERVOUS SYSTEM	
	Cholinergic and Anti-Cholinergic drugs.	3
	Adrenergic and Antiadrenergic drugs	3
3	DRUG ACTING ON PERIPHERAL NERVOUS SYSTEM	
	Skeletal muscle relaxants	2
	Local Anesthetics	1
	Sports Medicine and Doping, Drugs and Exercise	1
4	DRUGS ACTING ON THE CENTRAL NERVOUS SYSTEM(CNS)	

	General Anesthetics	1
	Sedatives, Hypnotics and Pharmacotherapy of Sleep Disorders	1
	Antiepileptic, Drug Therapy for Parkinsonism	1
	Opioid Analgesics, Non-Steroidal Anti Inflammatory Drugs	2
	CNS Stimulants	1
5	DRUG ACTING ON CARDIOVASCULAR SYSTEM	
	Drugs Used in the Treatment of Heart Failure: Digitalis, Diuretics, Vasodilators, ACE inhibitors	1
	Antihypertensive Drugs: Diuretics, Beta Blockers, Calcium Channel Blockers, ACE Inhibitors, Central Acting Alpha Agonists, Peripheral Alpha Antagonists, Direct acting Vasodilators	3
	Antiarrhythmic Drugs	1
	Drugs Used in the Treatment of Vascular Disease and Tissue Ischemia: Vascular Disease, Hemostasis Lipid-Lowering agents, Antithrombotic, Anticoagulants and Thrombolytic	1
	Ischemic Heart Disease: Nitrates, Beta-Blockers, Calcium Channel Blockers, Cerebral Ischemia	2
	Pharmacotherapy of Angina Pectoris	1
Section – II		
6	DRUGS USED IN RESPIRATORY DISORDERS	
	Pharmacotherapy of Cough.	3
	Pharmacotherapy of Bronchial Asthma, COPD and rhinitis	3
7	HORMONS AND RELATED DRUGS	
	Thyroid Hormone & Thyroid Inhibitors	2
	Insulin, Oral Hypoglycemic Drugs	2
	Corticosteroids	2
8	ANTIMICROBIAL AND CHEMOTHERAPY	
	General considerations of antimicrobial drugs	1
	Antimicrobial therapy for Malaria, Tuberculosis, Leprosy	2
	Other Chemo Therapeutic drugs : Sulfa drugs in urinary tract infection, tetra / chlora, penicillin, cephalosporin, aminoglycosides	2
	Anti-cancer drugs	1
9	DRUGS ACTING ON G.I. TRACT	
	Drugs for Peptic ulcer + antiemetics	3

	Drugs for Diarrhea & constipation	2
10	GERIATRICS Pharmacological challenges in geriatric age group and its effects on physical therapy.	2
11	MISCELLANEOUS	
	Chelating Agents.	1
	Irritants & Counter-irritants	1
	Vitamins & Antioxidants	1
	Immunosuppressants	1
12	ADVANCE PHARMACOLOGY FOR PHYSIOTHERAPISTS;	
	Integration of pharmacology in physiotherapy interventions	1
	Physiotherapeutic noninvasive mode of drug penetration use in Phonophoresis and iontophoresis	1
	Drug modulation / reduction therapy, insulin withdrawal therapy, asthma and lung lavage techniques e.g. Parkinson, pain management (spray), CP (Botox)	1

Instructional Method and Pedagogy:

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. 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

Text books:

1. Essentials of Medical Pharmacology: 6th Edition, KD Tripathi. Jaypee Publications.
2. Textbook of Pharmacology for Physiotherapy. Udaykumar P. Jaypee Publications.

Reference Books:

1. Pharmacology & Pharmacotherapeutics. 20th Edition. Satoshkar RS, Bhandarkar SD, Rege NN. Popular Publications.
2. Clinical Pharmacology: 9th Edition, PN Bennett, MJ Brown. Elsevier Publication.



SYLLABUS