

Course Code	Course Title	Teaching Load			Marks		Exam (hrs)		Credits
		L	T	P	Int.	Ext.	Int.	Ext.	
BP602T	Pharmacology -III	3	1	-	25	75	1	3	4

**Scope:** This subject is intended to impart the fundamental knowledge on various aspects (classification, mechanism of action, therapeutic effects, clinical uses, side effects and contraindications) of drugs acting on respiratory and gastrointestinal system, infectious diseases, immuno-pharmacology and in addition, emphasis on the principles of toxicology and chronopharmacology.

**Objectives:** Upon completion of this course, the student should be able to:

1. Understand the mechanism of drug action and its relevance in the treatment of different infectious diseases.
2. Comprehend the principles of toxicology and treatment of various poisonings.
3. Appreciate correlation of pharmacology with related medical sciences.

#### **Module 01**

**10hours**

##### **Pharmacology of Drugs Acting on Respiratory System**

- Anti -asthmatic drugs.
- Drugs used in the management of COPD.
- Expectorants and antitussives.
- Nasal decongestants.
- Respiratory stimulants.

##### **Pharmacology of Drugs Acting on The Gastrointestinal Tract**

- Antiulcer agents.
- Drugs for constipation and diarrhoea.
- Appetite stimulants and suppressants.
- Digestants and carminatives.
- Emetics and anti-emetics.

#### **Module 02**

**10hours**

##### **Chemotherapy**

- General principles of chemotherapy.
- Sulfonamides and cotrimoxazole.
- Antibiotics- Penicillins, cephalosporins, chloramphenicol, macrolides, quinolones and fluoroquinolones,
- tetracycline and aminoglycosides

#### **Module 03**

**10hours**

##### **Chemotherapy**

- Antitubercular agents
- Antileprotic agents

- Antifungal agents
- Antiviral drugs
- Anthelmintics
- Antimalarial drugs
- Antiamoebic agents

**Module 04**

**08hours**

**Chemotherapy**

- Urinary tract infections and sexually transmitted diseases.
- Chemotherapy of malignancy.

**Immunopharmacology**

- Immunostimulants
- Immunosuppressant
- Protein drugs, monoclonal antibodies, target drugs to antigen, biosimilars

**Module 05**

**07hours**

**Principles of Toxicology**

- Definition and basic knowledge of acute, subacute and chronic toxicity.
- Definition and basic knowledge of genotoxicity, carcinogenicity, teratogenicity and mutagenicity
- General principles of treatment of poisoning
- Clinical symptoms and management of barbiturates, morphine, organophosphorus compound and lead, mercury and arsenic poisoning.

**Chronopharmacology**

- Definition of rhythm and cycles.
- Biological clock and their significance leading to chronotherapy.

**Recommended Books (Latest Editions)**

1. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchill Livingstone Elsevier.
2. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.
3. Goodman and Gilman's, The Pharmacological Basis of Therapeutics.
4. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs. The Point Lippincott Williams & Wilkins.
5. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews- Pharmacology.
6. K.D.Tripathi. Essentials of Medical Pharmacology, JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
7. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher

Modern Pharmacology with clinical Applications, by Charles R. Craig & Robert,

8. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata,
9. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan.
10. N. Udupa and P.D. Gupta, Concepts in Chronopharmacology.