

Course Code	Course Title	Teaching Load			Marks		Exam (hrs)		Credits
		L	T	P	Int.	Ext.	Int.	Ext.	
BP103T	Pharmaceutics- I	3	1	-	25	75	1	3	4

Scope: This course is designed to impart a fundamental knowledge on the preparatory pharmacy with arts and science of preparing the different conventional dosage forms.

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

1. Know the history of profession of pharmacy.
2. Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations.
3. Understand the professional way of handling the prescription.
4. Preparation of various conventional dosage forms.

Module 01

10 Hours

Historical Background and Development of Profession of Pharmacy

- History of profession of Pharmacy in India in relation to pharmacy education, industry and organization, Pharmacy as a career, Pharmacopoeias: Introduction to IP, BP, USP and Extra Pharmacopoeia.

Dosage Forms

- Introduction to dosage forms, classification and definitions.

Prescription

- Definition, Parts of prescription, handling of prescription
- Errors in prescription.

Posology

- Definition, Factors affecting posology.
- Pediatric dose calculations based on age, body weight and body surface area.

Module 02

10 Hours

Pharmaceutical Calculations

- Weights and measures – Imperial and Metric system, Calculations involving percentage solutions, alligation, proof spirit and isotonic solutions based on freezing point and molecular weight.

Powders

- Definition, classification, advantages and disadvantages, Simple and compound powders – official preparations, dusting powders, effervescent, efflorescent and hygroscopic powders, eutectic mixtures. Geometric dilutions.

Liquid Dosage Forms

- Advantages and disadvantages of liquid dosage forms

- Excipients used in formulation of liquid dosage forms
- Solubility enhancement techniques.

Module 03

08 Hours

Monophasic Liquids

- Definitions and preparations of Gargles, Mouthwashes, Throat Paint, Eardrops, Nasal drops, Enemas, Syrups, Elixirs, Liniments and Lotions.

Biphasic Liquids

- Suspensions: Definition, advantages and disadvantages, classifications, Preparation of suspensions; Flocculated and Deflocculated suspension and stability problems and methods to overcome.
- Emulsions: Definition, classification, emulsifying agent, test for the identification of type of Emulsion, Methods of preparation and stability problems and methods to overcome.

Module 04

08 Hours

Suppositories

- Definition, types, advantages and disadvantages, types of bases, methods of preparations. Displacement value and its calculations, evaluation of suppositories.

Pharmaceutical Incompatibilities

- Definition, classification, physical, chemical and therapeutic incompatibilities with examples.

Module 05

07 Hours

Semisolid Dosage Forms

- Definitions, classification, mechanisms and factors influencing dermal penetration of drugs. Preparation of ointments, pastes, creams and gels. Excipients used in semi solid dosage forms. Evaluation of semi solid dosages forms.

Recommended Books (Latest Editions)

1. H.C. Ansel et al., Pharmaceutical Dosage Form and Drug Delivery System, Lippincott Williams and Walkins, New Delhi.
2. Carter S.J., Cooper and Gunn's-Dispensing for Pharmaceutical Students, CBS publishers, New Delhi.
3. M.E. Aulton, Pharmaceutics, The Science and Dosage Form Design, Churchill Livingstone, Edinburgh.
4. Indian pharmacopoeia.
5. British pharmacopoeia.

6. Lachmann. Theory and Practice of Industrial Pharmacy, Leaand Febiger Publisher, The University of Michigan.
7. Alfonso R. Gennaro Remington. The Science and Practice of Pharmacy, Lippincott Williams, New Delhi.
8. Carter S.J., Cooper and Gunn's. Tutorial Pharmacy, CBS Publications, New Delhi.
9. E.A. Rawlins, Bentley's Text Book of Pharmaceutics, English Language Book Society, Elsevier Health Sciences, USA.
10. Isaac Ghebre Sellassie: Pharmaceutical Pelletization Technology, Marcel Dekker, INC, New York.
11. Dilip M. Parikh: Handbook of Pharmaceutical Granulation Technology, Marcel Dekker, INC, New York.
12. Francoise Nieloud and Gilberte Marti-Mestres: Pharmaceutical Emulsions and Suspensions, Marcel Dekker, INC, New York.