

Course Code	Course Title			Course Type
BP102T	General Pharmacy (Theory)			Core
Credit	Hours Per Week (L-T-P)			Max. Hours
	L	T	P	
3	3	--	--	45
Maximum Marks	SE			ESE
75	30			45

COURSE OBJECTIVES

The objectives of this course are to:

1. Provide knowledge about evolution and development of Pharmacy profession in India and the growth of the Pharmaceutical Industries over the years.
2. Provide understanding of different types of pharmacopoeias and other official books in maintaining the standards of medicines.
3. Provide knowledge about the basic pharmaceutical calculations used in dispensing and compounding.
4. Understand the role of active pharmaceutical ingredients and pharmaceutical excipients in drug formulations
5. Impart basic knowledge about formulation and preparation of Various solid, liquid and semisolid dosage forms

Course Outcomes (CO):

CO No.	Upon successful completion of this course, the students will be able to:
1	Describe the history and evolution of the pharmacy profession, including pharmacopeial practices and prescription handling.
2	Perform accurate pharmaceutical calculations required in the formulation and preparation of various types of dosage forms.
3	Explain the properties and functions of active pharmaceutical ingredients (APIs) and excipients and demonstrate the methods of preparation of solid dosage forms.
4	Illustrate the formulation principles of liquid dosage forms by analyzing the role of APIs and excipients involved.
5	Compare and evaluate the formulation of semisolid dosage forms based on the characteristics of APIs, excipients, and preparation methods.

Detailed Syllabus:

Unit No.	Topics	No. of Lectures
I	Introduction to the Profession of Pharmacy - History of the Profession of Pharmacy in India: In relation to pharmacy education, pharmaceutical industries and organizations – evolution, development and milestones. - Scope of the Pharmacy Profession: Role and responsibilities of pharmacists in retail/community pharmacy, hospital and clinical pharmacy, and industrial pharmacy including research and development. - Pharmacopoeias: Introduction to IP, BP, USP, BPC, International Pharmacopoeia, other pharmacopoeias and the National Formulary of India; structure and content of the Indian Pharmacopoeia; study of one model IP monograph. - Introduction to Prescription: Structure and format/parts of prescription, handling of prescriptions, Latin terminology related to prescriptions.	9 hours
II	Introduction to Pharmaceutical Calculations and Dosage Forms - Metric system of weights and measures; calculations based on alligation, proof spirit, isotonic solutions, dilute solutions (percentage and ratio) and geometric dilution; scientific notation of units and measures. - Posology: Definition and dose calculation based on age, body weight and body surface area. - Introduction to Dosage Forms: Routes of administration and classification of dosage forms. - Introduction to Active Pharmaceutical Ingredients and Excipients: Definition, ideal characteristics and importance.	9 hours
III	Solid Dosage Forms - Powders: Classification, advantages and disadvantages; dusting powders, effervescent powders, efflorescent powders, hygroscopic powders and eutectic mixtures; introduction to excipients and methods of preparation. - Tablets: Definition, types of tablets including moulded tablets and pills with examples; advantages and disadvantages; introduction to excipients and methods of preparation. - Capsules: Definition, types of capsules, advantages and disadvantages, capsule sizes; introduction to excipients and methods of preparation.	9 hours
IV	Monophasic and Biphasic Liquids For internal use – aromatic waters, syrups, elixirs and linctus (definition and preparation).	9 hours

	- For external use and body cavities – liniments, lotions, throat paints, applications, gargles, mouthwashes, enemas, eye drops, ear drops, nasal drops and tinctures with examples. - Study of official preparations- Introduction to excipients and methods of preparation. - Suspensions- Definition and types (flocculated and deflocculated), advantages and disadvantages, formulation excipients and general methods of preparation. - Emulsions- Definition and types, emulsifying agents, tests for identification of types of emulsions, formulation excipients and general methods of preparation.	
V	Semisolid Dosage Forms - Definitions, classification, advantages and disadvantages, ointment bases and other excipients used in semisolid dosage forms; general methods of preparation of ointments, pastes, creams and gels. - Suppositories / Pessaries: Definition, types of suppositories, advantages and disadvantages, formulation excipients used in suppositories, properties of ideal suppository bases, types of suppository bases, displacement value and general method of preparation.	9 hours
Recommended References (Preferably Latest Editions): 1. Ansel, H.C., Allen, L.V. and Popovich, N.G., <i>Pharmaceutical Dosage Forms and Drug Delivery Systems</i>. Lippincott Williams & Wilkins, New Delhi. 2. Carter, S.J., <i>Cooper and Gunn's Dispensing for Pharmaceutical Students</i>. CBS Publishers, New Delhi. 3. Indian Pharmacopoeia Commission, <i>Indian Pharmacopoeia</i>. Ghaziabad. 4. Indian Pharmacopoeia Commission, <i>National Formulary of India</i>. Ghaziabad, India. 5. British Pharmacopoeia Commission, <i>British Pharmacopoeia</i>. London. 6. United States Pharmacopeial Convention, <i>United States Pharmacopeia (USP–NF)</i>. Rockville, Maryland, USA. 7. Lachman, L., Lieberman, H.A. and Kanig, J.L., <i>The Theory and Practice of Industrial Pharmacy</i>. Lea & Febiger, University of Michigan. 8. Gennaro, A.R., <i>Remington: The Science and Practice of Pharmacy</i>. Lippincott Williams & Wilkins, New Delhi. 9. Rawlins, E.A., <i>Bentley's Textbook of Pharmaceutics</i>. Elsevier Health Sciences, USA. 10. Nieloud, F. and Marti-Mestres, G., <i>Pharmaceutical Emulsions and Suspensions</i>. Marcel Dekker Inc., New York.		