



Gyanmanjari
Innovative University

Course Syllabus
Gyanmanjari Pharmacy College
Semester-I (B.pharm)

Subject: General Pharmacy
Subject code: BPHBP11352
Type of course: Major
Prerequisite: B. Pharmacy

Rationale: The objective of this course is to lay a foundation for the understanding and learning of General Pharmacy courses in the successive years of the B. Pharmacy program. During this course,

1. General Pharmacy provides the fundamental knowledge of pharmaceutical sciences required for the study of advanced pharmacy subjects.
2. The subject introduces students to the history, scope, and professional ethics of pharmacy practice.
3. It develops understanding of dosage forms, pharmaceutical calculations, prescription handling, and dispensing procedures.
4. The course helps students gain knowledge about routes of drug administration and factors affecting drug action.
5. It familiarizes students with basic principles of pharmacopoeias, posology, incompatibility, and storage of medicines.
6. The subject builds practical skills related to compounding, labelling, packaging, and handling of pharmaceutical preparations.

Teaching and Examination Scheme:

Course Code	Course Title			Course Type
BPHBP11352	General Pharmacy (Theory)			Major
Credit	Hours Per Week (L-T-P)			Max. Hours
	L	T	P	
3	3	--	--	45
Maximum Marks	MSE			ESE
75	30			45

Legends: CI-Classroom Instructions; T – Tutorial; P - Practical; C – Credit; ESE - End Semester Examination; MSE- Mid Semester Examination; V – Viva; CA - Continuous Assessment; ALA- Active Learning Activities.



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 semi solid 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.



Course Content:

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	Pharmaceutical Calculations - 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	9 hours



	methods of preparation.	
IV	Monophasic and Biphasic Liquids - For internal use – aromatic waters, syrups, elixirs and linctus (definition and preparation). - 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.	9 hours
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



Continuous Assessment:

Sr. No	Active Learning Activities	Marks
1	Activity 1: Dosage Form Compendium Preparation Faculty will provide a task to Students to Collect Information and Photographs of Marketed Pharmaceutical Products Representing Various Dosage Forms Like Tablets, Capsules, Syrups, Suspensions, Emulsions, Creams and students will have to prepare a proper report on it and have to submit on a GMIU portal.	10
2	Activity 2: Prescription Handling and Interpretation: Faculty will assign the task to students to collect and study a prescription from a registered medical practitioner and identify its various parts such as patient information, superscription, inscription, subscription, signa, and prescriber details. Students will interpret the prescription, identify commonly used Latin abbreviations and prescription terminologies. Students shall prepare a brief report highlighting the structure, format, and importance of prescription handling in pharmacy practice and submit the completed assignment on the GMIU Web Portal.	05
Total		15

Suggested Specification table with Marks (Theory)

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	20%	45%	25%	05%	05%	--

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Note: a) Preparation of compendia of dosage forms (marketed products), is recommended. b) Any other practical relevant to the syllabus can be introduced. c) Minimum 12 experiments from different Units must be performed

Recommended References (Preferably Latest Editions):



Recommended References (Preferably Latest Editions):

1. Ansel, H.C., Allen, L.V. and Popovich, N.G., *Pharmaceutical Dosage Forms and Drug Delivery Systems*, Lippincott Williams & Wilkins, New Delhi.
2. Carter, S.J., *Cooper and Gunn's Dispensing for Pharmaceutical Students*, CBS Publishers, New Delhi.
3. Indian Pharmacopoeia Commission, *Indian Pharmacopoeia*, Ghaziabad.
4. Indian Pharmacopoeia Commission, *National Formulary of India*, Ghaziabad, India.
5. British Pharmacopoeia Commission, *British Pharmacopoeia*, London.
6. United States Pharmacopoeial Convention, *United States Pharmacopoeia (USP-NF)*, Rockville, Maryland, USA.
7. Lachman, L., Lieberman, H.A. and Kanig, J.L., *The Theory and Practice of Industrial Pharmacy*, Lea & Febiger, University of Michigan.
8. Gennaro, A.R., *Remington: The Science and Practice of Pharmacy*, Lippincott Williams & Wilkins, New Delhi.
9. Rawlins, E.A., *Bentley's Textbook of Pharmaceutics*, Elsevier Health Sciences, USA.
10. Nieloud, F. and Marti-Mestres, G., *Pharmaceutical Emulsions and Suspensions*, Marcel Dekker Inc., New York.



Subject: General Pharmacy (Practical)

Type of course: Major

PRACTICAL: GENERAL PHARMACY

PRACTICAL CODE: BPHBP11352

Teaching and Examination Scheme:

Course Code	Course Title			Course Type
BPHBP11352	General Pharmacy (Practical)			Major
Credit	Hours Per Week (L-T-P)			Max. Hours
	L	T	P	
1	--	--	3	45
Maximum Marks	SE			ESE
50	20			30

Legends: CI-Classroom Instructions; T – Tutorial; P - Practical; C – Credit; ESE - End Semester Examination; MSE- Mid Semester Examination; V – Viva; CA - Continuous Assessment; ALA- Active Learning Activities.

Course Outcomes (CO):

CO No.	Upon successful completion of this course, the students will be able to:
1	Perform accurate pharmaceutical calculations using dilution and allegation principles for the preparation of various dosage forms.
2	Prepare and dispense liquid dosage forms such as solutions, syrups, gargles, and mouthwashes following official pharmacopeial procedures.
3	Formulate solid dosage forms including powders, divided powders, dusting powders, and effervescent granules as per standard guidelines.
4	Prepare semisolid and specialized dosage forms such as ointments, liniments, and suppositories using appropriate bases and techniques.
5	Compile and evaluate a compendium of marketed dosage forms, demonstrating compliance with pharmacopeial standards, labeling requirements, and patient-centric considerations



Course Content:

List of practical

1. Pharmaceutical Calculations

Solutions based on allegation and dilution methods

2. Solutions

- a) Strong solution of ammonium acetate – IP
- b) Cresol with soap solution – IP
- c) Lugol's solution – BPC

3. Syrups

- a) Simple Syrup – IP

4. Powders & Granules

- a) ORS powder – WHO
- b) Effervescent granules – IP
- c) Dusting powder – IP
- d) Divided powders – IP

5. Suppositories

- a) Glycerol gelatin suppository – EPC
- b) Cocoa butter suppository – IP
- c) Zinc Oxide suppository – IP

6. Semisolids

- a) Sulphur ointment – IP
- b) Non-staining iodine ointment with methyl salicylate – BPC

7. Gargles & Mouthwashes

- a) Iodine gargle – BPC
- b) Chlorhexidine mouthwash – IP

Note:

- a) Preparation of compendia of dosage forms (marketed products), is recommended.
- b) Any other practical relevant to the syllabus can be introduced.
- c) Minimum 12 experiments must be performed covering all dosage forms.



Recommended References (Preferably latest editions):

1. Carter, S.J., *Cooper and Gum's Dispensing for Pharmaceutical Students*. 12th ed. New Delhi: CBS Publishers.
2. Indian Pharmacopoeia Commission, *Indian Pharmacopoeia*, Vol. I. Ghaziabad: IPC.
3. United States Pharmacopeial Convention, *United States Pharmacopeia-National Formulary (USP-NF)*, Rockville, MD, USA.
4. British Pharmacopoeia Commission, *British Pharmacopoeia Codex*. London: The Stationery Office.
5. World Health Organization, *Oral Rehydration Salts (ORS) Formulation Guidelines*. Geneva: WHO.

