INSTITUTE	**FACULTY OF PHARMACY**
PROGRAM	**BACHELOR OF PHARMACY**
SEMESTER	**1**
COURSE TITLE	**GENERAL PHARMACY**
COURSE CODE	**13PH0107P**
COURSE CREDITS	**1**

Objective:

1. Familiarize students with essential pharmaceutical calculations, including dilution, concentration, and allegation methods required for accurate formulation of dosage forms.
2. Impart practical skills in the preparation of official and non-official dosage forms such as solutions, syrups, powders, granules, suppositories, semisolids, gargles, and mouthwashes in accordance with pharmacopeial standards.
3. Develop understanding of formulation principles related to selection of ingredients, dosage form design, stability, and patient acceptability.
4. Train students in the application of pharmacopoeial specifications (IP, BPC, WHO) during compounding, labeling, and evaluation of pharmaceutical preparations.
5. Enhance hands-on competency and professional confidence required for dispensing practice and pharmaceutical compounding in hospital and community pharmacy settings.

Course Outcomes: After completion of this course, student 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

Pre-requisite of course:1. Basic understanding of pharmaceutics and introductory pharmacy concepts. 2. Familiarity with units of measurement, conversions, percentages, ratios, and basic calculations. 3. Understanding of density, volume, concentration, dilution, and allegation methods. 4. Basic skills in weighing, measuring, and handling pharmaceutical apparatus.

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	3	0	0	0	30	20

DR. ASHISHKUMAR VRAJLAL KYADA
Digitally signed by (Name of HOD)

DR. LALJI HAKUBHAI BALDANIYA
Digitally signed by (Name of Dean/ Principal)

Contents : Unit	Topics	Contact Hours
Total Hours		

Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**Pharmaceutical Calculations** Solutions based on allegation and dilution methods.	3
2	**Solutions** Strong solution of ammonium acetate – IP , Cresol with soap solution – IP, Lugol's solution – BPC	3
3	**Syrups** Simple Syrup – IP	3
4	**Powders & Granules** ORS powder – WHO , Effervescent granules – IP, Dusting powder – IP, Divided powders – IP	3
5	**Suppositories** Glycerogelatin suppository – BPC, Cocoa butter suppository – IP, Zinc Oxide suppository – IP	3
6	**Semisolids** Sulphur ointment – IP , Non-staining iodine ointment with methyl salicylate – BPC	3
7	**Gargles & Mouthwashes** Iodine gargle – BPC , 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.	3
Total Hours		**21**

Textbook :

1 Cooper and Gunn's Dispensing for Pharmaceutical Students, S.J. Carter, CBS Publishers, 2008

2 Textbook of Pharmaceutics, E.A. Rawlins, Bailliere Tindall, 1977

3 Modern Pharmaceutics, Gilbert S. Banker, Christopher Rhodes, CRC Press, 2002

4 Pharmaceutics: The Science of Dosage Form Design, M.E. Aulton, K.M.G. Taylor, Elsevier, 2021

5 Practical Pharmaceutics, Y.K. Sharma, Vallabh Prakashan, 2020

6 Essentials of Pharmaceutics, M. Gupta, CBS Publishers, 2023

7 Dispensing Pharmacy and Pharmaceutical Calculations, R.M. Mehta, Vallabh Prakashan, 2021

8 Pharmaceutical Compounding and Dispensing, John F. Marriott et al., Pharmaceutical Press, 2015

References:

1 Indian Pharmacopoeia, Indian Pharmacopoeia, Indian Pharmacopoeia Commission, IPC, Ghaziabad, 2026

2 United States Pharmacopeia–National Formulary (USP–NF), United States Pharmacopeia–National Formulary (USP–NF), USP Convention, USP, 2026

3 British Pharmacopoeia, British Pharmacopoeia, British Pharmacopoeia Commission, TSO / BP Commission, 2026

4 Pharmaceutical Compounding and Dispensing, Pharmaceutical Compounding and Dispensing, Marriott, Wilson, Langley, Belcher, Pharmaceutical Press, 2010

5 Remington: The Science and Practice of Pharmacy, Remington: The Science and Practice of Pharmacy, Adejare (Ed.), Pharmaceutical Press, 2020

6 Handbook of Pharmaceutical Excipients, Handbook of Pharmaceutical Excipients, Rowe, Sheskey, Quinn, Pharmaceutical Press, 2020

7 WHO Oral Rehydration Salts Guidelines, WHO Oral Rehydration Salts Guidelines, World Health Organization, WHO, 2006

8 Practical Dispensing, Practical Dispensing, Wade & Weller, Pharmaceutical Press, 1991

Suggested Theory Distribution:

The suggested theory distribution as per Bloom's taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery

Remember / Knowledge	Understand	Apply	Analyze	Evaluate	Higher order Thinking / Creative
12.00	18.00	38.00	16.00	10.00	6.00

Instructional Method:

1 Demonstration of pharmaceutical preparations

2 Hands-on compounding exercises

3 Supervised dispensing practice

4 Viva voce and practical discussion sessions

5 Peer learning during compounding activities

6 Product-based learning through marketed dosage form compendium

Supplementary Resources:

1 Indian Pharmacopoeia Commission: https://ipc.gov.in

2 Central Drugs Standard Control Organization (CDSCO): https://cdsco.gov.in

3 World Health Organization: https://www.who.int

4 United States Pharmacopeia: https://www.usp.org

5 British Pharmacopoeia: https://www.pharmacopoeia.com