

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE-PILANI,
HYDERABAD CAMPUS
SECOND SEMESTER 2023-2024
Course Handout (Part-II)**

Date: 09/01/2024

In addition to Part-I (General handout for all the courses appended to the time table) this portion gives further specific details regarding the course.

Course No. : PHA F216
Course Title : PHARMACEUTICAL FORMULATION I
Instructor-in-charge : D. Sriram & Yuvraj Singh

1) Course Description:

Prescriptions and principles involved in the dispensing of prescriptions; physical, chemical and therapeutic incompatibilities involved and their remedy in such prescriptions; techniques involved in dispensing various pharmaceutical preparations like mixtures, ointments, suspensions, emulsions etc.

2) Scope and Objective of the Course:

This course is concerned with the preparation and dispensing of medicines. It intends to impart knowledge to the students on various aspects of dispensing of medicaments with stress on compounding, stability, incompatibilities, packing methods and labeling procedures. It also orients the students to take the responsibilities of a hospital pharmacist.

3. Course learning outcomes: At the end of the course a student can learn various types drug formulations available, they can able prepare and dispense commonly used medications, formulations, and drug products.

4) Text Book:

1) Cooper and Gunn's Dispensing for Pharmaceutical Students, CBS, 12th ed., 1987.

5) Reference Books:

- a) Merchant, S. H., Qadry, J. S., A Textbook of Hospital Pharmacy, B. S. Shah Prakashan, 2nd Ed., 1994.
- b) Michael E. Aulton, Aulton's Pharmaceutics: The Design and Manufacture of Medicines, Third Edition, Churchill Livingstone, 2007.
- c) Remington's Pharmaceutical Sciences, Mack Publishing Company, 17th Ed., 1985.
- d) Different Pharmacopias.
 - Indian Pharmacopiea 1996 and 2007.
 - British Pharmacopiea 1999.
 - United States Pharmacopiea 2006.
 - Martindale: The extra Pharmacopiea 1999.

6) Course Plan:

a) Lecture wise programme:

Lecture No.	Learning Objectives	Topics to be covered	Reference* Chapter./Sec.# (Book)
1	Definition and scope of dispensing pharmacy	Introduction	T- Chapter 1
2	Components of prescriptions; Sources of information	Prescription	T- Chapter 1
3-5	Basics of proper dispensing; Fundamental operations in compounding including weighing and measurements, Labeling requirement of dispensed preparations according to regulatory guidelines	General dispensing procedures, Types of label, labeling requirement for pharmaceutical dosage forms, latin terms and	T- Chapters 1, 5 and 6

		abbreviations, modern method of prescription	
6	Dose and its calculations	Posology	T- Appendix 10
7-8	Colour, flavour, antioxidants and preservatives employed in dispensed products	Additives	T-Chapter 7 and Appendix 1
9-12	Various types of solution preparations such as aromatic water, elixirs etc.	Solutions	T-Chapter 9
13-15	Formulation, evaluation and stability of suspensions	Suspensions	T-Chapter 10
16-20	Formulation, evaluation and stability of emulsions and creams	Emulsions and creams	T-Chapter 11
21-22	Formulation and evaluation of different types of oral dosage forms	Powders	T-Chapter 12
23-27	Different types of ointment bases; Formulation and evaluation of ointments, pastes and jellies	Ointments, pastes and jellies	T-Chapter 13
28-30	Formulation and evaluation of suppositories and pessaries	Suppositories and Pessaries	T-Chapter 14
31-32	Formulation and evaluation of parenteral products	Parenteral products	T-Chapter 20
33	Physical, chemical and therapeutic incompatibilities	Incompatibilities	T-Chapter 15

b) Practical:

Name of Experiments	Reference* Chapter./Sec.# (Book)
Dispensing of different pharmaceutical preparations like Aromatic waters, Spirits, Mixtures, Solutions, Powder mixtures, Injection, Emulsions, Liniments, Lotions, ointments	# Different chapters of text book # Different sections of Ref (b) and (c)

7) Evaluation Scheme:

Components	Duration	Weightage	Date and Time	Remarks
Mid-term test	90 minutes	30%	15/03 - 2.00 - 3.30PM	Close Book
Surprise quiz [3-4]	~20 min	15%	Lecture class hours	Open Book
Seminar/Assignment	-	5%	Lecture class hours	Open Book
Laboratory Component*	Continuous	15%	Practical class hours	Open Book
Comprehensive Examination	180 minutes	35 %	17/05 FN	Close Book

* Lab report & viva 5%, Lab Quiz 5%, Lab product 5%

8. Chamber consultation hours: To be announced in class.

9. Notices: Notices concerning the course will be displayed on the pharmacy group notice board only.

10. Make-Ups: Generally, make-up will be considered for regular students only (**80% attendance IN LECTURE CLASSES**).

11. Academic Honesty and Integrity Policy: Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

**Instructor In-Charge
PHA F212**