



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI
INSTRUCTION DIVISION
SECOND SEMESTER 2015-2016
Course Handout (Part - II)

In addition to part I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course

Course No. : PHA F342
Course Title : Medicinal Chemistry II
Instructor-in-Charge : R. Mahesh
Instructors : as in timetable

1. Scope and Objective of the Course:

This course deals with the study of important classes of drugs that are listed below. Various aspects like structure, properties, therapeutic and pharmaceutical importance and the uses of drug molecules both of natural and synthetic origin will be covered. Study of physico-chemical properties, mechanism of action, S.A.R. and metabolism of drugs dealt hereunder will also be emphasized. Special emphasis will be given on important topics such as Anti hypertensive drugs, Drugs affecting sugar metabolism, Antimalarial drugs, Anticancer agents, Antiviral agents etc.

2. Text Book :

William O Foye- "Principles of Medicinal Chemistry", VI Edition, Lea and Febiger, Phil., 2008. (Seventh edition 2013, is also available).

3. Reference Books :

1. Robert F Doerge- "Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical Chemistry", XII Edition, Lippincot William and Wilkinson, South Asian Edition, 2010
2. Remington's Pharmaceutical Sciences, 22nd., 2012.
3. Introduction to medicinal chemistry by **Graham L Patrick**. Fourth edition, Oxford University press. 2008 .
4. Vogel's text book of Practical Organic Chemistry, V edition, Longman Scientific Publications, 1989

***Most of the earlier editions of the above books are available in free downloadable form .



4. Course Plan

Lec. No.	Topics to be covered	Learning Objectives	Ref.
1-6	Anti hypertensive drugs	Adrenergic drugs, diuretics, calcium channel blockers, ACE inhibitors and others, structure, synthesis and SAR	TB-21, other sources
7-10	Coagulants, anticoagulants, anti platelet agents	Mode of Action, Syntheses, SAR.	TB-20
11-12	Hypo-lipidemic drugs	Mode of Action, Syntheses, SAR	TB-24
13-15	Drugs affecting sugar metabolism	Mode of Action, Syntheses, SAR.	TB-26
16-21	Antibiotics and other antimicrobial agents	Mode of Action, Syntheses, SAR.	TB-34
22-25	Antimalarial drugs	Mode of Action, Syntheses, SAR	TB-32
26-29	Antiseptics, disinfectants	Mode of Action, Syntheses, SAR	TB-36
30-35	Antiviral and Anticancer agents	Mode of Action, Syntheses, SAR	TB-37

5. Evaluation:

Component	Duration	Weightage (%)	Date & Time	Remarks
Mid sem Test	90 min.	30	16/3 9:00 - 10:30 AM	Closed Book
Continuous Assessment including Practicum experience*	--	35	continuous	---
Compre. Exam	180 min.	35	7/5 FN	Closed Book and or Open Book

* Continuous assessment may include quiz(zes)#, Laboratory Day to Day work, Viva-Voce, Home assignment, and Lab. component including Lab. Compre., etc.

* Practicum experience (Lab.component), Assignment(s) may be practical / theory oriented, for which a proper report in a standard format should be submitted as per deadline(s) that would be announced. It may also include a viva and or seminar presentation(s).

Quiz(zes) may/will be conducted as a part of evaluation component, at random, during contact hours including lecture, tutorial hours, as convenient, with/without prior intimation and sometimes outside class contact hours (for both theory and practical) and hence it is expected that the students come prepared to every class on topics covered in earlier contact hours. Students are also requested to refresh their **knowledge in basic organic reactions.**



6. Mid-Sem. Grading would be done once at least 30-40 % evaluation components are completed.
7. For all evaluation components, information given in text books and reference books in the same order will be considered as correct. All evaluation components are equally important, irrespective of weightage. Hence, students failing to attend or absenting themselves in one or many of the evaluation components may become ineligible for obtaining a valid grade at the end of the semester. Attendance in lectures, tutorials and practicum experience are all equally important as they are all integral components of learning, irrespective of weightage.
8. Students are strongly advised to keep away from absenting themselves from all aforementioned contact sessions.
9. **Reading Assignments:** Students are advised to read, collect additional information on the above mentioned topics as per given schedule.
10. **Chamber consultation hours:** To be announced in class.
11. **Notices:** Notices concerning the course will be displayed on the pharmacy group notice board only
12. **Make-Ups:** Make-Ups are not given as a routine. It is solely dependent upon the GENUINENESS OF THE CIRCUMSTANCES under which a student fails to appear in a scheduled evaluation component. In such circumstances, prior permission should be obtained from the Instructor-in-Charge. In no case the make-up letter be slipped inside the chamber of the Instructor-In-Charge. The decision of the Instructor- in-Charge will be final.

Instructor - in -Charge
PHA F342