

## PHC 471: MEDICINAL CHEMISTRY IV (2 + 1)

Prereq.: PHC 471

### Course Description

The study of the structures, nomenclatures, synthesis, interaction of drugs with the receptor sites, structure-activity relationship, metabolism of the different chemical classes of the following medicinal agents.

	<u>No. of Lectures</u>
<b>A. Chemotherapy</b>	
i. Introduction to chemotherapy Theory of selective toxicity	1
ii. Synthetic antimalarials	3
iii. Sulfonamides	3
iv. Antimycobacterium agents	1
v. Antiamoebic agents	2
vi. Anthelmintic agents	2
vii. Antiviral and antifungal agents	1
viii. Cancer chemotherapy (Antineoplastic agents):	
a) Introduction	1
b) Antimetabolites	2
b) Alkylating agents	2
d) Miscellaneous antineoplastic agents	1
<b>B. Diagnostic agents</b>	3
<b>C. Hypoglycemic agents</b>	2
<b>D. Thyroid and antithyroid agents</b>	2
<b>E. Two Examinations.</b>	2
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	Total 28
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## PHC 471: PRACTICAL

The course is designed to expose the student to the verification of the chemical purity of the drug products using the pharmacopoeial monographs as well as various spectrometric methods.

### Lab. No.

- 1
  - a) **Aminophylline Tablet**
    1. Identification
    2. Assay for theophylline (U.V. Assay).
    3. Assay for ethylenediamine (Acid-base titration).
  
- 2
  - a) **Aspirin Tablets** (Acetylsalicylic acid tablet)
    1. Identification.
    2. Limit test for salicylic acid.
    3. Assay according to British Pharmacopeia.
  
  - b) **Ascorbic Acid** (Vit. C) Tablet
    1. Assay (Redox titration).
  
- 3
  - a) **Chloramphenicol Capsules**
    1. Identification.
    2. Assay (U.V. Assay).
  
  - b) **Phenylephrine Eye Drops**
    1. Identification.
    2. Assay (by U.V.).
  
- 4
  - a) **Methyl Dopa** (Aldomet) Tablet:
    1. Identification.
    2. Assay (visible or colorimetric assay).
  
  - b) **Calcium Lactate Tablet**
    1. Identification.
    2. Assay (complexometric titration).
  
- 5 & 6
  - a) **Indomethacin Suppositories**
    1. Identification.
    2. Assay (U.V.).
  
  - b) **Frusemide Injection**
    1. Identification.
    2. Assay (U.V.).
  
- 7 **Practical Examination No. 1.**
  
- 8
  - a) **Tolbutamide Tablet**
    1. Identification.
    2. Assay (Acid-base titration).

Lab. No.

- b) **Paracetamol Tablet**  
1. Identification.  
2. Assay (U.V. assay).
- 9 a) **Hydroquinone Ointment**  
1. Identification (T.L.C.).  
2. Assay (Redox titration).
- b) **Grisofulvin Tablet**  
1. Identification.  
2. Assay (U.V. assay).
- 10 a) **Compound Sodium Lactate Intravenous Infusion**  
1. Identification.  
2. Assay for total Cl.  
3. Assay for CaCl<sub>2</sub>.  
4. Assay for lactic acid.
- b) **Hydroxocobalamine Injection**  
1. Identification.  
2. Assay (U.V.)
- 11 a) **Dextrose Intravenous Infusion**  
1. Identification.  
2. Assay (polarimetry).
- b) **Chloroquine Phosphate Tablet**  
1. Identification.  
2. Assay.
- 12 a) **Sodium Chloride Eye Lotion**  
1. Identification.  
2. Assay (precipitometric titration).
- b) **Busulphan Tablet**  
1. Identification.  
2. Assay.
- 13 **Revision**
- 14 **Practical Exam. No. 2.**

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14 Total

