

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PHARM.D**  
4<sup>th</sup> Year

**Subject Name: Hospital Pharmacy**  
**Subject Code: 848802**

**Scope:** In the changing scenario of pharmacy practice in India, for successful practice of Hospital Pharmacy, the students are required to learn various skills like drug distribution, drug dispensing, manufacturing of parenteral preparations, drug information, patient counselling, and therapeutic drug monitoring for improved patient care.

- Objectives:** At completion of this subject it is expected that students will be able to –
- a. know various drug distribution methods;
  - b. know the professional practice management skills in hospital pharmacies;
  - c. provide unbiased drug information to the doctors;
  - d. know the manufacturing practices of various formulations in hospital set up;
  - e. appreciate the practice based research methods; and
  - f. appreciate the stores management and inventory control

**Teaching scheme and examination scheme:**

Teaching Scheme				Evaluation Scheme				Total Marks
Theory	Tutorial	Practical	Total	Theory		Practical		
				External	Internal	External	Internal	
2	1	3	7	70	30	70	30	200

Sr.	Topic	Hr	% Weigh tage
1.	<b>Hospital - its Organisation and functions</b>	3	5
2.	<b>Hospital pharmacy-Organisation and management</b> a) Organizational structure-Staff, Infrastructure & work load statistics b) Management of materials and finance c) Roles & responsibilities of hospital pharmacist	7	12
3.	<b>The Budget – Preparation and implementation</b>	4	6
4.	<b>Hospital drug policy</b> a) Pharmacy and Therapeutic committee (PTC) b) Hospital formulary c) Hospital committees - Infection committee - Research and ethical committee d) developing therapeutic guidelines e) Hospital pharmacy communication – Newsletter	10	18
5.	<b>Hospital pharmacy services</b> a) Procurement & warehousing of drugs and Pharmaceuticals b) Inventory control Definition, various methods of Inventory Control ABC, VED, EOQ, Lead time, safety stock c) Drug distribution in the hospital i) Individual prescription method ii) Floor stock method iii) Unit dose drug distribution method d) Distribution of Narcotic and other controlled substances e) Central sterile supply services – Role of pharmacist	15	25
6.	<b>Manufacture of Pharmaceutical preparations</b>	10	17

	a) Sterile formulations – large and small volume parenterals b) Manufacture of Ointments, Liquids, and creams c) Manufacturing of Tablets, granules, capsules, and powders d) Total parenteral nutrition		
<b>7.</b>	<b>Continuing professional development programs</b> Education and training	<b>4</b>	<b>6</b>
<b>8.</b>	<b>Radio Pharmaceuticals – Handling and packaging</b>	<b>4</b>	<b>6</b>
<b>9.</b>	<b>Professional Relations and practices of hospital pharmacist</b>	<b>3</b>	<b>5</b>

**Practicals:**

1. Assessment of drug interactions in the given prescriptions
2. Manufacture of parenteral formulations, powders.
3. Drug information queries.
4. Inventory control

**Reference books :**

1. Hospital pharmacy by William .E. Hassan, Latest Edition
2. A text book of Hospital Pharmacy by S.H.Merchant & Dr. J.S. Qadry. Revised by R.K.Goyal & R.K. Parikh, Latest Edition
3. WHO consultative group report.
4. R.P.S. Vol.2. Part –B; Pharmacy Practice section.
5. Handbook of pharmacy – health care. Edt. Robin J Harman. The Pharmaceutical press. Latest Edition

**List of Assignments:**

1. Design and Management of Hospital pharmacy department for a 300 bedded hospital.
2. Pharmacy and Therapeutics committee – Organization, functions, and limitations.
3. Development of a hospital formulary for 300 bedded teaching hospital
4. Preparation of ABC analysis of drugs sold in one month from the pharmacy.
5. Different phases of clinical trials with elements to be evaluated.
6. Various sources of drug information and systematic approach to provide unbiased drug information.
7. Evaluation of prescriptions generated in hospital for drug interactions and find out the suitable management.

**Special requirements:**

1. Each college should sign MoU with nearby local hospital having minimum 300 beds for providing necessary training to the students' on hospital pharmacy activities.
2. Well equipped with various resources of drug information.

<b>Scheme of Practical Examination:</b>		<b>Annual</b>
<b>Sessionals</b>		
Synopsis	05	15
Major Experiment	10	25
Minor Experiment	03	15
Viva	02	15
<b>Max Marks</b>	<b>20</b>	<b>70</b>
<b>Duration</b>	<b>03hrs</b>	<b>04hrs</b>