Course Code	Course Title	Teaching Load			Marks		Exam (hrs)		Credits
		L	T	P	Int.	Ext.	Int.	Ext.	
BP703T	Pharmacy Practice	3	1	-	25	75	1	3	4

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 information, and therapeutic drug monitoring for improved patient care. In community pharmacy, students will be learning various skills such as dispensing of drugs, responding to minor ailments by providing suitable safe medication, patient counselling for improved patient care in the community set up.

Objectives: Upon completion of the course, the student shall be able to

1. Know various drug distribution methods in a hospital.
2. Appreciate the pharmacy stores management and inventory control.
3. Monitor drug therapy of patient through medication chart review and clinical review.
4. Obtain medication history interview and counsel the patients.
5. Identify drug related problems.
6. Detect and assess adverse drug reactions.
7. Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states.
8. Know pharmaceutical care services.
9. Do patient counselling in community pharmacy.
10. Appreciate the concept of rational drug therapy.

Module 01 **10 Hours**

Hospital and Its Organization

- Definition, Classification of hospital.
- Primary, Secondary and Tertiary hospitals.
- Classification based on clinical and non- clinical basis.
- Organization Structure of a Hospital, and Medical staffs involved in the hospital and their functions.

Hospital Pharmacy and Its Organization

- Definition, functions of hospital pharmacy, Organization structure, Location, Layout and staff requirements, and Responsibilities and functions of hospital pharmacists.

Adverse Drug Reaction

- Classifications –Excessive pharmacological effects, secondary pharmacological effects, idiosyncrasy, allergic drug reactions, genetically determined toxicity, and toxicity following sudden withdrawal of drugs.

Drug Interaction

- Beneficial interactions, adverse interactions, and pharmacokinetic drug

interactions.

- Methods for detecting drug interactions.
- Spontaneous case reports and record linkage studies.
- Adverse drug reaction reporting and management.

Community Pharmacy

- Organization and structure of retail and wholesale drug store, types and design.
- Legal requirements for establishment and maintenance of a drug store.
- Dispensing of proprietary products, maintenance of records of retail and wholesale drug store.

Module 02 **10Hours**

Drug Distribution System in A Hospital

- Dispensing of drugs to inpatients, types of drug distribution systems, charging policy and labelling, Dispensing of drugs to ambulatory patients, and Dispensing of controlled drugs.

Hospital formulary

- Definition, contents of hospital formulary, Differentiation of hospital formulary and Drug list, preparation and revision, and addition and deletion of drug from hospital formulary.
- **Therapeutic Drug Monitoring**
- Need for Therapeutic Drug Monitoring, Factors to be considered during the Therapeutic Drug Monitoring, and Indian scenario for Therapeutic Drug Monitoring.

Medication Adherence

- Causes of medication non-adherence, pharmacist role in the medication adherence, and monitoring of patient medication adherence.

Patient Medication History Interview

- Need for the patient medication history interview, medication interview forms.

Community Pharmacy Management

- Financial, materials, staff, and infrastructure requirements.

Module 03 **10 Hours**

Pharmacy and therapeutic committee

- Organization, functions, Policies of the pharmacy and therapeutic committee in including drugs into formulary, inpatient and outpatient prescription, automatic stop order, and emergency drug list preparation.

Drug information services

- Drug and Poison information centre, Sources of drug information, Computerised services, and storage and retrieval of information.

Patient Counselling

- Definition of patient counselling; steps involved in patient counselling, and Special cases that require the pharmacist.

Education and Training Program in the Hospital

- Role of pharmacist in the education and training program.
- Internal and external training program.
- Services to the nursing homes/clinics.
- Code of ethics for community pharmacy.
- Role of pharmacist in the interdepartmental communication and community health education.

Prescribed Medication Order and Communication Skills

- Prescribed medication order- interpretation and legal requirements.
- Communication skills- communication with prescribers and patients.

Module 04 **08 Hours**

Budget Preparation and Implementation

- Budget preparation and implementation

Clinical Pharmacy

- Introduction to Clinical Pharmacy, Concept of clinical pharmacy, functions and responsibilities of clinical pharmacist, Drug therapy monitoring - medication chart review, clinical review, pharmacist intervention, Ward round participation, Medication history and Pharmaceutical care.
- Dosing pattern and drug therapy based on Pharmacokinetic & disease pattern.

Over The Counter (OTC) Sales

- Introduction and sale of over the counter.
- Rational use of common over the counter medications.

Module 05 **07 Hours**

Drug Store Management and Inventory Control

- Organisation of drug store, types of materials stocked and storage conditions.
- Purchase and inventory control: principles, purchase procedure, purchase order, procurement and stocking, Economic order quantity, Reorder quantity level.
- Methods used for the analysis of the drug expenditure.

Investigational Use of Drugs

- Description, principles involved, classification, control, identification, role of hospital pharmacist, advisory committee.

Interpretation of Clinical Laboratory Tests

- Blood chemistry, haematology, and urinalysis.

Recommended Books (Latest Edition)

1. Merchant S.H. and Dr. J.S.Quadry. A textbook of hospital pharmacy. Ahmadabad: B.S. Shah Prakakshan.
2. Parthasarathi G, Karin Nyfort-Hansen, Milap C Nahata. A textbook of Clinical Pharmacy Practice- essential concepts and skills. Chennai: Orient Longman Private

Limited.
3. William E. Hassan. Hospital pharmacy. Philadelphia: Lea & Febiger.
4. Tipnis Bajaj. Hospital Pharmacy . Maharashtra: Career Publications.
5. Scott LT. Basic skills in interpreting laboratory data, 4thed. American Society of Health System Pharmacists Inc.
6. Parmar N.S. Health Education and Community Pharmacy, 18th ed. India: CBS Publishers & Distributers.

Journals

1. Therapeutic drug monitoring. ISSN: 0163-4356
2. Journal of pharmacy practice. ISSN : 0974-8326
3. American journal of health system pharmacy. ISSN: 1535-2900 (online)
4. Pharmacy times (Monthly magazine)