

(B. Pharm.)
(Semester - VII)

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Course Code	BP703T
Course Title	Pharmacy Practice – Theory

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 counseling for improved patient care in the community set up.

Objectives:

Upon completion of this course the student should 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 counseling in community pharmacy.
10. Appreciate the concept of rational drug therapy.

Course Learning Outcomes (CLO):

At the end of the course, students will be able to -

1. Recall about hospital pharmacy, community pharmacy and adverse drug reaction.
2. Outline the drug distribution system in a hospital, hospital formulary and therapeutic drug monitoring, budget preparation and implementation, clinical pharmacy and over the counter (OTC) sales.
3. Summarize pharmacy and therapeutic committee, drug information services, patient counseling, education and training program in the hospital as well as prescribing medication order.
4. Explain drug store management and inventory control, investigational use of drugs, as well as interpretation of clinical laboratory tests.
5. Elaborate medication adherence, interviewing patient medication history and community pharmacy management.

**Syllabus:
Hours**

Teaching hours: 45

UNIT I

10 Hours

Hospital and its organization- Definition, classification of hospital- primary, secondary and tertiary hospitals, classification based on clinical and non-clinical basis, organization as well as 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 of structure, location, layout and staff requirements, as well as responsibilities and functions of hospital pharmacists.

Adverse drug reaction- Classifications-excessive pharmacological effects, secondary pharmacological effects, idiosyncrasy, allergic drug reactions, genetically determined toxicity, 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, as well as reporting and management of adverse drug reaction.

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.

UNIT II

10 Hours

Drug distribution system in a hospital - Dispensing of drugs to inpatients, types of drug distribution systems, charging policy and labeling, 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, as well as 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 and medication interview forms.

Community pharmacy management- Financial, materials, staff, and infrastructure requirements.

UNIT III

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, computerized services, and storage and retrieval of information.

Patient counseling- Definition of patient counseling, steps involved in patient counseling 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, and role of pharmacist in the interdepartmental communication and community health education.

Prescribed medication order and communication skills- Prescribed medication order-interpretation and legal requirements, as well as communication skills-communication with prescribers and patients.

UNIT IV

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, and rational use of common over the counter medications.

UNIT V

07 Hours

Drug store management and inventory control- Organization 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, and methods used for the analysis of the drug expenditure.

Investigational use of drugs- Description, principles involved in classification, control, identification, role of hospital pharmacist, advisory committee.

Interpretation of Clinical Laboratory Tests- Blood chemistry, hematology, and urinalysis

Tutorials Teaching hours: 15

Tutorials will be based on above syllabus

Suggested Readings: (Latest Edition)

1. Merchant S. H., Quadry J. S., A textbook of hospital pharmacy. B. S. Shah Prakashan, Ahmedabad.
2. Parthasarathi G., Nyfort-Hansen K., Nahata M. C., A textbook of Clinical Pharmacy Practice- Essential concepts and skills. Orient Longman Private Limited, Chennai.
3. William E. H., Hospital pharmacy. Lea & Febiger, Philadelphia.
4. Bajaj T., Hospital Pharmacy. Career Publications, Maharashtra.
5. Scott L. T., Basic skills in interpreting laboratory data. American Society of Health System Pharmacists Inc, USA.
6. Parmar N. S., Health Education and Community Pharmacy. CBS Publishers & Distributers, Ahmedabad.
7. Journals:
 - a) Therapeutic drug monitoring. ISSN: 0163-4356, David Myers, Philadelphia.
 - b) Journal of pharmacy practice. ISSN: 0974-8326, Association of Pharmaceutical Teachers of India, Lucknow.
 - c) American journal of health system pharmacy. ISSN: 1535-2900, American Society of Health-System Pharmacists, USA.

L= Lecture, T= Tutorial, P= Practical, C= Credit

^ this is not an exhaustive list
