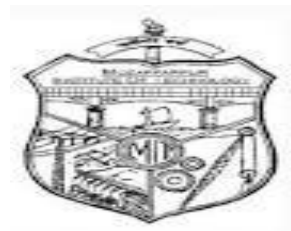


DEPARTMENT OF PHARMACY

M.I.T., MUZAFFARPUR



AFFILIATED TO

ARYABHATTA KNOWLEDGE UNIVERSITY, MITHAPUR, PATNA

PHARMACEUTICAL CHEMISTRY

DEPARTMENT OF PHARMACY

NAME OF FACULTY: Dr. O.P THAKUR

ASSISTANT PROFESSOR,

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Contact Details:

Email ID:

NAME OF COURSE:

COURSE CODE (T):091505

COURSE CODE (P):091505P

SEMESTER: V

ACADEMIC: 2018-2019

COURSE DESCRIPTIONS: PHARMACEUTICAL CHEMISTRY -IV
B. PHARM –FIFTH SEMESTER

1. Course Syllabus

Module-1

- .1. Organization and Structure: Organization of a hospital and hospital pharmacy, Responsibilities of a hospital pharmacist, Pharmacy and therapeutic committee, Budget preparation and Implementation.
2. Hospital Formulary: Contents, preparation and revision of hospital formulary.
3. Drug Store Management and Inventory Control: (a) Organization of drug store, Types of materials stocked, storage conditions. (b) Purchase and Inventory Control principles, purchase procedures, Purchase order, Procurement and stocking

Module-2

4. Drug distribution Systems in Hospitals: (a) Out-patient dispensing, methods adopted. (b) Dispensing of drugs to in-patients. Types of drug distribution systems. Charging policy, labelling. (c) Dispensing of drugs to ambulatory patients. (d) Dispensing of controlled drugs.
5. Central Sterile Supply Unit and their Management: Types of materials for sterilization, packing of materials prior to sterilization, sterilization equipment's, Supply of sterile materials.
6. Manufacture of Sterile and Nonsterile Products: Policy making of manufactural items, demand and costing, personnel requirements, manufacturing practice, Master formula Card, production control, manufacturing records.

Module-3

7. Drug Information Services: Sources of Information on drugs, disease, treatment schedules, procurement of information, Computerized services (e.g., MEDLINE), Retrieval of information, Medication error.

8. Records and Reports: Prescription filling, drug profile, patient medication profile, cases on drug interaction and adverse reactions, idiosyncratic cases etc.

9. Nuclear Pharmacy: Introduction to Radio- pharmaceuticals, radio-active half-life, Units of radio-activity Production of radio-pharmaceuticals, methods of isotopic tagging, preparation of radio-isotopes in laboratory using radiation dosimeters, radio-isotope generators, Permissible radiation dose level, Radiation hazards and their prevention, specifications for radio-active laboratory

Recommended Books:

1. Hospital Pharmacy-Hassan WE, Lec and Febiger Publication.

2. Text book of Hospital Pharmacy-Allowood MC and Blackwell,

3. Remington: The Science & Practice of Pharmacy, Lippincott Williams & Wilkins.

4. Collet & Aulton, Eds. : "Pharmaceutical Practice," ELBS

5. Owunwanne, Patel, and Sadek : "The Hand Book of Radiopharmaceuticals,"Chapman & Hall.

6. Shroff : "Professional Pharmacy," 1st ed., Part I (Ethics) & Part III (Hospital Pharmacy), Five Star Enterprises.

7. Aulton, Ed. : "Pharmaceutics –The Science of Dosage Form Design," ELBS,

8. Text Book of Hospital Pharmacy,” Blackwell Scientific Publications.
9. Merchant & Qadry : “Text Book of Hospital Pharmacy,” Shah Prakashan.
10. Chittion & Witcofski : “Nuclear Pharmacy,” Lea & Febiger. Aiiwodd & Fell

2. Program Objectives (POs)

The graduates of the programme will possess:

1. The knowledge of core concepts of Organization and Structure, hospital formulary & Drug Store Management and Inventory Control.
2. The knowledge of Drug distribution Systems in Hospitals, Central Sterile Supply Unit and their Management & Manufacture of Sterile and Nonsterile Products.
3. The knowledge Drug Information Services, Records and Reports, .Nuclear Pharmacy.

3. Course Outcomes (COs)

1. Recall the core concepts of Organization and Structure, hospital formulary & Drug Store Management and Inventory Control.
2. Explain Drug distribution Systems in Hospitals, Central Sterile Supply Unit and their Management & Manufacture of Sterile and Nonsterile Products.

Explanation of Drug Information Services, Records and Reports, .Nuclear Pharmacy.

4. Mapping of COs with Pos

PO	CO1	CO2	CO3	CO4
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5. Assessment Methods for Cos

5.1. Theory

S. No	Assessment Tools	Marks	Outcomes
1	Sessional Examination	20	CO1 CO2 CO3 CO4
2	Assignment	02	CO1 CO2 CO3 CO4
3	Presentation	02	CO1 CO2 CO3

			CO4
4	Quizzes	01	CO1 CO2 CO3 CO4
5	Attendance	05	NA
6	University Examination	70	NA

5.2. Practical

S. No	Assessment Tools	Marks	Outcomes
1	Attendance	05	CO1 CO2 CO3 CO4
2	Experiment valuation	10	CO1 CO2 CO3 CO4
3	Internal Viva- voce	05	CO1 CO2 CO3 CO4
4	University Practical Exam	30	CO1 CO2 CO3 CO4

6. Delivery Methodology

Outcomes	Methods	Supporting Tools
CO 1	Chalk-Talk, Interactive classroom, ICT usage, Case study discussion about diseases, Group discussions, Web based learning	Board, Laptop, Projector, You Tube, WhatsApp, Google,
CO2	Chalk-Talk, Interactive classroom, ICT usage, Case study discussion about	Board, Laptop, Projector, You Tube,

	diseases, Group discussions, Web based learning	WhatsApp, Google,
CO3	Chalk-Talk, Interactive classroom, ICT usage, Case study discussion about diseases, Group discussions, Web based learning	Board, Laptop, Projector, You Tube, WhatsApp Google,
CO4	Chalk-Talk, Interactive classroom, ICT usage, Case study discussion about diseases, Group discussions, Web based learning	Board, Laptop, Projector, You Tube, WhatsApp, Google,

7. Teaching plan

7.1. Theory

Lecture No.	Date of Delivery	Contents
1		Organization of a hospital and hospital pharmacy
2		Responsibilities of a hospital pharmacist
3		Pharmacy and therapeutic committee
4		Budget preparation and Implementation
5		Hospital Formulary
6		Drug Store Management and Inventory Control: (a) Organization of drug store
7		(b) Purchase and Inventory Control principles, purchase procedures, Purchase order, Procurement and stocking.

8		Drug distribution Systems in Hospitals: (a) Out-patient dispensing, methods adopted.
9		(b) Dispensing of drugs to in-patients. Types of drug distribution systems. Charging policy, labelling.
10		(c) Dispensing of drugs to ambulatory patients.
11		(d) Dispensing of controlled drugs.
12		Central Sterile Supply Unit and their Management
13		Types of materials for sterilization, packing of materials prior to sterilization
14		Sterilization equipment's, Supply of sterile materials.
15		Manufacture of Sterile and Nonsterile Products: Policy making of manufactural items.
16		demand and costing, personnel requirements.
17		manufacturing practice, Master formula Card.
18		production control, manufacturing records.
19		Drug Information Services: Sources of Information on drugs.
20		disease, treatment schedules.
21		Procurement of information, Computerized services (e.g., MEDLINE).
22		Retrieval of information, Medication error.
23		Records and Reports: Prescription filling, drug profile.
24		patient medication profile.
25		cases on drug interaction and adverse reactions, idiosyncratic cases etc.
26		Nuclear Pharmacy: Introduction to Radio-pharmaceuticals.

27		, radio-active half-life, Units of radio-activity Production of radio-pharmaceuticals.
28		methods of isotopic tagging, preparation of radio-isotopes in laboratory using radiation dosimeters.
29		radio-isotope generators.
30		Permissible radiation dose level.
31		Radiation hazards and their prevention.
32		specifications for radio-active laboratory.
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7.2. Practical

Exp. No	Experiment
1	Experiments based on sterilization of various types materials used in Hospitals
2	Practical's designed on the use computers in drug information centre,

	prescription filling, and documentation of information of drug interaction.
3	Experiments to illustrate handling of radio pharmaceutical products, measurement of radioactivity.
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