Las Positas College
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Course Outline for PHT 51

ADVANCED PHARMACY OPERATIONS

Effective: Fall 2010

I. CATALOG DESCRIPTION:
PHT 51 — ADVANCED PHARMACY OPERATIONS — 6.00 units

This course consists of advanced drug calculations, review of drug uses and side effects, intravenous drug and chemotherapeutic agent's admixtures, reading, evaluating, and filling prescriptions, compounding, assist pharmacist in medication therapy management, maintaining, inventory control systems, resume writing, job hunting and interview skills.

3.00 Units Lecture 3.00 Units Lab

Prerequisite
PHT 50 - PHARM TEC TRAINING I (INTRO)
with a minimum grade of C

Grading Methods:
Letter Grade

Discipline:

	MIN
Lecture Hours:	54.00
Lab Hours:	162.00
Total Hours:	216.00

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

III. PREREQUISITE AND/OR ADVISORY SKILLS:

Before entering the course a student should be able to:

A. PHT50
1. discuss the drug classification system;
2. explain common indication/usage of drugs;
3. interpret pharmacy laws, rules, and regulations;
4. compare and contrast common types of drug storage methods;
5. explain at least two different types of drug record keeping;
6. accurately apply pharmacy math to dosage calculations;
7. accurately solve dosage calculation;
8. integrate medical terminology into written and verbal communication with other medical professionals;
9. compose written and verbal communication using common medical abbreviations and symbols;
10. organize pertinent information collected from the patients;
11. analyze the patient needs in phone calls received from patients;
12. prescription orders for completeness, possible errors;
13. prepare medications according to directions from ordering agent;
14. perform inventory control procedures;

IV. MEASURABLE OBJECTIVES:

Upon completion of this course, the student should be able to:

1. explain the rules and prefixes of metric system;
2. demonstrate the use of basic units of weight, volume, and length;
3. perform percentage calculations;
4. demonstrate measurement of required doses using a syringe;
5. prepare parenteral medications including accurate labeling;
6. demonstrate use of relevant syringes for drug measuring and administering;
7. perform extemporaneous compounding;
8. demonstrate liquid measurement with graduates;
9. describe different types of mortars and pesties;
10. compare different types of laminar hoods.
11. calculate quantity and days supply of finished dosage forms for dispensing
12. measure or count quantity of finished dosage forms for dispensing
13. process and handle radio pharmaceuticals
14. perform calculations for radio pharmaceuticals

15. process and handle chemotherapeutic medications commercially available in finished dosage forms (for example, Efudex, mercaptopurine)
16. perform calculations for oral chemotherapeutic medications
17. process and handle investigational products
18. perform calculations for compounding medications
19. package finished dosage forms (for example, blister pack, robotic/automated dispensing vial)
20. affix label(s) and auxiliary label(s) to container(s)
21. assemble patient information materials (for example, drug information sheets, patient package inserts, Health Information Portability and Accountability Act [HIPAA] literature)
22. check for accuracy during processing of the prescription/medication order (for example, National Drug Code [NDA] number, bar code, and data entry)
23. verify the data entry, measurements, preparation, and/or packaging of medications produced by other technicians as allowed by law (for example, tech check tech)
24. prepare prescription or medication order for final check by pharmacist
25. prepare prescription or medication order for final check by pharmacy technician as allowed by law (for example, tech check tech)
26. complete inventory tasks including placing pharmaceuticals and medical equipment in inventory, removing and disposing properly of expired inventory.
27. maintain records for controlled substances or investigational products

V. CONTENT:
- A. Metric system and percentage
  1. Prefixes
  2. Basic unit for weight, height and length
  3. Weigh-volume percentage
  4. Weight-weight percentage
  5. Volume-volume percentage
  6. Pediatric dosage
- B. Parenteral Admixture
  1. Sterile product
  2. Laminar hoods operation and cleaning
  3. Small volume parenteral (SVPs)
  4. Large volume parenteral (LVPs)
  5. IV bolus, infusion, piggyback
  6. Ampules and vials
  7. Needles and syringes
  8. Aseptic technique
  9. Sharp container and bio-chemical hazardous disposal.
  10. Calculations
- C. Compounding prescription/medication order:
  1. Equipment and/or supplies
  2. Calculations for compounded admixtures
  3. Compounding by weight
  4. Compounding by percentage
  5. Calculations for extemporaneous compounds
  6. Compound medications for dispensing
- D. Inventory
  1. Place products in inventory
  2. Manage expired inventory
  3. Disposal of pharmaceuticals
  4. Controlled substances records
  5. Investigational products records
  6. Commercial calculations
- E. Communication and interpersonal skills
  1. Prejudice
  2. Cultural sensitivity
  3. Role of pharmacist in communication
- F. Resume writing, job hunting and interview skill
  1. Resume style, format and preparation
  2. Work experiences, volunteer
  3. Job searches
  4. Proper attire and job interview

VI. METHODS OF INSTRUCTION:
- A. **Lecture** -

VII. TYPICAL ASSIGNMENTS:
A. Research paper on USP 797 for IV room and aseptic technique B. Weekly reading assignments C. Cover letter and resume D. Group project on three Medicare Par D drug plan

VIII. EVALUATION:
- A. **Methods**
  1. Exams/Tests
  2. Quizzes
  3. Oral Presentation
  4. Class Participation
- B. **Frequency**
  1. Frequency:
     a. Two midterms
     b. Weekly quizzes
     c. One research paper
     d. One individual presentation
     e. One group project/presentation
     f. Comprehensive final examination

IX. TYPICAL TEXTS:

1. Johnston *Pharmacy Calculations: The Pharmacy Technician Series.*, Prentice Hall , 2003.
2. Johnston *Compounding : The Pharmacy Technician Series.*, Prentice Hall , 2003.
3. Finkel *Patient Care Management Lab.* 2nd ed., -, 2007.
4. Hunt *Training Manual for IV Admixture Personnel.*, -, 0.
5. Morton *Pharmacy Technician.* 3rd ed., Perspective Press, 2007.
6. Woodrow *Essential of Pharmacology for Health Occupation w/CD.* 5th ed., -, 2007.
7. Hopkins *APHA's Complete Math Review for Pharmacy Technician.* 2nd ed., -, 2006.

X. OTHER MATERIALS REQUIRED OF STUDENTS: