Course Prefix and Number: PHAR 102 Lab  
Credit Hours: 1

Course Title: Pharmacy Practice Lab

Course Prerequisites: CIS 099 or documentation of typing proficiency; enrollment in or completion of ALTH 116; departmental permission

Course Co-requisite: PHAR 104; PHAR 102 Lecture; PHAR 101

Textbooks: Ballington, D.; Pharmacy Practice for Technicians, 6th edition; The Pharmacy Technician, 6th edition

Course Description: This course for the pharmacy technician student provides instruction with hands-on experience in medication preparation, dispensing, calculations and business applications.

Learning Outcomes:

At the end of this course, the student will

I. The ability to utilize personal and interpersonal skills and knowledge appropriate to the role of the pharmacy technician.

A. Demonstrate ethical conduct in all job-related activities.
B. Present and image appropriate for the profession of pharmacy in appearance and behavior.
C. Communicate clearly when speaking and in writing.
D. Demonstrate a respectful attitude when interacting with diverse patient populations.
E. Apply self-management skills, including time management, stress management, and adapting to change.
F. Apply interpersonal skills, including negotiation skills, conflict resolution, and teamwork.
G. Apply critical thinking skills, creativity, and innovation to solve problems.

II. The foundational knowledge and skills necessary to function as a pharmacy technician in various pharmacy settings.

H. Demonstrate understanding of healthcare occupations and the health care delivery system.
I. Demonstrate understanding of wellness promotion and disease prevention concepts, such as use of health screenings; health practices and environmental
factors that impact health; adverse effects of alcohol, tobacco, and legal and illegal drugs.

J. Demonstrate commitment to excellence in the pharmacy profession and to continuing education and training.

K. Demonstrate knowledge and skills in areas of science relevant to the pharmacy technician’s role, including anatomy/physiology and pharmacology.

L. Perform mathematical calculations essential to the duties of the pharmacy technicians in a variety of contemporary settings.

M. Demonstrate understanding of the pharmacy technician’s role in the medication-use process.

III. Skills and knowledge necessary to assist the pharmacist in the correct handling of medication and medication order processing.

N. Assist pharmacist in collecting, organizing, and recording demographic and clinical information for direct patient care and medication-use review.

O. Receive and screen prescriptions/medication orders for completeness, accuracy and authenticity.

P. Assist pharmacists in the identification of patients who desire / require counseling to optimize the use of medications, equipment, and devices.

Q. Prepare non-patient specific medications for distribution.

R. Distribute medications in a manner that follows specified procedures.

S. Assist pharmacists in preparing, storing, and distributing medication products requiring special handling and documentation (e.g., controlled substances, immunizations, chemotherapy, investigational drugs, drugs with mandated Risk Evaluation and Mitigation Strategies {REMS}).

T. Practice effective infection control procedures, including preventing transmission of blood borne and airborne diseases.

U. Prepare patient-specific medication for distribution.

V. Maintain pharmacy facilities and equipment, including automated dispensing machines.

IV. The ability to accurately and safety perform sterile and non-sterile compounding.

W. Prepare medications requiring compounding of nonsterile products.

V. Performance of administrative skills appropriate to the role of a pharmacy technician.

X. Initiate, verify, and assist in the adjudication of billing for pharmacy services and goods, and collect payment for services.

Y. Apply procedures in purchasing pharmaceuticals, devices, and supplies.

Z. Apply accepted procedures in inventory control of medications, equipment, and devices.
AA. Explain pharmacy reimbursement plans for covering pharmacy services.

VI. Application of patient and medication safety in all aspects of the operation of a pharmacy.
   BB. Apply patient and medication safety practices in all aspects of the pharmacy technician’s roles.
   CC. Verify measurements, preparations, and/or packaging of medications produced by other healthcare professionals.
   DD. Explain pharmacist’s roles when they are responding to emergency situations and how pharmacy technicians can assist pharmacist by being certified as Basic Life Support Healthcare Providers.
   EE. Demonstrate skills required for effective emergency preparedness.
   FF. Assist pharmacists in medications reconciliation.

VII. Use of current technology in the operation of a pharmacy.
   GG. Utilize current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.

VIII. Compliance with regulatory issues in the operation of a pharmacy.
   HH. Compare and contrast the roles of pharmacist and pharmacy technicians in ensuring pharmacy department compliance with professional standards and relevant legal, regulatory, formulary, contractual, and safety requirements.
   II. Maintain confidentiality of patient information.

IX. Application of the principles of quality assurance in pharmacy operations.
   JJ. Apply quality assurance practices to pharmaceuticals, durable and nondurable medical equipment, devices and supplies.
   KK. Explain procedures and communication channels to use in the event of a product recall or shortage, a medication error, or identification of another problem.
   LL. Utilize current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.

To achieve the learning outcomes, the student will:

1. Lab 1: Introduction of the Pharmacy Technician Student to the Pharmacy Setting and Profession (B,F,H,K,M,P,CC)
   a. Demonstrate familiarity with the BPCC Pharmacy lab layout and equipment
   b. Demonstrate familiarity with the layout of a retail and institutional pharmacy
   c. Become familiar with the equipment and tools used in a pharmacy
d. Define OTC and prescription drugs

e. Differentiate between OTC, regular prescriptions, and controlled substance medications.

f. Read and interpret a manufacturer’s label on a medication bottle
g. Define the role of a pharmacy technician.

2. Lab 2: Prescription Interpretation, Labels, and Dispensing

(A,B,C,D,E,F,K,L,M,N,O,P,U,X,CC, HH)

a. Identify the parts of a prescription

b. Decode the DEA number
c. Interpret pharmacy abbreviations and medication abbreviations used in SIG codes
d. Translate medication SIG orders
e. Identify the parts of a prescription label
f. Demonstrate proper selection and placement of auxiliary labels for prescription labeling completion.
g. Utilize QS1 software to create and fill a prescription.
h. Practice placing completed prescription in bag with all necessary patient information sheets, such as patient drug information sheets, and Medication Guides.
i. Utilize the QS1 Point of sale system to ring up a patient, calculating the cost of the prescription to the patient, tax, and give a sales receipt using cash and third party payers.
j. Practice customer service and communication in various scenarios.
k. Capture a signature and offer patient counseling by the pharmacist.


a. Identify the three (3) types of pharmaceutical literature

b. Discuss HIPAA and OBRA 90s effect on information given and available to patients about their medication.
c. Use common references available to pharmacy technicians
d. Write a short paper discussing pharmaceutical processes, equipment, or laws
e. Introduce and use hard copy and online data bases for reference materials furnished by the college library and found in the classroom.


a. Utilize virtual pharmacy software to simulate a retail pharmacy experience including communication with customers, pharmacist, physicians, and insurance representatives

b. Utilize virtual pharmacy software to simulate a retail pharmacy experience to fill a prescription and prepare medication labels.

c. Utilize virtual pharmacy software to simulate a retail pharmacy experience to handle inventory and address store management tasks.

5. Lab 5: Pharmaceutical Calculations (B,L,CC)

a. Preform mathematical calculations utilized in pharmacy practice including ratio and proportion, percentages, decimal conversions, Roman numerals, calculation of day supply, dosing, flow rate, concentrations, and allegations.
6. Lab 6: Inventory Management (Part I) (B,Y,Z,FF,KK)
   a. Discuss prime vendor and just-in-time supplier method in procuring of drugs.
   b. Discuss alternate methods of obtaining medications shorted or for immediate use.
   c. Practice the procedure given for ordering and receiving pharmaceuticals.
   d. Discuss and practice inventory requirements for controlled drugs.
   e. Apply techniques on obtaining backordered medications.
   f. Identify what is classified as “expired”.
   g. List reasons and procedures to handle expired, discontinued and recalled medications in a pharmacy.
   h. Pull expired drugs off a designated section in a mock pharmacy.
   i. Explain the impact on cash flow of expired, discontinued and recalled medications.

7. Lab 7: Inventory Management (Part II) (A,B,C,D,E,F,G,L,Y,Z,FF,GG,KK)
   a. Utilize virtual pharmacy software to simulate inventory and materials management in a retail pharmacy.
   b. Utilize virtual pharmacy software to practice responding to customer requests, interacting with the pharmacist and co-workers, and handling everyday challenges of pharmacy operation.

8. Lab 8: Filling Prescriptions for the Hospital Setting (H,Q,R,T,V)
   a. Fill a prescription utilizing the card method of prescription fill
   b. Utilize the AutoPak II Prepacker to prepare a unit dose pack.
   c. Refill a medication cart
   d. Utilize a fax machine and scanner to transmit information
   e. Utilize the Medi Dose Unit-Dose system to print labels and seal medications using a no-heat method
   f. Replenish a crash cart
   g. Identify indications for each drug found in a crash cart.

   a. Identify the equipment and terminology used in compounding
   b. Calculate compounded ingredients needed for a prescription
   c. Demonstrate proper use of electronic and torsion balances
   d. Utilize proper technique and tools to weigh out correct amounts of required materials
   e. Select the appropriate tools and demonstrate the proper use of a mortar and pestle and other compounding tools
   f. Choose the proper dispensing container for each compounded pharmaceutical form of medication
   g. Generate and affix a proper medication label and auxiliary label for each compounded product.
   h. Demonstrate the ability to clean and store compounding tools and supplies

10. Lab 10: Compounding Products (Part I) (B,K,L,T,V,W)
    a. Produce a pharmaceutically elegant body cream.
    b. Produce a pharmaceutically elegant lip balm.
    c. Produce a pharmaceutical ointment.
d. Produce a pharmaceutical suspension.
e. Produce suppositories.

11. Lab 11: Compounding Products (part II) (B,K,L,T,V,W)
a. Utilize the ProFiller 100 to produce a capsule batch

a. Demonstrate skills and accuracy in the process of filling an Automated Drug Storage and Dispensing System.
b. Describe the rationale and procedures for using an Automated Drug Storage and Dispensing System for pharmacy products.
c. Discuss automation technology, terminology and concepts
d. Describe the reasons for automation use in the hospital setting
e. Identify primary roles and responsibilities of an automation technician.
f. Identify various reporting and maintenance functions for automation technology.
g. Examine a crash cart and medications stored inside.
h. Identify indications for each drug found in a crash cart.

a. Utilize virtual pharmacy software to simulate the most common medication errors encountered in practice.
b. Utilize virtual pharmacy software to simulate different types of high-risk, life-threatening medication errors.
c. Utilize virtual pharmacy software to demonstrate how errors occur and how to systematically reduce and prevent them.

14. Lab 14: Class Presentation (I,J,S,Z,HH)
a. Discuss perpetual count for schedule II pharmaceuticals 
b. Examine DEA forms for schedule II pharmaceuticals.
c. Exposure to Medication Therapy Management (MTM) for technician roles.
d. Discuss CE requirements for technicians
e. View examples of prescriptions which require an REMS 
f. Review the use of Informatics in the Pharmacy.
g. Prepare a 15 slide Power Point Presentation

15. Lab 15: Library Lab
a. Tour the learning commons area 
b. Examine the resources available for research 
c. Complete a checklist of references

Course Requirements: To earn a grade of “C” or higher the student must earn 70% of the total points for the course and meet all of the following course requirements.

- Complete a minimum of 80% of assigned lab activities and homework
- Earn a minimum average of 70% on the midterm and final exams
Course Grading Scale:

A- 90% or more of the total possible points and meet all course requirements.
B- 80% or more of the total possible points and meet all course requirements.
C- 70% or more of the total possible points and meet all course requirements.
D- 60% or more of the total possible points and meet all course requirements.
F- less than 60% of the total possible points or failure to complete at least 80% of assigned lab activities or less than 70% average on the midterm and final exams.

Attendance Policy: The college attendance policy is available at http://www.bpcc.edu/catalog/current/academicpolicies.html

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, certification exams and/or clinical fees.

Nondiscrimination Statement

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