Course Prefix and Number: PHAR 110L  Credit Hours: 1

Course Title: Sterile Products

Course Co-requisite: Phar 120, Phar 110

Textbooks: Johnston, Mike; The Pharmacy Technician Series: Sterile Products, 2nd edition

Course Description:
This course provides activities or laboratory exercises to support the PHAR 110 lecture course. NPTA National Sterile Products Certification will be offered during this course.

Learning Outcomes:
At the end of the course, the student will

I. The foundational knowledge and skills necessary to function as a pharmacy technician in various pharmacy settings.
   A. Perform mathematical calculations essential to the duties of the pharmacy technicians in a variety of contemporary settings.

II. Skills and knowledge necessary to function as a pharmacy technician in various pharmacy settings.
   B. Prepare non-patient specific medications for distribution.
   C. Practice effective infection control procedures, including preventing transmission of blood borne and airborne diseases.
   D. Assist pharmacist in preparing, storing, and distributing medication products requiring special handling and documentation.
   E. Prepare patient-specific medication for distribution.
   F. Maintain pharmacy facilities and equipment, including automated dispensing machines.
   G. Use material safety data sheets to identify, handle, and safely dispose of hazardous materials.

III. The ability to accurately and safely perform sterile and non-sterile compounding.
   H. Prepare medications requiring compounding of sterile products.
   I. Prepare medications requiring compounding of chemotherapy/hazardous products.

IV. Application of patient and medication safety in all aspects of the operation of a pharmacy.
   J. Apply patient and medication safety practices in all aspects of the pharmacy technician’s roles.

V. Use of current technology in the operation of a pharmacy.
K. Describe the use of current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.

VI. **Application of the principles of quality assurance in pharmacy operations.**

L. Apply quality assurance practices to pharmaceuticals, durable and nondurable medical equipment, devices and supplies; and

M. apply critical thinking, creativity, and innovation to solve problems.

To achieve the learning outcomes, the student will:

Lab 1: Personal Aseptic Technique (C, H, J)
1. Demonstrate proper handwashing technique.
2. Demonstrate the proper technique for garbing for sterile products preparation.

Lab 2: Introduction to Aseptic Manipulations (A, C, E, H, J)
1. Demonstrate the straight draw technique for injecting an IV bag.
2. Demonstrate the correct technique for reconstituting of a powder vial.
3. Demonstrate the proper technique for an ampule draw.
4. Demonstrate the proper technique for aseptically transferring drugs from a vial.

Lab 3: Introduction to Equipment, Supplies, and Regulations of Sterile Products Preparation (C, E, H, J)
1. Recognize the components of USP 797 and USP 800
2. Identify the various types of hoods, equipment, and tools used in the preparation of sterile products.
3. Identify the type of IV bags, piggyback bags, needles and syringes.

Lab 4: Microbiological Contamination (C, E, H, J, L, M)
1. Inject substances into IV bag using a needle and syringe.
2. Perform a culture test to determine contamination.

Lab 5: Application of Sterile Technique in Preparation of Sterile Products (A, C, E, H, J, L)
1. Demonstrate the ability to apply sterile technique
2. Utilize sterile technique to draw up a premixed liquid from a vial, reconstitute a practi-powder vial and inject a bag.
3. Complete a self-assessment of knowledge of sterile technique

Lab 6: Repeater Pump (B, C, E, F, H, J, K)
1. Utilize a repeater pump to fill syringes

Lab 7: TPN (A, C, E, F, H, J, K, L)
1. Demonstrate the ability to utilize a compounnder to produce a TPN
2. Correctly perform TPN calculations
3. Identify incompatibility and stability issues

Lab 8: Safe Handling of Hazardous Drugs (C, D, E, F, G, H, I, J, K, L)
1. Demonstrate knowledge of safe handling of hazardous drugs
2. Demonstrate the ability to perform manipulations of a mock hazardous substance.
3. Perform a hazardous manipulation inside an isolator hood.

1. Complete NPTA modules to achieve sterile products certification.

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.

- production of two intravenous products while demonstrating aseptic technique
- minimum 70% on the comprehensive written final exams
- minimum average of 70% in laboratory
- on the laboratory practical exam demonstrate competency on all identified skills as documented on checklist with a maximum of one instructor correction
- minimum of 70% on learning assessments for modules 1-10 of the national sterile products certification

Course Grading Scale

A- 90% or more of total possible points and meet all course requirements

B- 80% or more of total possible points and meet all course requirements

C- 70% or more of total possible points and meet all course requirements

D- 60% or more of total possible points and meet all course requirements

F- less than 60% of total possible points or failure to many all of the course requirements.

Attendance Policy: The college attendance policy, which is available at http://www.bpcc.edu/catalog/current/academicpolicies.html, allows that “more restrictive attendance requirements may apply to some specialized classes such as laboratory, activity, and clinical courses because of the nature of those courses.” The attendance policy of the Pharmacy Tech program is described in the Pharmacy Tech Clinical Handbook.

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

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T.Wynn/ Feb 2017