

**PHM 118
STERILE PRODUCTS**

COURSE DESCRIPTION:

Prerequisites: PHM 110, PHM 111, and PHM 115

Corequisites: Pqpg

This course provides an introduction to intravenous admixture preparation and other sterile products, including total parenteral nutrition and chemotherapy. Topics include aseptic techniques; facilities, equipment, and supplies

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- III. Facilities, equipment, and supplies used in admixture preparations
 - A. Overall organization of the sterile compounding area
 - B. Use of horizontal and vertical laminar flow hoods, biological safety cabinets, automated pumps and compounding equipment
 - C. Use of syringes, needles, vials, ampules, double needles, and filters
 - D. Flexible plastic bags and bottles

- IV. Laminar flow hoods
 - A. Theory of laminar air flow
 - B. Positioning of supplies in horizontal flow hood
 - C. Positioning of supplies in vertical flow hood
 - D. Use of biological cabinet
 - E. Practice aseptic compounding in the horizontal and vertical flow hoods and biological safety cabinets

- V. Immunizations and irrigating solutions
 - A. Storage of biological products
 - B. Commonly used irrigating solutions
 - C. Compounding irrigating admixtures

- VI. Intermittent and continuous infusions
 - A. Intravenous administration of IV fluids
 - B. Types of available IV fluids used in intermittent and continuous infusions
 - C. Types of medications given by IV infusion
 - D. Appropriate labeling and recordkeeping
 - E. Admixture calculations
 - F. Flow rate calculations
 - G. Quality assurance documentation
 - H. Medication order interpretation and Ascend-IP computer entry of orders
 - I. IV administration sets
 - J. Assembly of Add-Vantage systems

- VII. Stability and incompatibility issues related to admixtures
 - A. Assigning expiration dates to admixtures
 - B. Products requiring protection from light
 - C. Types of admixture incompatibilities
 - D. Reference sources on compatibility and incompatibility information
 - E. Visual inspection of admixtures

- VIII. Total parenteral nutrition admixtures
 - A. Order interpretation and Ascend-IP computer entry of medication order
 - B. Review of TPN calculations
 - C. Typical solutions and additives used in TPN compounding
 - D. Aseptic techniques used in TPN compounding

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- E. Gravity method vs. automated compounding equipment
 - F. Labeling and recordkeeping
 - G. Quality assurance documentation
 - H. Indications of use for TPN therapy
 - I. Indications of use for PPN (partial/peripheral parenteral nutrition)
 - J. Adverse reactions associated with TPN/PPN therapies
 - K. Electrolyte incompatibility concerns
- IX. Chemotherapy preparations
- A. Aseptic manipulations within biological safety cabinets
 - B. Safe handling and disposal of cytotoxic drugs
 - C. Use of hydrophobic filter needle units
 - D. Order interpretation and Ascend-IP computer entry of medication orders
 - E. Product labeling and recordkeeping
 - F. Quality assurance documentation
 - G. Importance of product and personnel protection
 - H. Commonly prescribed chemotherapeutic agents

REQUIRED TEXTBOOKS AND MATERIALS:

Manual for Pharmacy Technicians. American Society of Health-System Pharmacists. 4th ed. 2010.

Baxter's Blue Book-Training Manual for Intravenous Admixture Personnel. 6th edition 2009; enrolled students will have online access to text.

STATEMENT FOR STUDENTS WITH DISABILITIES:

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