

Certified Pharmacy Technician

Course Objectives / Syllabus

Course Description: Pharmacy technology is a one year course which focuses on the educational requirements to become a certified pharmacy technician. The goal is for students to be able to pass the state examination to become a Certified Pharmacy Technician.

Topics Covered:

1. Orientation: 3.25 classroom instructional hours & 1.5 projected homework hours.

- a. **Certification, Licensure, Registration** – introduces basic definitions the student will need to know
- b. **The PTCB & the Certification Exam** – discusses the founding members & purpose of the PTC Board & examines the PTCB certification exam structure & content & the time allowed for the exam.
- c. **Recertification** – study the requirements & process needed to maintain certification & the requirements for re-certification.

2. Federal Law: 13.5 classroom instructional hours & 3 projected homework hours.

- a. **Pharmacy Laws** – Discusses different laws & legislation that affect the pharmacy industry.
- b. **Federal Law & Drugs** – Discusses the importance of the Controlled Substance Act of 1970 & shows how this act regulated the manufacturing, distribution & dispensing of controlled substances.
- c. **Rules for Controlled Substance Prescriptions** – outlines filing procedures, maintaining records according to State & Federal Laws, & drug substitution requirements.
- d. **DEA Number Verification** – Illustrates how a Doctor's DEA Number is determined & its purpose.
- e. **Schedule II Drugs** – discusses storage requirements for Schedule II Drugs.
- f. **Investigational Drugs** – defines the 4 phases of Investigational Drugs.

3. Medication Review: 19 classroom hours & 20 projected homework hours.

- a. **Doses & Terminology** – discusses the different terms used in pharmacology & provides an in-depth review of the different types of medication dosages.
- b. **Central Nervous System** – A medication review of drug interactions & the mechanism of action on the Central Nervous System.
- c. **Peripheral Nervous System** – a medication review of drug interactions which affect the Peripheral Nervous System.
- d. **Hormones** – A medication review of drugs classified as hormones.
- e. **Cardiovascular Drugs** – a medication review of drugs that affect the cardiovascular system.
- f. **Renal Drugs** – a medication review of drugs which affect the renal system & a basic review of renal definitions.
- g. **Cancer Chemotherapy Drugs** – a medication review of drugs classified as chemotherapy drugs & the therapeutic classes used in the treatment of cancer.
- h. **Blood & Blood Formation** - a medication review of blood & blood formation drugs & drug interactions.
- i. **Vitamins** – a medication review of vitamins & their drug interactions.

4. Aseptic Techniques: 13 classroom hours & 7 projected homework hours.

- a. **Definitions** – explores basic terminology & environmental contamination concerns in performing aseptic technique procedures.
- b. **Syringes** – explores the various types of syringes, needle assembly, & how to size the needle.
- c. **Parenteral** – a review of various injection types, & the 4 most widely used parenteral routes used.
- d. **Techniques of Sterile Compounding** – a review of sterile compounding procedures provide a broad overview of skills needed to perform sterile compounding.
- e. **Solutions** – Irrigation solutions, parenteral solutions & TPNs are examined.
- f. **Parenteral Antineoplastic Agents** – a general overview of preparation & the safe handling of antineoplastic agents used in the treatment of cancer.
- g. **Stability Considerations for Parenteral Products** – steps of parenteral admixture order for receiving the order to delivering to the patient are discussed.

5. Calculations: 20 instructional classroom hours & 22 projected homework hours.

- a. **Metric Measurements** – the units of measurement for the Metric, Avoirdupois, & Apothecary system.
- b. **Abbreviations** – study the abbreviations used in prescriptions and the pharmacy industry.
- c. **Roman Numerals** – the eight primary Roman Numerals are illustrated w/the emphasis on “rules” for adding & subtracting.
- d. **Fractions, Decimals & Percent** – provide the student with a basic understanding of fractions, decimals & percentages.
- e. **Temperature Conversions** – study of the 2 widely used methods for Fahrenheit – Centigrade temperature conversions.
- f. **Ratio Proportions** – determining the proper amount of solution to mix w/drug active ingredients.
- g. **Quantities, Dilutions, & Concentrations** – discusses the different methods for determining quantities of ingredients & concentration of drugs when preparing or dispensing drug products.
- h. **Dosage Regimen** – learn to calculate the amount of drug product to dispense or the number of days’ supply from a dosage regimen.
- i. **IV Flow Rates** – learn to determine the flow rate of an IV solution when given the total volume, total time of administration, & the drops delivered per ml by the administration set.
- j. **Powder Volumes** – learn how to calculate powder volume & how to use this information in reconstituting dry powders for suspension or solution.
- k. **Pricing** – review of various pricing methods used in retail pharmacy.

6. Pharmacy Operations: 13.5 classroom hours & 7.5 projected homework hours.

- a. **Basic Facts in Pharmacy** – learn the generic and trade names given to each drug, identify drug containers, & learn NDC codes, mnemonic codes, & the importance of understanding different expiration date formats.
- b. **Assisting the Pharmacist** – study how prescriptions can be transmitted to a pharmacy & requirements for certain classes of drugs is discussed.
- c. **General prescription Duties** – details of what should be collected for a proper patient profile is discussed along with formularies, measuring & counting techniques, compounding & the different classes of balances are reviewed.
- d. **Medication Distribution & Inventory Control** – define key terms used in inventory management. Review proper ordering techniques.
- e. **Third Party Reimbursement** – a general overview of processes used for reimbursement & different payment plans currently offered is discussed.