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.

s c. ***Parenteral*** – a review of various injection types, & the 4 most widely used parenteral routs 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.