

Pharmacy Technician

LEARNING OBJECTIVES



The Pharmacy Technician program was developed by a board-certified pharmacist and pharmacy technicians with years of experience to prepare students for the Pharmacy Technician Certification Board (PTCB) Exam. The program is one of the only online pharmacy technicians programs accredited by the American Society of Health-System Pharmacists (ASHP)/Accreditation Council for Pharmacy Education (ACPE). In addition, Walgreens and CVS Pharmacy have partnered with CareerStep to provide externs for their locations nationwide. The learning objectives outlined below provide a map of the knowledge and skills you'll gain as you complete each module.

Program Orientation (1 Hour)

- Identify the elements, expectations, and requirements of the program.
- Navigate the program using the pages, menus, and buttons provided.
- Use the program tools, including the study planner, gradebook, and completion report, and be able to contact CareerStep via phone, email, forums, chat rooms, and social media.
- Identify and use program resources.

Working at a Pharmacy (3 Hours)

- Identify industry basics as well as tools and trends of both retail and institutional pharmacy settings.
- State the occupational conditions and expectations of pharmacy technicians and the differences between the roles and responsibilities of pharmacists and pharmacy technicians.

Preparing for the Workforce (5 Hours)

- Differentiate between registration, state licensure, and certification. Be able to state the differences between an externship and on-the-job training.
- Compare and contrast the exams (PTCE and ExCPT) required to become nationally certified. State the requirements for continuing education and recertification.

Computer Fundamentals (7 Hours)

- Identify basic computer hardware and interpret system requirements.
- Navigate a Windows operating system environment and install and operate basic software utilities.
- Use a web browser to navigate between websites in multiple tabs or windows, send and receive email, and access search engines to find information and troubleshoot basic computer problems.
- Recognize basic technologies related to an office environment.

Medical Word Building (15 Hours)

- Identify common medical prefixes, roots, and suffixes.
- Identify and properly combine word parts to create medical terms.

Basic Anatomy (20 Hours)

- Identify and describe the basic structure and functions of human body systems.
- Identify and define basic anatomical terms related to the basic structure and function of human body systems.

Mastering Medical Language (23 Hours)

- Pluralize common medical words.
- Define common medical slang, jargon, and foreign terms.
- Distinguish between common similar medical words and word parts.
- Recognize common medical abbreviations and their meanings.

Pharmacology (55 Hours)

- Distinguish between drugs of different classifications and their corresponding rules and regulations.
- Distinguish between common medication dosage forms.
- Distinguish between different topical, enteral, and parenteral administration routes and their corresponding methods and recommendations.
- Properly identify common generic and brand name drugs and their basic functions from the following categories: cardiovascular, digestive, endocrine, immune, pain management, psychological, central nervous system, respiratory, topical/ophthalmic/otic, chemotherapy, and alternative medications.
- Use legitimate resources to find drug definitions, dosages, pronunciations, and other related information.

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Pharmacy Law, Regulations, and Standards (15 Hours)

- Identify and describe federal laws affecting pharmacy practice and controlled substances.
- Identify and describe current pharmacy-related regulations and standards, including safety, accuracy, dispensing, and ethical behavior.
- Distinguish between the five schedules of controlled substances.

Business of Pharmacy (17 Hours)

- Describe proper customer service procedures related to professional communication, appearance, duties, and limits.
- Describe and differentiate between prescription insurance plans, including Medicaid, Medicare Part D, and Workers' Compensation. State the proper procedures for filing claims and accepting payment.
- Identify procedures and regulations related to proper retail and institutional pharmacy inventory management, including purchasing, temperature-controlled storage, receiving, returns, and recalls.

Pharmacy Lab Kit (1 Hour)

- Explain expectations and procedures for obtaining and using your lab kit.
- Navigate and operate interactive simulation exercises.

Pharmacy Calculations (60 Hours)

- Calculate fractions and decimals as well as convert numerals from Roman to Arabic.
- Apply principles of algebra to solve an equation for an unknown variable x .
- Recognize and convert metric system measurements.
- Use knowledge of significant figures to estimate appropriate drug dosages.
- Convert numbers between ratio/proportion, percent, and decimal format.
- Calculate appropriate doses based on age, weight, and body surface area.
- Convert measurements of weight, volume, and temperature between household, metric, apothecary, and grains.
- Calculate appropriate compounding measurements involving concentrations, dilutions, stock preparations, compound formulas, allegations, and aliquot measurements.

- Calculate appropriate measurements for injectable and intravenous medications involving ratio strength, milliequivalents, units, solutions, powders, flow rates, drop sets, IV piggybacks, and pediatric parenterals.
- Calculate appropriate values related to overhead, gross/net profit, discounts, wholesale prices, insurance reimbursements, inventory, and turnover rate.

Prescriptions (25 Hours)

- List each component of creating and reviewing a patient profile.
- Identify physiological and social causes of medical errors and list prevention methods.
- Perform a proper check for the validity of a prescriber's DEA number.
- Verify the completeness of a prescription and interpret and process special types of prescriptions.

Nonsterile Compounding (30 Hours)

- Differentiate between sterile and nonsterile compounding and identify the terminology, uses, requirements, regulations, and documentation of nonsterile compounding.
- Define Good Compounding Practices (GCP) and list the 14 standards required by the United States Pharmacopeia (USP) for both nonsterile (Chapter 795) and sterile (Chapter 797) compounding.
- Identify pharmaceutical compounding equipment and its appropriate use, and be able to describe the techniques used in weighing, measuring, and mixing compounded drugs.
- Identify the proper methods and ingredients for compounding solids, and compare and contrast the steps in the processes for compounding powders, capsules, lozenges, and suppositories.
- Identify the proper methods and ingredients for compounding dispersions, and compare and contrast the steps in the processes for creating suspensions, ointments, creams, and gels.

Community Pharmacy Practice (35 Hours)

- Define the responsibilities of a pharmacy technician in community pharmacy settings, including population health, common over-the-counter medication restrictions, common diabetes management supplies awareness, and Medicare Part B supplies.
- Use pharmacy management software to enter patient data, process prescriptions refills, process third-party claims, process refill authorizations, verify cash pricing, and produce an audit log.

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Institutional Pharmacy Practice (45 Hours)

- Identify the unique organizational and functional elements of an institutional pharmacy. Name the roles and responsibilities of the following: Director of Pharmacy, Pharmacy and Therapeutics (P&T), Infection Control, and Institutional Review Board (IRB).
- List the appropriate steps to prepare oral syringes; check and fill the medication cart, floor stock, and crash cart; and fill and record narcotic floor stock and the automated drug storage and dispensing system (ADSDSs).
- Describe the elements of proper aseptic technique, including personal hygiene, garb, hand washing, USP 797 standards, environmental standards, LAFWs, and hood cleaning.
- Identify sterile compounding terms and procedures related to ampules, vials, syringes, needles, parenteral solutions, and sterile powder drug vials.
- Identify proper procedures for handling hazardous agents, including chemotherapy drugs and radiopharmaceuticals.

Externship Preparation (7 Hours)

- Understand expectations and procedures for passing off the labs in the kit.
- Apply and prepare for the pharmacy technician externship.

Virtual Pharmacy Labs (25 Hours)

- Verify DEA numbers.
- Dispense and report theft of controlled substances.
- Follow protocol for drug recalls, expired drugs, and destruction of controlled substances.
- Store, order, and receive medication.
- Understand unit dose preparation.
- Follow protocol for labeling mix-ups and incorrectly dispensed drugs, and differentiate between drugs that look and sound alike.
- Explain the effects of stress and fatigue and violations in the workspace.
- Use abbreviations and symbols accurately and timely.
- Explain the effects of specific drug interactions.
- Follow protocol with reporting drug problems.
- Assist a variety of customers, such as non-English speaking.

- Manage staff members with diverse perspectives and personalities.
- Manage situations that require alternate drugs and exceptions.
- Manage drug and supply inventory.
- Explain requirements for compounding medications.

Final Exam Preparation (1 Hour)

- Identify the steps to effectively prepare for and access the final exam.
- Identify the format, restrictions, and policies of final exams, including scoring, retakes, allowed resources, and time limits.

Externship (130 Hours)

- Effectively and professionally communicate and interact with coworkers and patients.
- Demonstrate scientific and industrial knowledge of the pharmacy profession and the role of the pharmacy technician.
- Assist the pharmacist with prescription screening and distribution, medication preparation, and maintaining pharmacy safety procedures.
- Prepare medications requiring the compounding of sterile, non-sterile, or chemotherapy/hazardous products.
- Perform purchasing and ordering of supplies, and understand reimbursement and billing for pharmacy services.
- Demonstrate preparedness for emergency situations and assist the pharmacist in ensuring medication safety practices.
- Describe the use of current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.
- Identify the responsibility of pharmacists and pharmacy technicians in ensuring regulatory compliance and maintaining patient privacy.
- Apply quality assurance practices and follow protocol in the event of supply shortages and quality breaches.