PHARMACY TECHNICIAN

Students completing this certificate will acquire skill in refilling prescriptions, maintaining proper storage and security conditions for drugs, assisting customers, cleaning and maintaining equipment and work areas, and entering inventory data into a computer system.
Entry Level employment opportunities may include health and personal care store worker, outpatient care, grocery store pharmacy worker, and employment in government sectors.

Contact Information

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Certificates

- Certificate of Achievement in Entry-Level Pharmacy Technician (https://catalog.cos.edu/areas-study/pharmacy-technician/certificate-achievement-pharmacy-technician/)

For a complete list of courses and descriptions visit: COURSES (https://catalog.cos.edu/course-descriptions/)

PT 200 Introduction to Pharmacy Technology **2unit(s)**
Hours: 2 Lecture/Discussion
This 2-unit lecture course provides an overview of the COS Pharmacy Technician Program. Introduces students to the profession of pharmacy. Explores the roles and opportunities open to pharmacy clerks and technicians in various practice settings. Provides an overview of various types of pharmacies and the patients that they serve, the roles and responsibilities of pharmacists and pharmacy technicians, and the education and training required. Current standards of pharmacy practice as defined by California State Board of Pharmacy, Pharmacy Technician Certification Board and American Society of Health-Systems Pharmacists will be examined. Students will be introduced to: pharmacy vocabulary, pharmaceutical calculation, dosage forms, drug classification systems, prescription labeling and pharmacy laws and ethics.

PT 215 Pharmacy Outpatient Practice **3unit(s)**
Hours: 2 Lecture/Discussion Hours:
3 Lab

Introduction to technical aspects of drug distribution for out-patient pharmacy practice. This course presents duties and responsibilities of the pharmacy technician working in an ambulatory setting. Emphasized topics include: inventory receipt and control; prescription and medication order screening; computerized prescription processing; medical insurance payment procedures; patient information confidentiality and relevant legal and ethical issues; extemporaneous compounding principles; over the counter drug indications and contraindications; and effective customer relations. Students will develop the knowledge and skills required to work with pharmacists, other clinical staff, and patients. Students will simulate skills in lab to: utilize pharmacy references, create and maintain patient profile records, reconcile and file inventory records, prepare and maintain records related to controlled substances, process, fill and file prescriptions, operate cash register, use ordering software, training software modules, pharmacy specific websites for dispensing programs, prior authorizations, accounts receivable, medication repackaging, extemporaneously compound non-sterile products, preparation of oral syringes, identification of home health supplies and customer service.
Prerequisites: PT 200 or both ENGL 001 and MATH 044 (or a more advanced math course at COS with a minimum grade of C or an equivalent course at a regionally accredited college with a minimum grade of C or eligibility for MATH 035 or higher at COS).
Corequisites: PT 216, PT 217, PT 218, and PT 402 must be taken concurrently.

PT 216 Pharmacology 1 **3unit(s)**
Hours: 3 Lecture/Discussion
This course introduces pharmacy technician students to the evolution of medicinal drugs, basic principles of pharmacology and dispensing medication. Anatomy, physiology, pathology, and pharmacology of the following classes of pharmaceutical products: Antibiotics, Antifungals, Antivirals, Vaccines, Anesthetics, Narcotics, Psychiatric Drugs, Medications for Central Nervous System Disorders, Respiratory Drugs. Drugs are discussed in the context of drug classes, indications, mechanics of action, disease types, and body systems. The goal is to provide pharmacy technicians with sufficient background information needed to analyze health care information so that they will be able to play a key role in various pharmacy support functions. Top 1-100 of the top 200 drugs will be covered during this course.
Prerequisites: PT 200 or both ENGL 001 and MATH 044 (or a more advanced math course at COS with a minimum grade of C or an equivalent course at a regionally accredited college with a minimum grade of C or eligibility for Math 035 or higher at COS).
Corequisites: PT 215, PT 217, PT 218, and PT 402 must be taken concurrently.

PT 217 Pharmacy In-Patient Operations **3unit(s)**
Hours: 2 Lecture/Discussion Hours:
3 Lab

This course presents duties and responsibilities of the pharmacy technician working in an institutional setting. Emphasizes in-patient hospital pharmacy practice and other related practice settings (such as Homecare and Nursing Home or Long-Term Care) Topics include: inpatient oral medication distribution systems, institutional organization and function, pharmacy law, quality Improvement, an introduction to aseptic technique, laminar flow hoods, IV admixtures, materials management, and relevant legal and ethical issues. A laboratory experiential component provides a hands-on experience in medication order processing, medication preparation, inpatient drug distribution using manual and automated systems and electronic and manual record-keeping. Students develop the knowledge and skills required to work with pharmacists and other clinical staff.
Prerequisites: PT 200 or both ENGL 001 and MATH 044 (or a more advanced math course at COS with a minimum grade of C or an equivalent course at a regionally accredited college with a minimum grade of C or eligibility for MATH 035 or higher at COS).
Corequisites: PT 215, PT 216, PT 218, and PT 402 must be taken concurrently.

PT 218 Pharmacy Calculations **3unit(s)**
Hours: 2 Lecture/Discussion Hours:
3 Lab

This course provides an in-depth exploration of essential pharmacy calculations performed in various pharmacy settings. Includes medical terminology, weights and measures, the metric, avoirdupois, and apothecary systems of measurement and interconversion of units in the metric and common systems of measurement. Pharmacy calculations typically used daily in retail, closed-door, home health, compounding and institutional pharmacies are emphasized. Topics include ratio and proportion, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution and concentration, aliquots, specific gravity and density, and flow rates. Business terms and business math skills, purchasing needs, profit margins, and inventory control are also covered. A laboratory experiential component provides a hands-on experience to develop problem-solving skills, including how to use information from written prescriptions, hospital orders, and labels of products available in a pharmacy. Upon completion, students should be able to correctly perform calculations required to properly prepare a medication order.
Prerequisites: PT 200 or both ENGL 001 and MATH 044 (or a more advanced math course at COS with a minimum grade of C or an equivalent course at a regionally accredited college with a minimum grade of C or eligibility for MATH 035 or higher at COS).
Corequisites: PT 215, PT 216, PT 217, and PT 402 must be taken concurrently.

PT 225 Pharmacy Seminar **3unit(s)**
Hours: 2 Lecture/Discussion Hours:
3 Lab

This course is designed to introduce pharmacy technician students to the personal and professional development skills necessary for effective participation in a healthcare team as strong, capable leaders in the pharmaceutical industry. Subjects include: communication skills utilized in various healthcare settings, including verbal and non-verbal communication, listening, speaking, reading, professional courtesy, professional behavior, confidential communications, multi-cultural awareness, diversity of age:, gender, race, orientation, ethnicity, religion, ability, language, socioeconomics and literacy. Medication errors, upset patients and providers, customer service, externship readiness and career advancement are discussed. This course will also explore the benefits of professional mentoring relationships and professional organization resources. A laboratory experiential component provides a hands-on experience for role-play of pharmacy specific scenarios to facilitate development of self-awareness, empathy and respect for patients, family members and all members of the health care team.. Students will practice patient and healthcare team interactions, participate in mock interviews, write a cover letter, prepare a resume and complete a State Board of Pharmacy application for registration as a pharmacy technician.
Prerequisites: PT 215, PT 216, PT 217, and PT 218 or equivalent college course with a minimum grade of C.
Corequisites: PT 226, PT 227, PT 228, PT 229, and PT 404 must be taken concurrently.

PT 226 Pharmacy Law and Professional Standards **2unit(s)**
Hours: 2 Lecture/Discussion
This course is designed to familiarize the pharmacy technician student with current state and federal laws and regulations, as well as, ethics and standards of professional behavior that govern pharmacy practice. Pharmacy law topics will include: Federal and California pharmacy laws and regulations, ethics and how they define and relate to pharmacy technician roles, patient safety, pharmacist and technician training requirements, California Board of Pharmacy, human resources issues, substance abuse, regulatory agencies: DEA, OSHA, EPA, NIOSH, FDA,etc, security and risk management, medication safety, root-cause-analysis and error reporting. Professional standards topics will include: professional organizations, pharmacy technician oath, professional standards, cultural competence, organizational culture, career-long requirements for professional and personal development and community perceptions of the pharmacy technician's role in healthcare.
Prerequisites: PT 215, PT 216, PT 217, and PT 218 or equivalent college course with a minimum grade of C.
Corequisites: PT 225, PT 227, PT 228, PT 229, and PT 404 must be taken concurrently.

PT 227 Pharmacology 2 **3unit(s)**
Hours: 3 Lecture/Discussion
Anatomy, physiology, pathology, and pharmacology of the following classes of pharmaceutical products: Gastrointestinal and related disorders, Renal System, Cardiovascular Diseases, Muscle and Joint Disease, Pain, Hormonal Disorders, Topical, Ophthalmic, otic, Chemotherapy, Vitamins, Electrolytes, Nutritional Status, antidotes and bioterrorism. Drugs are discussed in the context of drug classes, indications, mechanics of action, disease types, and body systems. The goal is to provide pharmacy technicians with sufficient background information needed to analyze health care information so that they will be able to play a key role in various pharmacy support functions. Top 101-200 of the top 200 drugs will be covered during this course.
Prerequisites: PT 215, PT 216, PT 217, and PT 218 or equivalent college course with a minimum grade of C.
Corequisites: PT 225, PT 226, PT 228, PT 229, and PT 404 must be taken concurrently.

PT 228 Pharmacy Technician Externship 1 **2unit(s)**
Hours: 7.5 Activity
This course is an externship program based in a live pharmacy setting designed to give the student practical experience in the basic roles the technician fulfills in the pharmacy. Students will experience pharmacy practice and operations under the supervision of a pharmacist. This work-based training enables the student to apply specialized occupational theory, skills, and concepts. This environment also presents the student with numerous opportunities to improve communication, problem-solving and critical thinking skills. Students will participate in a weekly online group discussion to maximize the externship experience and to complete their preparation for transition to the workplace.
Prerequisites: PT 215, PT 216, PT 217, and PT 218 or equivalent college course with a minimum grade of C.
Corequisites: PT 225, PT 226, PT 227, PT 229, and PT 404 must be taken concurrently.

PT 229 Self-Care and Wellness **2unit(s)**
Hours: 2 Lecture/Discussion
This lecture course will introduce the concept of self-care and commonly utilized self-care pharmacy products and services. Topics will include: over-the-counter medications and devices, drug test kits, diabetic supplies, durable medical equipment, emergency birth control, family planning, weight loss products, incontinence products and medical supplies. Alternative medicine, complementary medicine, homeopathy nutraceuticals and point of care testing will also be covered. Students will learn the pharmacy technician roles assisting patients with self-care including: identifying patients who need assistance, patient confidentiality, triage, listening skills, when to access the pharmacist, conveying information to the pharmacist, referring the patient to the pharmacist, patient advocacy, special orders and patient education.
Prerequisites: PT 215, PT 216, PT 217, and PT 218 or equivalent college course with a minimum grade of C.
Corequisites: PT 225, PT 226, PT 227, PT 228, and PT 404 must be taken concurrently.

PT 402 Pharmacy Technician Skills Lab 1 **0unit(s)**
Hours: 1 - 6 Lab
This course provides students additional directed learning and supervised use of the Pharmacy Technology laboratory time to assist in developing the skills necessary to successfully complete Pharmacy Out-Patient Operations, Pharmacy In-Patient Operations and Pharmacy Calculations. The student will gain knowledge from instructor demonstration, a variety of written and electronic media, equipment, supplies, computers and simulation. Lab hours verified by sign-in.
Corequisites: PT 215, PT 216, PT 217, and PT 218 must be taken concurrently.

PT 404 Pharmacy Technician Skills Lab 2 **0unit(s)**
Hours: 1 - 6 Lab
This course provides students additional directed learning and supervised use of the Pharmacy Technology laboratory time to assist in developing the skills necessary to successfully complete Pharmacy Seminar and Pharmacy Externship. The student will gain knowledge from instructor demonstration, a variety of written and electronic media, equipment, supplies, computers and simulation. Lab hours verified by sign-in.
Corequisites: PT 225, PT 226, PT 227, PT 228, and PT 229 must be taken concurrently.