PHARMACY TECHNICIAN

Diploma Program
33 weeks – 760 hours, 48 credit units

The Pharmacy Technician diploma program provides both technical and practical training which will enable the technician, upon certification, licensure or registration, to function as a competent entry-level pharmacy technician to the licensed pharmacist. The program provides the student with the basic knowledge of and practice in pharmacy calculations, drug distribution systems, and preparation of sterile dosage forms. Computer skills necessary in pharmacy practice will be utilized, and both pharmaceutical and medical terminology and anatomy and physiology are also covered. The program emphasizes theory, as well as hands-on practice, followed by an externship which prepares the student for the actual work setting. Upon completion of this program, the graduate will be fully prepared to take the national pharmacy technician certification exam offered by the Pharmacy Technician Certification Board (PTCB).

Pharmacy services have expanded and grown at an accelerated rate. Pharmacy Technicians play a major role in pharmacy operations and in the overall healthcare work force. As pharmacy services continue to grow, with new services being offered, new drugs entering the market, and as comprehensive drug information becomes a necessity, the need for highly-trained pharmacy technicians increases.

Many of the traditional pharmacy functions, once performed by pharmacists, are now being performed by pharmacy technicians. Today's pharmacy technician has assumed a position which supports and enhances the progressive direction taken by pharmacy. The technician has also become the key person in assuring the smooth uninterrupted functioning of traditional pharmacy services.

Pharmacy is a dynamic field requiring an ongoing learning process. Graduates from this training program will become active participants in this growing field by exhibiting competence through knowledge and skills learned through the college.

Module ID and Title

Module A Administration of Medications and Pharmacology of the Endocrine/Lymphatic Systems 80 hours 6 credits
Module B Aspects of Retail Pharmacy and Pharmacology of the Nervous System 80 hours 6 credits
Module C History and Ethics of Pharmacy and Pharmacology of the Respiratory System & Nuclear Oncology Pharmacy Practice 80 hours 6 credits
Module D Infection Control, Medication Errors and Alternative Medicine and Pharmacology of the Integumentary System and Senses 80 hours 6 credits
Module E Administrative Aspects of the Pharmacy Technician & Pharmacology of the G.I. and Muscular System 80 hours 6 credits
Module F Aspects of Hospital Pharmacy and Pharmacology of the Urinary and Reproductive System 80 hours 6 credits
HCIN Introduction to Healthcare Profession 80 hours 6 credits
Module X Clinical Externship 200 hours 6 credits
Total 760 hours 48 credits

Major Equipment

Computers, Class A prescription balance, Conical graduates, Anatomy and Physiology Charts, Laminar Flow Hood, Counter balance, Cylindrical graduates, Pharmaceutical weights set, Porcelain mortar and pestle, Glass mortar and pestle, Spatulas, Anatomy and physiology models: Skeleton Head and Torso (with removable organs)

Module A – Administration of Medications and Pharmacology of the Endocrine and Lymphatic Systems 6 Quarter Credits

This module is designed to provide the student with an overall understanding of medication administration, safety and quality assurance. Included in this course is an overview and historical development of pharmacy. Body systems are covered in this module which includes the Endocrine and Lymphatic systems, and medications used to treat conditions of the endocrine system. Repackaging and compounding will be discussed and performed. Included in this course is use of policy and procedure manuals, materials management of pharmaceuticals, the pharmacy formulary system, computer applications in drug-use control, receiving and processing medication orders. Preparation and utilization of patient profiles, handling medications, storage and delivery of drug products, records management and inventory control, and compensation and methods of payment for pharmacy services are discussed. Conversions and calculations used by pharmacy technicians will be discussed along with drug dosages in units and working with compounds, admixtures, and parenteral and IV medications. Hands-on skills in the laboratory practice setting are performed. Out-of-class activities will be assigned and assessed as part of this module. *Prerequisites: None.* Lecture Hours: 40 Lab Hours: 40

Module B – Aspects of Retail Pharmacy and Pharmacology of the Nervous System 6 Quarter Credits

This module is designed to provide the student with responsibilities of a technician filling prescriptions, including the information required to fill prescription and typing the prescription label. This module also covers how to

read a drug label. Medications for the Respiratory and Nervous systems are covered including a study of medications for neurological conditions, mental disorders and a discussion on muscle relaxants. This module will include C.P.R. certification. Hands-on skills in the laboratory practice setting are performed. Out-of-class activities will be assigned and assessed as part of this module. *Prerequisites: None.* Lecture Hours: 40 Lab Hours: 40

Module C – History and Ethics of Pharmacy and Pharmacology of the Respiratory System & Nuclear and Oncology Pharmacy Practice 6 Quarter Credits

This module is designed to introduce the student to the professional aspects of working in pharmacy technology. Subjects covered include a history of and changing roles of pharmacists and pharmacy technicians. This module covers the Law and Ethics of Pharmacy which includes the Food and Drug Act, The 1970 Comprehensive Drug Abuse Prevention and Control Act, and other modern-day drug legislation. The respiratory system is discussed along with medications for respiratory tract disorders. Oncology agents are covered in this module along with HIV/AIDS. Calculations and dimensional analysis of drug dosages are covered. Hands-on skills in the laboratory practice setting are performed. Out-of-class activities will be assigned and assessed as part of this module. *Prerequisites: None.* Lecture Hours: 40 Lab Hours: 40

Module D – Infection Control, Medication Errors and Alternative Medicine and Pharmacology of the Integumentary System and Senses 6 Quarter Credits

This module covers pharmacy technician registration and certification, including professionalism and communication in the pharmacy setting. Over-the-counter medications, vitamins and skin care products are discussed in this module. Medications for the integumentary system are covered along with a discussion on medication calculations for the elderly. Also covered in this module are medications used for disorders of the eyes and ears. Students learn the most common medication errors, alternative medication and food & drug interactions. Hands-on skills in the laboratory practice setting are performed. Out-of-class activities will be assigned and assessed as part of this module. *Prerequisites: None.* Lecture Hours: 40 Lab Hours: 40

Module E – Administrative Aspects of the Pharmacy Technician & Pharmacology of the G.I. and Muscular System 6 Quarter Credits

In this module, emphasis is placed on the role and responsibilities of the pharmacy technician regarding parenteral dosages, including using proportion in calculating drug dosages for pediatrics. This module is designed to provide the student with an overall understanding of the administrative aspects and hands-on applications involved in working in a pharmacy. Medications for the G.I. and Musculoskeletal System are covered along with medications for disorders of the musculoskeletal system, as well as a study of general operations of pharmacies at different settings. Subjects covered include safety in the workplace, using computers in the pharmacy, communications and interpersonal relations within the pharmacy. Students will learn about migraine headaches, analgesics and drugs for NSAID. Use of computers in the pharmacy practice setting is covered. Hands-on skills in the laboratory practice setting are performed. Out-of-class activities will be assigned and assessed as part of this module. *Prerequisites: None.* Lecture Hours: 40 Lab Hours: 40

Module F – Aspects of Hospital Pharmacy and Pharmacology of the Urinary and Reproductive System 6 Quarter Credits

This module is designed to provide the student with an overall understanding of anatomy and physiology as it relates to the Urinary and Reproductive Systems. Students will learn common tasks performed by pharmacy technicians in the hospital practice setting, including policies and procedures, responsibilities of the inpatient pharmacy technician, and specific State requirements regulating the use of pharmacy technicians in various States. Students will familiarize themselves with intravenous flow rates of large volume and small volume IV, infusion of IV Piggybacks, and the use of a Heparin lock. Critical Care flow rates and automated medication dispensing systems are discussed and calculated. Hands-on skills in the laboratory practice setting are performed. Out-of-class activities will be assigned and assessed as part of this module. *Prerequisites: None.* Lecture Hours: 40 Lab Hours: 40

MODULE HCIN - Introduction to the Healthcare Profession 6 Quarter Credits

This course is designed to provide an introduction to the healthcare profession for new students starting an allied health diploma program. Students will learn the basics of medical terminology, anatomy and physiology, infection control, HIPAA, and OSHA. Additional topics covered include professional codes of ethics, medical insurance and billing, keyboarding, computer applications, basic mathematical skills, and critical professionalism skills are also taught. Students will have the opportunity to learn program-specific topics throughout the course. CPR certification is also included in the course. Prerequisite: None Lecture Hours: 40 Lab Hours: 40 Outside: 20 Hrs.

Module X – Clinical Externship 6 Quarter Credits

This 200-hour module is designed to provide the student with supervised, practical hands-on and observational experiences in the working pharmacy. Students will be expected to gain experiences in either a hospital pharmacy or a community (retail) pharmacy. Students will gain exposure to “on-the-job” experiences and training in the pharmacy setting and practice of skills, gaining experiences in all aspects of drug preparation, and distribution utilized by participating sites. *Prerequisites: Completion of Modules A through G.* Lecture Hours: 0 Lab Hours: 0 Other Hours: 200