PHARMACY TECHNICIAN

PROGRAM OBJECTIVES

The Pharmacy Technician diploma program will provide the student with the required knowledge base and practical "hands-on" skills necessary to pursue licensure as a Pharmacy Technician in New Brunswick community and hospital pharmacies.

Students gain knowledge relevant to the technical and clerical aspects of the pharmacy profession including inventory maintenance, record keeping, pharmacy equipment, mathematical skills related to pharmacy, compounding, and prescription preparation.

The Pharmacy Technician Program of Eastern College, Fredericton has been awarded the status *of* ***Full Accreditation*** *by the Canadian Council for Accreditation of Pharmacy Programs for a three year term July 1st, 2015- June 30th, 2018.*

CAREER OPPORTUNITIES

Upon successful completion of the program, the graduate will have met the academic requirements necessary to pursue licensure as a Pharmacy Technician in a hospital, community pharmacy or long term care setting. Prior to obtaining licensure, the graduate is qualified to work as a Pharmacy Assistant.

PREREQUISITES

- Grade 12 or equivalent, with academic level (grade 11 and/or 12) Math, English and/or French, Chemistry and Biology
- A complete standardized health form and proof of immunization may be required
- A Clear Conduct Certificate
- Language proficiency requirement as per the National Association of Pharmacy Regulatory Authorities (NAPRA)

GRADUATION REQUIREMENTS

In order to graduate and receive a diploma, a student must obtain an overall grade of at least 70% in each module. As a requirement of accreditation, an exception to this is Pharmaceutical Calculations II, where a grade of 100% is required.

Additionally, students must complete all requirements of Student Success Strategies, the Field Placement, and any 3rd party certifications detailed below.

PROGRAM OVERVIEW

Course	Hours
Student Success Strategies	20
Introduction to Pharmacy*	50
Pharmaceutical Fundamentals*	75
Anatomy and Physiology*	125
Pharmacology*	125
Pharmaceutical Calculations I*	100
Preparation of Extemporaneous Mixtures*	75
Hospital Pharmacy*	150
Retail Pharmacy*	175
SJA Standard First Aid/Heartstart Training/WHMIS	20
Pharmaceutical Calculations II*	25
Comprehensive Review*	50
Professional Skills for the Health Care Student	80
Career Planning and Preparation Level I	20
Career Planning and Preparation Level II	20
Field Placement	8 Weeks
TOTAL WEEKS (without breaks)	54

*Classes in these modules run 5 hours per day, 5 days per week. Field Placement weeks require a minimum of 35 hours.

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COURSE DESCRIPTIONS

Student Success Strategies

In this orientation module, emphasis is placed on thinking about achieving success from Day One. This module stresses the importance of developing non-technical skills to enhance personal, academic, and career success. This includes understanding learning styles and honing practical study skills, such as memory, reading, note- and test-taking techniques. Personal exercises will focus on teamwork, decision-making and problem-solving skills, setting SMART goals and maintaining a positive attitude; techniques for managing change, stress and conflict will also be explored.

Introduction to Pharmacy

This module will provide the student some background in pharmacy, beginning with the history of pharmacy and how it has evolved to the level of pharmaceutical care present today. The student will learn about the total health care system, how pharmaceutical services play an important role in that system, the role and responsibility of the pharmacist and the pharmacy technician, including the expectations and limitations of the pharmacy technician. Also discussed will be the impact of computerization in the delivery of pharmaceutical services, pharmacy organizations (roles and structure), the health protection branch (federal department of health), federal laws and provincial regulations governing prescription drugs, and codes of ethics for pharmacists and pharmacy technicians.

Pharmaceutical Fundamentals

This module explores in detail the terminology used in a pharmacy, the parts of a prescription and the associated language. Students will gain a thorough knowledge of various dosage forms, their advantages and disadvantages and routes of administration. They will be introduced to guidelines for maximizing drug stability and understand the important role in this played by the pharmacy technician. They will gain an appreciation for the wide use of the CPS (Compendium of Pharmaceuticals and Specialties). The need for accuracy and attention to detail will be stressed throughout the module. Topics include common pharmaceutical abbreviations, common types of pharmaceutical preparations, oral, solid, liquid, topical, parental and rectal/vaginal dosage forms, inhalation, ophthalmic, optic, and nasal preparations, non-medicinal ingredients and drug classification.

Anatomy and Physiology

This module will provide the student with an overview of the structure and function of the human body, necessary to understand the effects of drugs. The student will be introduced to one body system at a time and will learn how that system interacts with the other body systems. The modules will also provide a basic understanding of medical terminology. Upon completion of this module the student will be better prepared to understand disease processes in those same systems.

Pharmacology

This module will provide the student with a basic knowledge of drugs and diseases and a broad understanding of the pathological conditions associated with each system of the body. The proper use of medications, how they work in the body and their effects will also be covered. Drug classifications, as well as their generic and brand names are included. Areas of study include general principals of pharmacology, toxicology, adverse drug reactions, drug interactions, pharmacokinetics (study of the absorption, distribution, metabolism and elimination of drugs), factors that affect drug activity, the autonomic nervous, central nervous, musculoskeletal, circulatory, cardiovascular systems along with the lymphatic and immune, respiratory, gastrointestinal, urinary, endocrine and integumentary (skin, hair and nails) systems. Also studied will be the eye, the ear, anti-infective agents and cancer treatment agents.

PHARMACY TECHNICIAN

Pharmaceutical Calculations I

This module is designed to introduce the student to the type of calculations performed in both hospital and retail pharmacies on a daily basis, starting with the metric system and leading into more complex calculations and problem solving skills. The instructor will introduce topics and then provide the students time and assistance to complete exercises. Topics will include converting between Roman numerals and Arabic numbers, a review of basic math using fractions and decimals, the metric system of measurement, ratio, proportion and percent, calculating strength of medication using percent, units, parts per million and mEq (milliequivalent), translating Latin abbreviations for the administration of medication, calculating pediatric dosages and fractional dosages, performing calculations using formulas, preparing solutions, understanding parental medications and TPN (total parenteral nutrition) calculations, as well as the calculation of a prescription price.

Preparation of Extemporaneous Mixtures

This module provides the student with the instruction and practical experience that will enable them to prepare common extemporaneous mixtures. They will be introduced to the concept of pharmaceutical elegance with reference to a finished prescription product. Good organization, accuracy, cleanliness and quality control will be emphasized throughout the module. Topics include a review of dosage forms, appropriate behavior and appearance in the lab, a review of guidelines for compounding and for calculating the price of a compound, measuring liquids, use of the balance and weights, stock solutions, making a solution from a formula, ointments, creams, oral, and liquid preparations, preparation of powder papers, preparation of capsules, preparation of compounds using narcotic and controlled ingredients and preparation of suppositories. The module includes both lab sessions and a formal lab report.

Hospital Pharmacy

This module will provide the student with a broad view of the health care system and the role of the hospital within it. The student will be introduced to the structure and organization of the hospital, focusing on the relationship of the pharmacy department with other departments and services. The intricacies of the pharmacy department will be explored in detail including the mission statement, role of pharmacy personnel, confidentiality and security. The student will also be introduced to the methods of drug distribution, inventory control, record keeping, other areas of special control, parenteral products and aseptic technique.

Retail Pharmacy

This module will give the student an understanding of the roles, duties and responsibilities of personnel involved in a retail pharmacy. Students will gain an appreciation for the teamwork involved in a retail pharmacy and the factors involved in giving a high level of customer service. The student will also gain experience using popular pharmacy computer software.

Pharmaceutical Calculations II

This module reviews all calculations covered in the program. Students review and practice a range of calculations with an aim for 100% accuracy in all work. The module will focus on practical application of the different types of calculations used in pharmacy practice. On the last day of the module, students must write an “Entry to Practice” calculations exam, which is marked under zero tolerance policy parameters, a requirement of any accredited Pharmacy Technician program.

Comprehensive Review

All aspects of the pharmacy technician program are reviewed, including narcotic and controlled drug regulations, retail formulary, the Compendium of Pharmaceuticals and Specialties (CPS), pharmaceutical dosage forms/routes of administration, pharmaceutical calculations, medical terminology, anatomy and physiology, common drugs, laboratory procedures, hospital pharmacy procedures and techniques, retail pharmacy procedures and the pharmacy computer system.

PHARMACY TECHNICIAN

St. John Ambulance Standard First Aid/Heartstart Training/WHMIS

This course introduces participants to basic first aid techniques and cardiopulmonary resuscitation. The course is designed to offer participants the confidence and knowledge to provide safe and correct medical assistance. Students will also complete an online course in WHMIS.

Professional Skills for the Health Care Student

This module is designed to equip students with the skills necessary for success in today's health care environment. Topics covered include: which jobs require professionalism, definitions and key elements of professionalism, why professionalism is important to all involved in the health care environment, the importance of interprofessional collaboration in a health care environment, making a commitment to the job, how to contribute to the specialized workplace, working with others and ensuring success in the field placement and career.

Career Planning and Preparation Level I

This module introduces tools for planning and preparing for a successful job search, so that students can maintain a career-focused approach throughout their education program. Students will learn about the "hidden" job market and ways to access it in their upcoming job search, how to research opportunities and network for industry contacts and use appropriate etiquette when communicating with prospective employers. Students will identify their personal skills, values and preferences for the workplace, begin preparation of a professional resume and references, and organize proof documents for their career portfolio. Class discussions on various self-management topics introduced in Student Success Strategies will round out this module, which is a prerequisite for Career Planning and Preparation Level II.

Career Planning and Preparation Level II

This module continues to build on the concepts and skills introduced in Career Planning and Preparation Level I. Students will learn how to conduct an effective job search and identify various methods of applying for work with today's technology. Students will create a personal list of "top employers" and target current industry opportunities, while finalizing their professional resume, portfolio and career correspondence. Students will learn to identify the different types and forms of interviews, practice responding to typical questions, and practice follow-up, evaluation and negotiation techniques they can use to ensure success. Self-management topics from Career Planning and Preparation Level I will be reviewed with focus towards on-the-job success in both learner placements and post-graduate employment.

Field Placement

Students will complete two practicum experiences, each one four weeks in duration (35 hours per week) from both a hospital and retail environment.

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