



# Pharmacy Assistant

PROGRAM OUTLINE

## Program Objectives

The objective of this course is to give the student "hands-on" skills necessary to be employed as a Pharmacy Assistant in 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, and introduction to prescription preparation.

## Career Opportunities

Upon successful completion of the program, the graduate will be qualified to work as a Pharmacy Assistant in a hospital or retail environment.

## Prerequisites

- Grade 12, Adult Basic Education (ABE), GED equivalent OR Mature Student status (19 years of age)
- Passing score on the entrance examination.

## Some Highlights of the Program

- History of Pharmacy in Canada
- Medical Terminology
- Overview of Anatomy
- Medications & How They Effect the Body
- Mathematical Calculations
- Business Math
- Preparation/Distribution of Non-Parenteral Medication
- Preparation/Distribution of Parenteral Medication
- Preparation of Prescriptions
- Merchandise Stocking/Displaying

## Graduation Requirements

A student must obtain an overall average in each module of at least 70% in order to graduate and receive a diploma. A student may be allowed to retake a module in which the mark was below 60% or to raise the average to 70%.

A student must complete the hours of the Strategies for Student Success and Career Planning and Preparation modules as well as the Work Term for the program as indicated on this outline.

## Program Modules Pharmacy Technician

### TECHNICAL SKILLS-740

	<u>Hours</u>
Introduction to Pharmacy .....	40
Pharmaceutical Fundamentals .....	60
Pharmaceutical Calculations .....	80
Anatomy & Physiology .....	80
Pharmacology .....	80
Preparation of Extemporaneous Mixtures .....	60
Hospital Pharmacy .....	120
Retail Pharmacy .....	160
Comprehensive Review .....	40
St. John Ambulance Standard Level .....	20

### COMPUTER SKILLS-160

Computer Fundamentals/Keyboarding .....	80
Word Processing Level I .....	40
Spreadsheets Level I .....	40

### WORKPLACE/SOFT SKILLS-140

Strategies for Student Success .....	20
Professional Skills .....	80
Career Planning & Preparation .....	40

### WORK TERM-200

Work Term .....	200
<b>TOTAL HOURS .....</b>	<b><u>1,240</u></b>

Work Term .....	8 Weeks
<b>TOTAL .....</b>	<b>60 Weeks</b>

*Detailed course information follows. Please note that programs may be changed or upgraded to meet the demands of business.*

**NOTE:** Modules not listed in the order taught

### **Strategies for Student Success and Career Planning & Preparation**

In addition to learning career-oriented skills, students at Western College also learn how to obtain a job in their chosen profession. This is why every diploma program includes our Strategies for Student Success and Career Planning & Preparation.

Our Career Services Department will assist the graduate in resume writing, as well as preparing for job interviews. Our staff is sensitive to current job market trends and the needs of employers in each local market.

Our staff will show the graduate some of the latest techniques such as audio/visual role playing and advanced telemarketing; techniques which will help the graduate to secure the job now and which will also be beneficial in their future career. Our graduates receive one of the most intensive job search programs available anywhere in North America.

### **Technical Skills**

#### **Introduction to Pharmacy (40 Hours)**

This module will give 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 of Pharmacist and the Pharmacy Technician, and the expectations and limitations of the Pharmacy Technician.

- Brief History of Pharmacy in Canada
- The role and responsibility of the pharmacist and the pharmacy technician
- Pharmaceutical services in the health care system
- The impact of computerization in the delivery of pharmaceutical services
- Pharmacy organizations – roles and structure
- Health Protection Branch (Federal Dept. of Health)
- Federal laws governing prescription drugs
- Provincial regulations
- Ethics
- Code of Ethics for pharmacist and pharmacy technician

### **Pharmaceutical Fundamentals (60 Hours)**

Terminology used in a pharmacy, the parts of a prescription, and the language used will be explored in detail in this module. The student 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 the important role they play in maintaining this. This will gain an appreciation for the wide use of CPS. Accuracy and attention to detail will be stressed.

- Parts of a Prescription
- Common pharmaceutical abbreviation terminology
- Common types of pharmaceutical preparations
- Oral solid dosage forms
- Liquid dosage forms
- Topical dosage forms
- Parenteral dosage forms
- Rectal/Vaginal Dosage Forms
- Inhalation preparations
- Ophthalmic preparations
- Otic preparations
- Nasal Preparations
- Non-medical ingredients
- Compendium of Pharmaceutical Specialties
- Classification of drugs

#### **Pharmaceutical Calculations (80 Hours)**

This module is designed to introduce the student to the type of calculations performed in a pharmacy on a daily basis. The module will start with the metric system and lead into more complex calculations and problem solving skills. The instructor will introduce topics and give the student time and assistance to complete exercises. Calculations performed are typical of those in both Hospital & Retail Pharmacies.

- Convert between Roman numerals and Arabic numbers
- Review basic math using fractions and decimals
- Metric system of measurement
- Ratio, proportion and percent
- Calculate strength of medication using percent, unit's parts per million, Meq.
- Translate latin abbreviation for the administration of medication
- Calculate pediatric dosages
- Fractional dosages
- Calculation from a formula
- Preparing solution
- TPN orders
- Calculation of a prescription price
- Business Math

**Anatomy & Physiology (80 Hours)**

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 have a basic understanding of the common pathological conditions that occur. The module will also provide a basic understanding of medical terminology.

- Medical Terminology
- General organization of the body
- Cells & Tissues
- The musculoskeletal system
- Nervous system
- Blood
- Cardiovascular system
- Lymphatic and Immune system
- Respiratory system
- Gastrointestinal system
- Urinary system
- Reproductive system
- Endocrine System
- Integumentary system (skin)
- Eye
- Ear

**Pharmacology (80 Hours)**

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.

- Pharmacokinetics
- Factors that effect drug activity
- Musculoskeletal system
- Autonomic nervous system
- Central nervous system
- Blood
- Cardiovascular
- Lymphatic and immune
- Respiratory
- Gastrointestinal
- Urinary
- Endocrine
- Integumentary
- Eye
- Ear
- Anti-infective agents
- Cancer treatment agents

**Preparation of Extemporaneous Mixtures (60 Hours)**

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.

- Review dosage forms
- Review pharmaceutical elegance
- Appropriate behavior and appearance in the lab
- Guidelines for compounding
- Review calculating the price of a compound
- Measuring liquids
- Use of the balance and weights
- Stock solutions
- Making a solution from a formula
- Preparation of an ointment/cream
- Oral liquid preparations
- Preparation of powder papers
- Preparing compounds using narcotic and controlled ingredients
- Preparation of suppositories
- Lab sessions
- Lab report

**Hospital Pharmacy (120 Hours)**

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/services. The intricacies of the pharmacy department will be explored in detail including the mission statement, role of pharmacy personnel and confidentiality, and security. The student will also be introduced to the methods of drug distribution, inventory control, record keeping and other areas of special control.

**Introduction to Hospital Pharmacy (40 Hours)**

- Hospital structure and organization
- Pharmacy services
- Hospital pharmacy procedures
- Pharmaceutical care and clinical pharmacy services
- Functions of a hospital pharmacist
- Function that may be delegated to a pharmacy technician

### **Preparation and Distribution of a Parenteral Medication (40 Hours)**

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- Introduction to aseptic technique
- Preparing IV admixtures-equipment and supplies
- Principles of working in the laminar flow hood
- Aseptic techniques
- Total parenteral nutrition
- Handling antineoplastic drugs

### **Preparation and distribution of Non-Parenteral Medication (40 Hours)**

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- Receiving of drug orders in Hospital
- Classes of non-parenteral medications by routes of administration
- General distribution of non-parenteral drugs and related functions
- Filling individual prescription orders
- Dispensing counter – procedures and techniques
- Overview of uses of hospital pharmacy software in the preparation and distribution of non-parenteral drugs
- Preparation of irrigating solutions
- Preparation of batch solutions
- Preparation and handling of chemotherapeutic non-Parenteral drugs
- Preparation of inhalation therapy drugs
- Pre-filled syringes

### **Retail Pharmacy (160 Hours)**

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This module will give the student an understanding of the roles, duties and responsibilities of personnel involved in a retail pharmacy, with emphasis on the pharmacy department. The 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 the popular pharmacy computer software program Zadall.

### **Introduction to Retail Pharmacy (60 Hours)**

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- Community pharmacies
- Functions that may be delegated to a pharmacy technician
- Functions of a retail pharmacist
- Federal and provincial licensing body legislations, regulations and policies
- Third party insurance plans
- Zadall computer applications

### **Preparation of Prescriptions (60 Hours)**

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- Receipt of order
- Product selection
- Patient profile
- Drug containers, labels, auxiliary labels and DIN numbers
- Filling of a prescription
- Preparation and reconciliation of third party billing
- Evaluation of a prescription
- Preparation of 200 prescription orders
- Third parties entries completed according to any pertinent agreements
- Evaluation of fifty prescriptions for narcotic and controlled drugs

### **Retail Pharmacy – Front Shop (40 Hours)**

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- Introduction to OTC drugs
- Common classifications of OTC products (definition, uses, agents)
- Terminology of inventory and purchasing
- Inventory control systems
- Purchasing
- Receiving
- Pricing of merchandise
- Purchasing and inventory of computer software applications
- Merchandise stocking , displaying

### **Comprehensive Review (40 Hours)**

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This module integrates all the theory and skill covered throughout the Pharmacy Assistant program in a comprehensive review in preparation for the Work Term.

### **St. John Ambulance Standard Level First Aid/Heartstart training (20 Hours)**

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- Standard First Aid and CPR

### **Computer Skills**

### **Computer Fundamentals/Keyboarding (80 Hours)**

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Designed to introduce the user to computer operation, operating system basics, disk structures, and keyboarding. This module provides the foundation of all training in computer application.

- Basic Computer Hardware Operation
- Windows Graphical User Interface Features
- Effective File Management
- Information Sharing and Customization
- Basic Touch-Typing Techniques (Alphanumeric Keyboard)

### **Word Processing Level I (40 Hours)**

Students will work with typical office documents to practice word processing skills in Microsoft Word.

- Process and Edit Text
- Create Letters, Envelopes, & Labels
- Use Editing, and Writing Tools
- Use Character, Paragraph, and Page Formatting Features
- Use Page Numbers, Headers, and Footers & Sections
- Create and Format Tables
- Insert, Size and Position a Picture
- Use Styles and Templates

### **Spreadsheets Level I (40 Hours)**

Students will work with typical office documents to practice spreadsheet skills with Microsoft Excel.

- Create, Modify and Print Workbooks
- Calculate with Formulas and Functions
- Format Worksheet Text and Values
- Work with Ranges
- Sort Data
- Create and Format Charts
- Add Graphic Elements

### **Strategies for Student Success (20 Hours)**

Emphasis is placed on thinking about achieving success from day one, and developing the non-technical skills to enhance personal, academic, and career success.

- Goal Setting
- Learning Styles
- Time Management
- Planning
- Memory Techniques
- Motivation
- Note Taking
- Money Management
- Tests Techniques
- Writing techniques

### **Workplace/ Soft Skills**

### **Professional Skills (80 Hours)**

This module is designed to equip students with the

skills necessary for dealing effectively with both customers and colleagues in the business world. Using a variety of instructional methods including role-plays, case studies, group exercises, simulated situations, and discussion, students learn and practice the customer service and interpersonal skills necessary for success in today's business environment. The workplace of the twenty-first century demands excellent communication skills; the focus of the second part of this module is on learning oral and written techniques that ensure effective business communication.

- Employability Skills Review
- Living with Diversity
- Communicating Across Cultures
- Critical Thinking
- Decision Making
- Conflict Management
- Developing Good Work Habits
- Effective Verbal Communications
- Non-Verbal Communications
- Effective Listening Skills
- Communicating in a Business Organization
- Effective Customer Relations
- Interpersonal Relations
- Relations with Co-Workers
- Speaking Skills
- Presentation
- Developing Basic and Advanced Writing Techniques
- Resumes and Cover Letters

### **Career Planning & Preparation (40 Hours)**

This module gives you the tools for planning, preparing, and executing a successful job search.

- Work Skills Inventory
- Barriers to Employment
- Presenting an Enthusiastic Attitude
- Assessing Skills & Work Preferences
- Informational Interviewing
- Avenues for contracting employers
- Presenting Yourself in Person and on Paper
- Cover & Thank You Letters
- Interview Preparation
- Accessing the Hidden Job Market
- Handling Objections
- Negotiating the Job
- Self-Confidence & Self-Esteem Building
- Tools for the Journey
- Preparing a Work Search Action Plan

### **Work Term – 8 Weeks ( 200 Hours)**

This module is mandatory and the business organization does not pay for the services of the student during the work term. Hours may range from 25 – 40 per week.