

## PHARMACY TECHNICIAN

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### Program Outline

<b>Major:</b>	PHRM
<b>Length:</b>	2 Years
<b>Delivery:</b>	4 Semesters
<b>Credential:</b>	Ontario College Diploma
<b>Effective:</b>	2016-2017
<b>Location:</b>	Barrie
<b>Start:</b>	Fall (Barrie), Winter (Barrie)

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### Description

This program prepares graduates to work collaboratively with registered pharmacists and the interprofessional health care team within their scope of practice. Students will learn dispensing and compounding skills using knowledge from labs and supervised clinical practice. Courses focus on professionalism, relevant legislations, pathophysiology, and pharmacology, customer care, software systems, and principles of quality assurance. Students will utilize current technologies for an understanding of inventory control and customer service to accurately prepare and dispense medication. Guiding principles of safe medication practice; including aseptic technique, accurate calculations and labelling, use of current, credible sources of information are emphasized in lectures, simulated labs and community and institutional placements.

### Career Opportunities

The graduate may go on to become a Registered Pharmacy Technician with the Ontario College of Pharmacists. Registration with the Ontario College of Pharmacists is a legal requirement to practice and is subject to the regulations and restrictions established by this governing body. Graduates of the program will be qualified to work in a variety of settings including community pharmacies, home health care companies, hospital pharmacies, pharmaceutical wholesalers, pharmacy software vendors, third party insurance companies and pharmaceutical companies and manufacturers.

## **Program Learning Outcomes**

The graduate has reliably demonstrated the ability to:

- practice in a professional and competent manner within the defined scope of practice and consistent with current regulations and standards of practice;
- identify, select, implement and evaluate quality assurance standards and protocols which contribute to a safe and effective working environment;
- establish and maintain professional and interprofessional relationships which contribute to patient care safety and positive health care outcomes;
- process prescriptions accurately in compliance with pertinent legislation and established standards, policies and procedures in community and institutional practice settings;
- prepare pharmaceutical products for dispensing in compliance with pertinent legislation and established standards, policies and procedures in community and institutional practice settings;
- release pharmaceutical products in compliance with pertinent legislation and established standards, policies and procedures in community and institutional practice settings;
- optimize medication therapy management and product distribution using current technologies in community and institutional practice settings;
- develop and implement effective strategies for ongoing personal and professional development that support currency, competence, ethics and values in the pharmacy sector;
- identify the implications of pharmacy technician on the natural environment and to employ environmentally sustainable practices to reduce the impact on the environment;
- develop social entrepreneur skills to foster positive social change in the community.

## **External Recognition:**

The Pharmacy Technician program of Georgian College of Applied Arts and Technology has been awarded the status of Full Accreditation by the Canadian Council for Accreditation of Pharmacy Programs for a five year term (January 1st 2015- December 31st 2019). This enables graduates to preregister with the Ontario College of Pharmacists and start the process of becoming licensed to practice as regulated pharmacy technician in Ontario. Graduates will also be eligible to write the Pharmacy Examining Board of Canada Qualifying Exam ([www.pebc.ca](http://www.pebc.ca)) and the OCP jurisprudence examination ([www.ocpinfo.com](http://www.ocpinfo.com)). Click on the links for timelines and fees for registration and exams.

## **The Program Progression:**

Fall Intake - Barrie

Sem 1 | Sem 2 | Sem 3 | Sem 4

Fall 2016	Winter 2017	Fall 2017	Winter 2018
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Winter Intake - Barrie

Sem 1 Winter 2017	Sem 2 Summer 2017	Sem 3 Winter 2018	Sem 4 Summer 2018
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### **Articulation:**

A number of articulation agreements have been negotiated with universities and other institutions across Canada, North America and internationally. These agreements are assessed, revised and updated on a regular basis. Please contact the program co-ordinator for specific details if you are interested in pursuing such an option. Additional information can be found on our website at

<http://www.georgiancollege.ca/admissions/credit-transfer/>

### **Admission Requirements:**

OSSD or equivalent with

- Grade 12 English (C or U)
- Grade 12 Mathematics (C or U)
- Grade 11 or 12 Biology (C or U)
- Grade 11 or 12 Chemistry (C or U)

Language Proficiency Requirement:

The Pharmacy Technician Program is accredited by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP). CCAPP ensures that all accredited Colleges meet the National Association of Pharmacy Regulatory Authorities (NAPRA) language proficiency, refer to their website for further details:

[http://napra.ca/Content\\_Files/Files/Language\\_Proficiency\\_Requirements\\_for\\_Licensure\\_PharmTech\\_Nov2009\\_Final.pdf](http://napra.ca/Content_Files/Files/Language_Proficiency_Requirements_for_Licensure_PharmTech_Nov2009_Final.pdf)

In addition to the National Association of Pharmacy Regulatory Authorities (NAPRA) language proficiency, applicants must meet Georgian's English Language Proficiency policy 2.5, refer to [www.georgiancollege.ca/admissions/policies-procedures](http://www.georgiancollege.ca/admissions/policies-procedures) for details.

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: [www.georgiancollege.ca/admissions/policies-procedures/](http://www.georgiancollege.ca/admissions/policies-procedures/)

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit Transfer Centre website for details:  
[www.georgiancollege.ca/admissions/credit-transfer/](http://www.georgiancollege.ca/admissions/credit-transfer/)

**Additional Information:**

Certain clinical placements may require students to have updated flu shots, TB testing and Hepatitis B vaccination as well as a Police Record Check (including Vulnerable Sector Screening and a check of the Pardoned Sex Offender Data Base). It is the student's responsibility to ensure he or she is eligible to participate in clinical placements. The College assumes no responsibility for these matters and students should be aware that tuition will not be refunded in the event that access to a placement is denied. In addition to these requirements, applicants must also provide proof of a current First Aid and C.P.R. 'HCP' certification, prior to the commencement of preclinical courses. Registration with the Ontario College of Pharmacists (OCP) is mandatory to practice as a Pharmacy Technician in Ontario.

Note: A history of criminal offences or charges of professional misconduct in another jurisdiction or another profession may interfere with your ability to become registered in Ontario. Should either situation apply, you are recommended to seek clarification with the OCP before applying to the Pharmacy Technician program at Georgian College. See Criminal Reference Check below for information related to placements.

Applicants are advised that the clinical requirements of the program and future employment require good vision (with or without corrective lenses) and manual dexterity with repetitive motion.

**\*\* CRIMINAL REFERENCE CHECK \*\***

Placement agencies require an up-to-date clear criminal reference check and vulnerable sector check prior to going out on placement. Students should obtain their criminal reference three months prior to placement; checks conducted earlier may not be considered current. As some jurisdictions require longer lead-time for processing, please check with the program coordinator to ensure you allow for sufficient turn-around time. It is the students responsibility to provide the completed document prior to placement start.

NOTE: Individuals who have been charged or convicted criminally and not pardoned will be prohibited from proceeding to a clinical or work placement.

**Graduation Requirements:**

- 22 Mandatory Courses
- 2 Communications Courses
- 2 Practicum Placements
- 3 General Education Courses

**Graduation Eligibility:**

To graduate from this program, the passing weighted average for promotion through each semester, from year to year, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

**Mandatory Courses**

- BIOL1012 Drug Therapy and Pathophysiology 1
- BIOL1014 The Essential Body
- BIOL2010 Drug Therapy and Pathophysiology 2
- BIOL2011 Drug Therapy and Pathophysiology 3
- COMP1063 Community Pharmacy Computer Systems
- COMP2096 Hospital Pharmacy Computer Systems
- MATH1025 Pharmaceutical Calculations
- MATH2009 Pharmaceutical Calculations Advanced
- PHRM1000 Pharmacology Fundamentals
- PHRM1002 Community Pharmacy Dispensing Introductory Theory
- PHRM1007 Community Pharmacy Dispensing Introductory Lab
- PHRM1008 Community Pharmacy Dispensing Advanced Theory/Lab
- PHRM1009 Community Pharmacy Inventory Control
- PHRM1010 Non-Sterile Compounding Practice Lab
- PHRM2004 Legal Foundations and Professional Practice
- PHRM2006 Herbal Products and Complementary Care
- PHRM2009 Hospital Inventory Control
- PHRM2010 Hospital Dispensing Introductory Theory
- PHRM2011 Sterile Techniques
- PHRM2012 Advanced Compounding
- PHRM2013 Hospital Dispensing Advanced Theory
- PHRM2014 Pharmacy Practice and the Interprofessional Team

**Communications Courses**

To be selected at time of registration from the College list, as determined by testing.

**Practicum Placements**

PHRM1006 Practicum 1  
PHRM2008 Practicum 2

General Education Courses  
To be selected from College list

**Course Descriptions:**

BIOL1012 Drug Therapy and Pathophysiology 1 56.0 Hours

This course will cover disease processes that involve the integumentary , gastro-intestinal, and respiratory systems. Common disorders of the eye and ear will be covered. Drug therapy commonly prescribed for each of these conditions will be noted. P- BIOL1014 The Essential Body and P- PHRM1000 Pharmacology Fundamentals and P-PHRM1007 Community Pharmacy Dispensing Introductory Lab

BIOL1014 The Essential Body 42.0 Hours

This course will provide the student with a foundational overview of human anatomy from a systems perspective including but not limited to the gastrointestinal, cardiovascular, respiratory, renal, integumentary, immune, endocrine and reproductive systems. Focus will be on the inter relationships of these systems as it relates to normal human function.

BIOL2010 Drug Therapy and Pathophysiology 2 42.0 Hours

Disease conditions that involve the cardiovascular system, blood, urinary system, endocrine and reproductive system are examined. Drug therapy commonly prescribed for each of these conditions are reviewed.

P- BIOL1012 Drug Therapy and Pathophysiology 1

BIOL2011 Drug Therapy and Pathophysiology 3 42.0 Hours

Students examine conditions such as cancers and infections. Drug therapy commonly prescribed for each of these conditions are discussed. The pharmacological effects of medications on pregnant and lactating women are emphasized. Students discuss tropical diseases, travel medications, and related immunizations.

P- BIOL2010 Drug Therapy and Pathophysiology 2

COMP1063 Community Pharmacy Computer Systems 42.0 Hours

Students learn how to navigate a retail computer system through practicing data entry, generating labels and reports, and entering third party insurance information. Implications of drug warnings and appropriate responses are emphasized. Students develop sound information literacy skills related to pharmacy practice.

COMP2096 Hospital Pharmacy Computer Systems 42.0 Hours

The student will learn the operation of at least one hospital pharmacy computer system. Entry of medication orders, maintenance of patient medication profiles, recognition of and acting on warning messages will be covered. Inventory control and tracking of ward stock for prescription and non-formulary drugs, reconciliation of drug counts, automatic stop orders, procedures for dispensing narcotic/controlled drugs and emergency release drugs will be covered. Documentation associated with emergency drug boxes, crash carts and night cupboards will be practiced. Electronic medical records will be demonstrated.

P- COMP1063 Community Pharmacy Computer Systems and C- PHRM2010 Hospital Dispensing Introductory Theory and C- PHRM2011 Sterile Techniques

#### MATH1025 Pharmaceutical Calculations 28.0 Hours

This course will cover various metric, imperial, and apothecary measurements encountered in pharmacy calculations. The student will perform dosage and conversion calculations using basic mathematical principles. Both accuracy and precision are stressed throughout.

#### MATH2009 Pharmaceutical Calculations Advanced 28.0 Hours

Students build on previous skills and knowledge related to the metric, imperial and apothecary measurements encountered in an institutional pharmacy. Students solve mathematical problems related to pharmaceutical calculations including dilutions, percentages, conversions, alligations, IV flow rates, daily volumes, drip rates, Total Parenteral Nutrition (TPN) as well as chemotherapy. Accuracy and precision are emphasized throughout.

P- MATH1025 Pharmaceutical Calculations

#### PHRM1000 Pharmacology Fundamentals 42.0 Hours

The student will be introduced to medical terminology and general properties of drugs. Pharmacokinetics and routes for drug administration and factors influencing drug action will be discussed. Pharmacodynamics will be covered to include drug receptor interactions, half life, bioavailability, side effects and adverse reactions. Over the counter and prescription drugs will be identified and basic classifications according to the body systems will be discussed.

#### PHRM1002 Community Pharmacy Dispensing Introductory Theory 42.0 Hours

This course introduces basic concepts in dispensing prescriptions: interpreting the prescriptions, translating Latin abbreviations, calculating the prescription quantity from the directions for patient use, in accordance with provincial legislation. Generic and brand name recognition will be stressed. The student will be introduced to community pharmacy practice and the elements of effective customer service.

C- PHRM1007 Community Pharmacy Dispensing Introductory Lab

#### PHRM1006 Practicum 1 140.0 Hours

The student will have a placement in a community/retail pharmacy under the direct supervision of the pharmacist and/or an experienced pharmacy technician or assistant. The student will apply knowledge learned in class and lab related to professional behaviour, communication, ethical practice and hands on skills. The student will practice ordering, receiving, inventory control, record-keeping and prescription processing. Patient safety related to preparing and dispensing medications will be a core performance criteria.

C- BIOL1012 Drug Therapy and Pathophysiology 1 and (C- PHRM1008 Community Pharmacy Dispensing Advanced Theory/Lab or C- PHRM1004 Retail Dispensing Advanced Theory) and (C- PHRM1009 Community Pharmacy Inventory Control or C- PHRM1005 Retail Inventory Control) and (C- PHRM1010 Non-Sterile Compounding Practice Lab or C- PHRM1003 Non-Sterile Compounding Practices Lab) and C- PHRM2004 Legal Foundations and Professional Practice

PHRM1007 Community Pharmacy Dispensing Introductory Lab 42.0 Hours

This course will focus on professionalism, accurate calculations and skill development of safe dispensing practice and release of prescription drugs. Students will utilize community pharmacy computer systems to practice input and retrieval of patient data, prescriber profiles, and maintenance of patient profiles, prescription order entry and generation of prescription labels. Entering third party insurance will be demonstrated and practiced. Students will become familiar with generic and trade/brand names and the therapeutic classification of common pharmaceutical products.

C- PHRM1002 Community Pharmacy Dispensing Introductory Theory

PHRM1008 Community Pharmacy Dispensing Advanced Theory/Lab 56.0 Hours

This course will build on the skills of receiving, dispensing and releasing prescriptions. Students will gain efficiency, speed and accuracy for selecting and processing pharmaceutical products, using drug inter-changeability information, third party formulary restrictions, and other relevant references. Students will practice communication skills with patients and health care professionals in consulting appropriately in order to make ethical dispensing decisions. Students will learn how to assist patients to select and use drug administration devices, diagnostic and monitoring devices, home health aids, and other non-drug measures.

P- COMP1063 Community Pharmacy Computer Systems and P- MATH1025

Pharmaceutical Calculations and P- PHRM1002 Community Pharmacy Dispensing Introductory Theory and P- PHRM1007 Community Pharmacy Dispensing Introductory Lab

PHRM1009 Community Pharmacy Inventory Control 28.0 Hours

This course will focus on the importance of inventory management in community settings. The steps in receiving, verifying and reconciling pharmacy orders will be examined. Students will identify different systems to monitor expired drugs, return policies and recalls, and the documentation required with these activities. The



regulations required for pharmaceutical waste disposal management within a retail setting will be emphasized.

P- MATH1025 Pharmaceutical Calculations and P- PHRM1002 Community Pharmacy Dispensing Introductory Theory and P- PHRM1007 Community Pharmacy Dispensing Introductory Lab

#### PHRM1010 Non-Sterile Compounding Practice Lab 42.0 Hours

This course allows students to compound non-sterile products by accurately calculating the amount of ingredients and using compounding equipment correctly. Practice may include compounding lotions, creams, ointments and suspensions. Preparation techniques, calculations, weights and measurements in all relevant systems of pharmaceutical products will be emphasized. Labelling and storage will be discussed. Equipment maintenance and asepsis will be stressed.

P- MATH1025 Pharmaceutical Calculations or P- MATH1024 Pharmaceutical Calculations or P- PHRM1012 Community Pharmacy Dispensing Lab

#### PHRM2004 Legal Foundations and Professional Practice 42.0 Hours

This course presents an introduction to pharmacy practice, historic development and the current role of the pharmacist and pharmacy technician in institutional and community pharmacy practice. Current Canadian legislation, regulatory bodies that govern safe and ethical practice and jurisprudence will be a point of focus. Students will understand their role within the profession and their responsibilities for meeting legal and ethical requirements. Concepts related to professional liability will be a point of focus.

P- PHRM1002 Community Pharmacy Dispensing Introductory Theory and P- PHRM1007 Community Pharmacy Dispensing Introductory Lab

#### PHRM2006 Herbal Products and Complementary Care 42.0 Hours

A variety of herbal products available over the counter, their significance in pharmacy practice, and their possible interactions with prescribed medications are discussed. Students survey the scope of practice for a variety of complementary care practitioners. The use of a variety of retrieval techniques to gather and evaluate evidence based information is emphasized.

#### PHRM2008 Practicum 2 140.0 Hours

Students complete a four week unpaid placement in a hospital or institutional pharmacy under the direct supervision of the pharmacist or an experienced pharmacy technician. Students practice within the scope of practice of a Pharmacy Technician as outlined by the Ontario College of Pharmacists of Ontario. The culminated knowledge learned in class and lab related to professional behaviour, ethical practice and hands on skills is applied. Prescription processing, inventory control, and compounding required of the hospital pharmacy is practiced. The student demonstrates appropriate and professional behaviour, good problem-solving, and acceptance of corrective feedback in order to improve performance and safe practice.

P- COMP2096 Hospital Pharmacy Computer Systems and P- MATH2009 Pharmaceutical Calculations Advanced and P- PHRM1006 Practicum 1 and P- PHRM2004 Legal Foundations and Professional Practice and P- PHRM2009 Hospital Inventory Control and P- PHRM2011 Sterile Techniques and (C- BIOL2011 Drug Therapy and Pathophysiology 3 or C- BIOL2006 Pathophysiology and Drug Therapy 3) and C- PHRM2006 Herbal Products and Complementary Care and (C- PHRM2012 Advanced Compounding or C- PHRM2003 Hospital Practice and Infection Control) and (C- PHRM2013 Hospital Dispensing Advanced Theory or C- PHRM2005 Hospital Dispensing Advanced Theory) and (C- PHRM2014 Pharmacy Practice and the Interprofessional Team or C- PHRM2007 Integrated Practice and Career Development)

#### PHRM2009 Hospital Inventory Control 28.0 Hours

Students examine the different inventory management systems used in the hospital and institutional environments. Students receive, verify and reconcile pharmacy drug orders using purchase orders, packaging slips and invoices. The importance of stock rotation, restocking and monitoring expiry dates and recalls of medications are examined. Strategies for costs containment and drug shortages are reviewed. . Safety protocols and security measures for the hospital pharmacy are discussed. Documentation associated with emergency drug boxes, crash carts and night cupboards are emphasized.

P- PHRM1009 Community Pharmacy Inventory Control and C- PHRM2010 Hospital Dispensing Introductory Theory

#### PHRM2010 Hospital Dispensing Introductory Theory 56.0 Hours

Students examine the role of the pharmacy technician within the institutional environment. The interprofessional team and the circle of care are emphasized. Hospital accreditation and quality assurance programs to ensure patient safety are reviewed. Students discuss and apply a variety of methods of inpatient drug distribution. Security of patient records and maintaining patient confidentiality is emphasized.

C- COMP2096 Hospital Pharmacy Computer Systems and C- PHRM2011 Sterile Techniques

#### PHRM2011 Sterile Techniques 42.0 Hours

Students are introduced to various aseptic techniques necessary in sterile product preparation while performing accurate dosage calculations, concepts of accurate measurements and quality assurance. They explore sterile compounds including intravenous admixtures, chemotherapy agents, Total Parenteral Nutrition, and patient controlled analgesics. Regulations, standards and guidelines governing preparation of sterile products are examined.

P- PHRM1010 Non-Sterile Compounding Practice Lab

#### PHRM2012 Advanced Compounding 28.0 Hours

Students examine advanced preparations commonly be seen in both the community and institutional pharmacy settings. Students compound a variety of sterile and non-sterile pharmaceutical compounds using accepted industry formulations. A focus on proper technique using aseptic standards in order to maintain the integrity of the compounded preparations is practiced.

P- MATH2009 Pharmaceutical Calculations Advanced and P- PHRM1010 Non-Sterile Compounding Practice Lab and P- PHRM2011 Sterile Techniques

#### PHRM2013 Hospital Dispensing Advanced Theory 56.0 Hours

Students build on knowledge and skills related to hospital dispensing procedures and independent double checks. Storage requirements as well as how to accurately dispense controlled substances, investigational drugs, and drugs from the special access program in a simulated lab environment are discussed. Medication reconciliation, ward stock and night cupboard systems are examined. Professionalism and patient safety as they apply within the scope of practice of a pharmacy technician are emphasized.

P- COMP2096 Hospital Pharmacy Computer Systems and P- PHRM2009 Hospital Inventory Control and P- PHRM2010 Hospital Dispensing Introductory Theory

#### PHRM2014 Pharmacy Practice and the Interprofessional Team 42.0 Hours

Using an integrated approach, students examine the role of the pharmacy technician within the interprofessional team. Students examine case studies for medication errors and system failures that result in patient or employee harm. Students develop skills communicating with and gaining a deeper understanding of other professions. The Ontario College of Pharmacists (OCP) Learning Portfolio is further developed. Using relevant legislation, the Code of Ethics, and the Professional Responsibility Principles, students participate in the ethical decision making process. New trends and changes within the pharmacy industry are investigated.

P- PHRM2004 Legal Foundations and Professional Practice

### **Course Description Legend**

P = Prerequisite; C = Concurrent prerequisite; CO= Corequisite

*Information contained in College documents respecting programs is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.*