

Area of Interest: Health Sciences

## Pre-Health Sciences Pathway to Certificates and Diplomas

Ontario College Certificate  
1 Year  
Ottawa Campus

Program Code: 1625X01FWO

### Our Program

#### **Develop knowledge and skills to continue your studies in health sciences.**

This one-year Pre-Health Sciences Pathway to Certificates and Diplomas Ontario College Certificate program provides you with the knowledge, skills and abilities fundamental to academic success in a variety of health science programs. You develop strong study skills and earn post-secondary credits that may be transferred to other college programs.

As a student, you explore your interests in the health science field while meeting the eligibility requirements for several Algonquin College programs, including:

- Dental Assisting - Levels I and II
- Fitness and Health Promotion
- Occupational Therapist Assistant/Physiotherapist Assistant
- Paramedic
- Practical Nursing
- Pre-Service Firefighter Education and Training
- Veterinary Assistant
- Veterinary Technician

The curriculum provides you with the opportunity to learn more about potential careers in the health sciences as you improve your skills and knowledge in communications, mathematics, biology and chemistry.

The intention of this program is to prepare you for further study in certificates or diplomas, rather than moving directly into a chosen industry. It is important to note that completing this program does not guarantee entry into a health or science program.

Students interested in further academic study in a three-year advanced diploma or university program should consider applying to the Pre-Health Sciences Pathway to Advanced Diplomas and Degrees program.

### Employment

Graduates of the Pre-Health Sciences Pathway to Certificates and Diplomas program may be eligible to apply for admission to various certificate or diploma programs. However, final admission to any program is at the discretion of the receiving institution.

### Learning Outcomes

The graduate has reliably demonstrated the ability to:

- Examine fundamental biological concepts, processes and systems of the human body,

- Examine fundamental biological concepts, processes and systems of the human body, including the structure, function and properties of the molecules of life, cells, tissues and organ systems in relation to homeostasis and health.
- Examine fundamental concepts, processes and systems of chemistry, including matter and chemical bonding; quantities in chemical reactions; solutions and solubility; acids and bases; as well as nomenclature, structure and properties of organic compounds in relation to health and the human body.
- Solve basic numeric problems and interpret data related to health sciences and other science-related fields using mathematical concepts, including algebra, basic probability and descriptive statistics.
- Use health sciences and other science-related language and terminology appropriately to communicate clearly, concisely and correctly in written, spoken and visual forms.
- Prepare a personal strategy and plan for academic, career and professional development in the health sciences or other science-related fields.
- Investigate health sciences and science-related questions, problems and evidence using the scientific method.
- Identify and apply discipline-specific practices that contribute to the local and global community through social responsibility, economic commitment and environmental stewardship.

## Program of Study

Level: 01	Courses	Hours
BIO0005	Human Biology	56.0
ENL0078	Communication Studies for the Health Sciences	42.0
MAT0024	Math for the Health Sciences	56.0
PSY0032	Psychology	42.0
SCI0004	General Chemistry	56.0
SSC0097	Exploring Careers in Health Sciences	42.0
Level: 02	Courses	Hours
BIO0006	Introductory Anatomy and Physiology	56.0
ENL0079	Communications and Research for the Health Sciences	56.0
MAT0025	Introductory Statistics for the Health Sciences	42.0
SCI0005	Introductory Organic and Biological Chemistry	56.0
SOC0012	Sociology of Health	56.0

## Fees for the 2025/2026 Academic Year

Tuition and related ancillary fees for this program can be viewed by using the Tuition and Fees Estimator tool at <http://www.algonquincollege.com/fee-estimator>

Further information on fees can be found by visiting the Registrar's Office website at <http://www.algonquincollege.com/ro>

Fees are subject to change.

Additional program related expenses include:

Textbooks, access to online learning platforms, and supplies cost approximately \$800.

## **Admission Requirements for the 2026/2027 Academic Year**

### **College Eligibility**

- Ontario Secondary School Diploma (OSSD) or equivalent;
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing, for which a fee will be charged.

### **Program Eligibility**

- English, Grade 12 (ENG4C or equivalent) with a grade of 65% or higher.
- Mathematics, Grade 11 (MBF3C or equivalent) with a grade of 65% or higher. Applicants with international transcripts must provide proof of the subject specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
- IELTS-International English Language Testing Service (Academic) Overall band of 6.5 with a minimum of 6.0 in each band; OR TOEFL-Internet-based (iBT)-overall 88, with a minimum of 22 in each component: Reading 22; Listening 22; Speaking 22; Writing 22; OR Duolingo English Test (DET) Overall 120, minimum of 120 in Literacy and no score below 105.

Should the number of qualified applicants exceed the number of available places, applicants will be selected based on their proficiency in English and mathematics.

## **Admission Requirements for 2025/2026 Academic Year**

### **College Eligibility**

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee will be charged.

### **Program Eligibility**

- English, Grade 12 (ENG4C or equivalent) with a grade of 65% or higher.
- Mathematics, Grade 11 (MBF3C or equivalent) with a grade of 65% or higher.
- Applicants with international transcripts must provide proof of the subject specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
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Not sure if you meet all of the requirements? Academic Upgrading may be able to help with that:  
<https://www.algonquincollege.com/access/> .

Should the number of qualified applicants exceed the number of available places, applicants will be selected on the basis of their proficiency in English and mathematics.

## Application Information

### PRE-HEALTH SCIENCES PATHWAY TO CERTIFICATES AND DIPLOMAS

Program Code 1625X01FWO

**Applications to full-time day programs must be submitted with official transcripts showing completion of the academic admission requirements through:**

ontariocolleges.ca  
60 Corporate Court  
Guelph, Ontario N1G 5J3  
1-888-892-2228

Students currently enrolled in an Ontario secondary school should notify their Guidance Office prior to their online application at <http://www.ontariocolleges.ca/>

Applications for Fall Term and Winter Term admission received by February 1 will be given equal consideration. Applications received after February 1 will be processed on a first-come, first-served basis as long as places are available.

International applicants please visit this link for application process information:  
<https://algonquincollege.my.site.com/myac360/s/self-registration-page> .

For further information on the admissions process, contact:

Registrar's Office  
Algonquin College  
1385 Woodroffe Ave  
Ottawa, ON K2G 1V8  
Telephone: 613-727-0002  
Toll-free: 1-800-565-4723  
TTY: 613-727-7766  
Fax: 613-727-7632  
Contact: <https://www.algonquincollege.com/ro>

## Additional Information

This is a full-time program, running in two consecutive 14-week semesters. Classes may be scheduled anytime Monday through Friday between the hours of 8:00 a.m. and 10:00 p.m.

The Pre-Health Sciences Pathway programs are part of the College's Bring Your Own Device (BYOD) initiative. All applicants are expected to own a laptop or tablet, have access to a reliable internet connection, be computer proficient and have a working knowledge of Microsoft Office Suite. There may also be additional technology-related resources required to participate in a course that are not included in the course materials fee.

This full-time program is offered at both Ottawa and Pembroke campuses. While the learning outcomes at the Ottawa and Pembroke campuses are the same, the curriculum order and subject delivery are reflective of local circumstances that impact program delivery.

## Contact Information

### Program Coordinator(s)

- Janna Redmond, <mailto:redmonj@algonquincollege.com> , 613-727-4723, ext. 2087

## Course Descriptions

### BIO0005 Human Biology

An understanding of human biology forms the basis of further study in health science. Students

learn about the cell as the basic unit of structure and function in the human body. In addition, students relate the organization of cells to tissues, organs and systems to the maintenance of homeostasis. Students also gain insights into the structure and function of essential organ systems such as the digestive, cardiovascular, respiratory, and nervous system. Through interactive group work and laboratory exercises, human biology and genetics are explored on both microscopic and macroscopic levels.

Prerequisite(s): none

Corerequisite(s):none

### **BIO0006 Introductory Anatomy and Physiology**

The structure and function of the body is fundamental to health science. Students further their study of the structure of the human body by examining anatomical models and wet specimens in a laboratory environment. The function of body systems is explored through labs and interactive group projects. In addition, students are introduced to the field of microbiology and the importance of homeostatic mechanisms to maintain health.

Prerequisite(s): BIO0005

Corerequisite(s):none

### **ENL0078 Communication Studies for the Health Sciences**

The ability to communicate clearly contributes to success in academics and in the workplace. Strong communicators critically assess information and ideas and can explain them accurately and concisely, in the language, style, and format appropriate to the audience and purpose. Students develop their skills through reflection, analysis, and reporting in individual and team-based assignments.

Prerequisite(s): none

Corerequisite(s):none

### **ENL0079 Communications and Research for the Health Sciences**

The ability to understand, apply and communicate scientific information is critical in healthcare education and practice. Students use research tools to conduct preliminary research and learn to write with a scientific focus. Skills are developed through workshops, collaborative projects, literature reviews and presentations.

Prerequisite(s): ENL0078

Corerequisite(s):none

### **MAT0024 Math for the Health Sciences**

Through the study of mathematics, students learn how to reason logically, think critically and solve problems - key skills for success in the health sciences. Students review key numeracy concepts, systems of measurement and dimensional analysis and use analytical techniques to solve problems arising from real-world applications involving algebraic, linear, exponential and logarithmic functions and equations.

Prerequisite(s): none

Corerequisite(s):none

### **MAT0025 Introductory Statistics for the Health Sciences**

Strong critical-thinking, problem-solving and decision-making skills are key to success in health professions. Students develop these skills by using statistical concepts and methods for the organization, analysis and interpretation of data. In addition, students calculate the empirical and theoretical probability of events using the key rules of probability, and apply descriptive and inferential statistics to examples from various health care fields.

Prerequisite(s): none

Corerequisite(s):none

**PSY0032 Psychology**

Understanding mental processes, thoughts, feelings, and behaviours is essential in promoting healthy relationships. Through examining traditional and current psychology research, students learn how concepts are applied to many aspects of our personal lives. Learners develop skills to think critically about psychological issues and recognize the discipline as a natural science. Foundational theories in biology and behaviour, learning, motivation, cognition, memory, consciousness, sensation and perception are explored through a variety of learning activities.

Prerequisite(s): none

Corerequisite(s):none

**SCI0004 General Chemistry**

All biological processes are rooted in chemistry. Through collaboration and a focus on health-related examples, students learn about matter, the periodic table, compounds, nuclear chemistry, quantities in chemical reactions and solutions and solubility. Laboratory experiments and demonstrations enhance comprehension of concepts and help students develop safe laboratory practices.

Prerequisite(s): none

Corerequisite(s):none

**SCI0005 Introductory Organic and Biological Chemistry**

Chemistry underlies fundamental biological principles. Students deepen their understanding of matter and chemical reactions. In addition, acids, bases and buffers, organic compounds and biochemistry are introduced. The chemical concepts included are particularly applicable to students entering health science programs.

Prerequisite(s): SCI0004

Corerequisite(s):none

**SOC0012 Sociology of Health**

Understanding current trends and issues in the interaction between society and health is essential for professionals working in the industry. Using the sociological perspective, students examine the social factors shaping health, illness, and the changing nature of health care work.

Prerequisite(s): none

Corerequisite(s):none

**SSC0097 Exploring Careers in Health Sciences**

Investigating a variety of health science opportunities is an integral step in successful career planning. Through discussions, independent research and self-reflection, students explore areas of health specialization and prepare a plan for academic and career development in the health sciences.

Prerequisite(s): none

Corerequisite(s):none