

BIOTECHNOLOGY - HEALTH

Program: BIOT

Credential: Ontario College Diploma

Delivery: Full-time

Length: 4 Semesters

Duration: 2 Year

Effective: Fall 2018, Summer 2019

Location: Barrie

Description

Students are prepared for a career as a lab technician in a biomedical field. Experimental techniques and use of scientific equipment across a variety of disciplines including biology, chemistry and physics will form the basis of the program. Both the theoretical and practical aspects of this discipline are equally emphasized. Upon graduation, students will be able to perform a wide array of experiments and assays to answer clinically-related and scientific problems.

Career Opportunities

Students graduating from this program will possess a wide array of skills related to the analysis of chemical and biological samples. Graduates will also be able to work at academic and clinical institutions in the context of supporting research labs and education of post-secondary students while performing analysis of biological samples in both public and private settings.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. complete all tasks in compliance with pertinent legislation and regulations, as well as biotechnology standards and guidelines;
2. apply quality control and quality assurance procedures to meet organizational standards and guidelines;
3. apply best practices for sustainability;
4. complete biotechnological applications using principles of chemistry, biology and biostatistics as well as basic principles of physics;
5. use appropriate laboratory procedures to carry out quantitative and qualitative tests and analyses;
6. carry out standard cell culture procedures under aseptic conditions;
7. carry out molecular biology procedures;
8. assist with the management of biological data to support biological scientists and researchers in capturing, organizing/summarizing and storing their data;
9. prepare, maintain and communicate scientific data effectively;
10. develop and present a strategic plan for ongoing personal and professional development to enhance work performance;
11. find solutions to problems related to health and medicine using biotechnology procedures and data analysis;
12. apply basic entrepreneurial strategies to identify and respond to new opportunities in biotechnology.

The Program Progression

Fall Intake

- Sem 1: Fall 2018

- Sem 2: Winter 2019

- Sem 3: Fall 2019

- Sem 4: Winter 2020

Summer Intake

- Sem1: Summer 2019

- Sem 2: Fall 2019

- Sem 3: Summer 2020

- Sem 4: Fall 2020

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 12 Chemistry (C or U)

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/>)

Graduation Requirements

- 17 Program Courses
- 2 Communications Courses
- 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.

Program Tracking

Semester 1	Hours
Program Courses	
BIOL 1030 Cell Biology	56

BIOL 1031	Human Physiology 1	56
CHEM 1011	Chemistry for Biotechnology	56
PHYS 1008	Physical Measurements	56
STAT 1000	Statistics	42
Communications Course		
Select 1 course from the communications list during registration.		42
Hours		308
Semester 2		
Program Courses		
BIOL 1032	Human Physiology 2	56
BIOL 1039	Biomedical Laboratory 1	56
BIOL 2012	Microbiology	56
CHEM 1012	Organic Chemistry 1	56
Communications Course		
Select 1 course from the communications list during registration.		42
General Education Course		
Select 1 course from the general education list during registration.		42
Hours		308
Semester 3		
Program Courses		
BIOL 1034	Biochemistry	56
BIOL 2013	Biomedical Laboratory 2	56
CHEM 2004	Organic Chemistry 2	56
CHEM 2005	Analytical Chemistry	56
General Education Course		
Select 1 course from the general education list during registration.		42
Hours		266
Semester 4		
Program Courses		
BIOL 2014	Pharmacology and Pharmaceutical Analysis	56
BIOL 2015	Tissue Culture and Histology	84
BIOL 2016	Immunology and Genetics	56
CHEM 2006	Quality Assurance	56
General Education Courses		
Select 1 course from the general education list during registration.		42
Hours		294
Total Hours		1176

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.