

# Biotechnology Technician – Industrial Microbiology

Program Code: 3621

Program Length: 1 year/2 semesters

Credential: Ontario College Diploma

Start: Fall,

Campus: Centennial Science and  
Technology Centre

bio@centennialcollege.ca

## Program Overview

Qualified college or university graduates gain direct admission into this nationally-accredited one-year program and receive their technician diploma in two semesters. This program prepares you to work as a bench tech (in quality control/quality assurance) in the food, pharmaceutical and cosmetic industries. We provide thorough practical training in industrial microbiology as well as chemistry – analytical, organic and biochemistry.

Laboratory techniques, including appropriate safety procedures, are extensively highlighted. A special feature of the program is our focus on the project approach, with independently designed microbiology projects that enhance your problem-solving and research skills

You may graduate in one year as a biotechnological technician or continue for a second year to study specialized topics such as advanced biotechnology and microbial genetics or systematic microbiology, graduating as a biotechnology technologist

You will learn to:

- isolate, enumerate and identify microorganisms from many types of samples (water, soil, air, your body, and food, pharmaceutical and cosmetic products)
- prepare specimens for staining and become an expert light-microscopist
- become proficient in aseptic handling of materials
- accurately calibrate and use a range of instruments such as pH and BOD meters, Gas Chromatographs, spectrophotometers (regular/IR/UV), HPLC's etc.
- prepare microbiological media and reagents; culture pathogenic microbes; and design and perform your own microbiology experiments
- use microorganisms to assay pharmaceutical products and much, much more.

### AWARDS

The Biotechnology Technician program is a repeat recipient of the Centennial College President's Academic Program Recognition Award for outstanding student satisfaction.

## BENEFITS

### CAREER OUTLOOK

Graduates typically start their careers as quality control technicians in a broad-range of industries – food, cosmetics and pharmaceuticals and also in related government agencies

The organizations our graduates work for include:

- Kisko Products
- Hermann Laue Spice Company
- Apotex Inc.
- Agropur – Division Natrel
- Mill Street Brewery
- MAXXAM Analytics
- Campbell Soup Company
- bioMerieux Canada Inc.
- Griffiths laboratories
- Cosmetica laboratories Inc.

### PROGRAM HIGHLIGHTS

- national accreditation improves the mobility of graduates anywhere in Canada and abroad
- graduates may apply for certification through OACETT (Ontario Association of Certified Engineering Technicians and Technologists) to use the following professional designation: CTech (Certified Technician)
- we are the only Industrial Microbiology program in Ontario
- eight up-to-date laboratories and modern wireless lecture facilities
- thorough laboratory training, starting from the basics up to professional skills
- theory is combined with on-going laboratory work
- high program graduation rate and student satisfaction
- training in Occupational Health and Safety, WHMIS, GMP, HACCP – to industry standards
- qualified and caring faculty and staff provide individual attention in laboratories
- teamwork skills encouraged and developed
- qualified graduates may apply to enter the third year of the Biotechnology Technologist program

### CTAB NATIONALLY ACCREDITED PROGRAM

The Biotechnology Technician – Industrial Microbiology program has met the national technology accreditation requirements established by the Canadian Council of Technicians and Technologists (CCTT) and, as such, has received national accreditation status by the Canadian Technology Accreditation Board (CTAB).

## RECOGNITION AS A CERTIFIED ENGINEERING TECHNICIAN/TECHNOLOGIST



OACETT (The Ontario Association of Certified Engineering Technicians and Technologists) recognizes the Biotechnology Technician – Industrial Microbiology

program as meeting all the academic requirements for certification in the Technician category.

## ADMISSION REQUIREMENTS

Applicants to Fast-track programs must submit an official transcript demonstrating proof of successful completion of a post-secondary diploma or degree program in related chemistry/biology or engineering area. Possessing the minimum requirements does not ensure admission to the program.

## NON-ACADEMIC REQUIREMENTS

- transcript and resumé review may be required
- English and/or math skills assessment may be required

For information on the admission process, please see p. 14.

## PROGRAM OUTLINE

### Semester 3

BI-207	Microbiology Project 1
BI-208	Food Microbiology
CH-121	Organic Chemistry
CH-207	Analytical Chemistry
ENGL-250	Communication For Technology
COMM-170/171	College Communications 2

### Semester 4

BI-206	Microbiology Project 2
BI-209	Pharmaceutical Microbiology
CH-203	Food Chemistry
CH-222	Biochemistry 1
GNED-500	Global Citizenship: From Social Analysis to Social Action

*Note: Students will be required to take a microbiology laboratory preparation/college orientation course offered before semester 3 to prepare for semester 3.*

## At A Glance

- national accreditation supports program quality and provides mobility for graduates
- program length provides timely access to job market