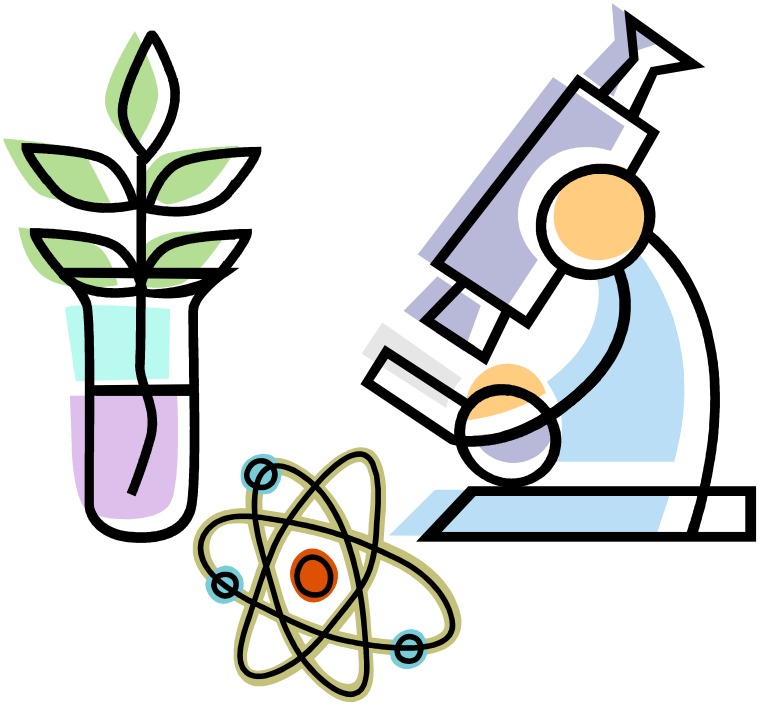
BCIT 2025
Exploring Biotechnology Workshop

WORKSHOP A: DECEMBER 8 - 12, 2025



This package contains:

- Program Overview
- Summary of Events
- Criteria
- Workshop Descriptions
- Career options
- Application form

Program Overview

Welcome to the fifteenth year of the Exploring Biotechnology Workshop. The program is directed at Grade 10, 11 and 12 students with a strong interest in science who want to learn more about applying biology to real-world problems such as human disease. It is built on a partnership between BCIT, local biotechnology companies and participating school districts.

The program consists of a series of integrated elements:

- A student application and selection process
- Laboratory workshops at BCIT
- Industry visit

There will be **24** openings for the workshops and industry visits. The program assigns a student quota to each district and every effort will be made to accommodate interested students if district quotas are not filled.

Districts can be responsible for student selection, ensuring that students meet the selection criteria (please see Selection Criteria).

The program will provide bus transportation (when applicable) between the laboratory and the industry site. The Exploring Biotechnology instructors' endeavor to improve the program each year. We welcome your feedback on any part of the program at any time.

Thank you for helping make the program the success it has become.

The Program Planning Committee

Getting Started

- ✓ District coordinator, teacher, school representative OR qualified students send application forms to **kathy_white@bcit.ca**, Program Assistant for the BCIT Biotechnology department by **FRIDAY, NOVEMBER 14, 2025.**

NOTE TO DISTRICT COORDINATORS/TEACHERS/FACILITATORS/
If possible, please submit your completed form as soon as possible. Applications are accepted until November 14th, 2025. (Selection is based on variables like application date, what grade the student is in, district allotment, etc).

TUITION FEES:
Domestic student course fee: $256.35.

International student course fee (3X domestic): $768.00 (approx.)

International students:
If you are not a **Canadian citizen or permanent resident** of Canada, you will be required to pay **international tuition fees at BCIT**. Students in Canada on an exchange program, will be considered International. Please make sure you are aware of the approximate fee which must be paid in FULL upon registration.

Application and acceptance process for **WORKSHOP A: DECEMBER 8 – 12, 2025.**

1. Applicant creates BCIT student number **https://secure.bcit.ca/sis/reg/** and **INCLUDES NUMBER ON APPLICATION FORM**. All applications **MUST** have a **BCIT ID number,** or they will be disqualified.

2. Accepted students **will be notified via email** the week of **NOVEMBER 17th, 2025** and given the chance to accept and register/pay.

3. **In order to confirm a seat, each student MUST register first and pay their tuition within 24 hours of registration. This must be done no** later than **MONDAY, DECEMBER 1st, 2025**. If registration/payment does not occur by the deadline, the seat will be offered to applicants on the waiting list.

Deadline Recap:

- Submit application by **Friday, November 14th, 2025**
- Accepted students will be notified: **the week of November 17th, 2025**
- Register and pay by: **Monday, December 1st, 2025**
- Course starts: **Monday, December 8th, 2025**

Information for Accepted Students

PAYMENT OPTIONS - IMPORTANT

You must obtain a BCIT ID number before you can register for the course online or by calling our registration line. Once you register for the course, tuition payment **MUST** be made within 24 hours, or you will get dropped for non-payment and may not be notified. Therefore, if you are not ready to make a payment you should wait to register before the deadline. BCIT offers a variety of convenient payment options for tuition and related student fees:

- ✓ Online banking (bill payment)
- ✓ In-person – cash, debit card, cheque, bank draft, money order

Please note, BCIT **does not accept credit cards** for payment of tuition and related student fees or for rent.

1. **Online banking (bill payment):** BCIT accepts payment from Canadian banks and credit unions and it is the **recommended method** for paying your fees. Payments can be made quickly and at your convenience through your bank's online services using your home computer, tablet or smartphone.

   Canadian financial institutions have two payment options: Tuition and Rent. Find the bill payments section on your institutions' website and add **"BCIT – Tuition Payments"** as a **PAYEE** to pay for your courses. **DO NOT** use the rent option to pay for tuition as this could result in you being dropped from courses for non-payment. **Your nine (9) digit student ID (A########) is your account number**. If the student ID is not present, the funds will be returned to your financial institution.

   Please note there may be a delay of up to 48 hours from when you make your payment to when the payment reaches BCIT, so ensure you schedule sufficient time before your payment deadline. **You can view your BCIT receipt in your myBCIT account to confirm payment has been received by BCIT**. View instructions

2. **In-person (Student Information and Enrolment Services):**

   Customers can choose from a variety of in-person payment options including:

   - Cash
   - Debit card – please keep in mind your daily transaction limit
   - Cheque – please ensure the cheque is made payable to BCIT and includes your student ID
   - Bank draft
   - Money order

Selection Criteria

Eligible students must:

- ✓ Have an expressed interest in life science-related curriculum, be enthusiastic about scientific research and lab work, and be interested in learning about careers related to life sciences research and biotechnology
- ✓ Be a Grade 10, 11 or 12 student (preference given to Grade 12 and then Grade 11 students first).
- ✓ Actively participate in the lab-based workshops and attend all sessions
- ✓ Be able to initiate and maintain conversation with practicing professionals at an industry site concerning occupational information and scientific focus

Student Sponsorship

- ✓ Once students are selected to register, if a school/district would like to fund the student, sponsorship paperwork can be completed and BCIT can send an invoice to the sponsoring organization. Payment can then be made by cheque or electronic funds transfer. BCIT's payment terms for sponsorship invoices are net 20 days. Please let Kathy White know if you need more information on how to sponsor a student. kathy_white@bcit.ca)

Refunds

- ✓ Refunds for students who cancel their participation in the Program will be reviewed under BCIT's part time studies refund guidelines and ultimately determined by the staff in BCIT's School of Health Sciences. **Two (2) weeks' notice** for cancellation is required in order for student to receive refund.

BCIT Workshop Description

Monday Lecture AM Lab PM	An Introduction to Biotechnology Topics: • Modern Applications of Biotechnology • Fields of Biotechnology • Tools of Biotech Lab1: Use of Micropipettes and Spectrophotometers Lab 2: Aseptic techniques and culturing microbes
Tuesday Lecture AM Lab	Molecular Cloning and Animal Cell Culture Topics: • A history of genetic engineering • Cloning versus molecular cloning • Recombinant DNA technologies Lab 3: Plasmid preparation from bacteria Lab 4: Animal Cell Culture
Wednesday Lecture AM Lab	Genetic Engineering and Plant Cell Culture Topics: ▪ Micropropagation of plants ▪ DNA fingerprinting and PCR ▪ DNA sequencing ▪ CRISPR and genome editing Lab 4: Restriction digests and gel electrophoresis Lab 5: DNA Fingerprinting Lab 6: Plant cell culture
Thursday Lecture AM Lab	Protein Biotechnology Topics: • Monoclonal antibodies • CAR-T therapy • Vaccines Lab 8: Cell staining and microscopy
Friday AM Friday PM	Lab Activity OR visit to UBC Microbiology and Immunology Department labs (TBD) Visit to Acuitas Therapeutics on the UBC campus

★ Schedule subject to change

Examples of Careers in Biotechnology

In Research & Development

Research Scientist

- Responsible for initiating, directing and executing all preclinical scientific research and/or development strategies for a company through the research staff or individual studies which are critical.
- Typically requires a PhD in a scientific discipline.

Research Associate

- Responsible for research and/or development in collaboration with others for projects.
- Typically requires a B.Sc. or a M.Sc. in related field.

Laboratory Assistant

- Responsible for performing a wide variety of research and/or development, laboratory tasks and experiments.
- Requires a high school diploma or some laboratory experience.

Quality Control Analyst

- Responsible for conducting routine and non-routine analysis of raw materials, in process, and finished formulations according to standard operating procedures.
- Typically requires a B.Sc.

Quality Assurance Associate

- Responsible for performing a wide variety of activities pertaining to assuring compliance with applicable regulatory requirements by conducting audits, training programs, data and documentation reviews and analysis.
- Typically requires a B.Sc.

In Regulatory Affairs and Biomanufacturing

Regulatory Affairs Associate

- Responsible for the coordination and preparation of document packages for regulatory submissions to regulatory bodies, such as the Food and Drug Administration (FDA) in the US and the Therapeutic Drug Program in Canada,
- Performs internal audits and inspections.
- Typically requires a B.Sc.

Manufacturing Associate

- Responsible for the implementation of production and large scale manufacturing
- Procedures to optimize processes and regulatory requirements.
- Typically requires a B.Sc.

Process Development Scientist

- Responsible for the development of methods for the production, purification, fermentation and testing of new process formulas, technologies and products.
- Typically requires a PhD in a scientific discipline.

In Clinical Research

Medical Director

- Responsible for managing the direction, planning, execution, and interpretation of clinical trials (clinical trials are research involving humans) and the data collection activities.
- Typically requires a MD or PhD.

Medical Writer

- Responsible for researching, writing, and editing clinical reports, summarizing data from clinical studies for submissions to the FDA and for publication and/or presentation.
- Typically requires a B.Sc. or M.Sc.

Clinical Research Associate

- Responsible for the design, planning, implementation and overall direction of clinical research projects.
- Typically requires a B.Sc., RN or BSN degree.

Biostatistician

- Responsible for the design, development, modification and evaluation of a technical infrastructure to expedite conducting and evaluation of clinical trials.
- Typically requires a M.Sc. or PhD.

EXPLORING BIOTECHNOLOGY
WORKSHOP A: December 8 – 12, 2025
E-mail application form to:
Kathy_white@bcit.ca

****** Complete this form online if possible or please print clearly *********

BCIT Student Number: **A01**:_____ **(required field)**

No student number? Create one here: **https://secure.bcit.ca/sis/reg/**

Student's Last Name: _____ First Name: _____

Parent/Guardian Name: _____ Parent's Email: _____

City: _____

Telephone: _____Student Email: _____

Gender: _____

Grade: _____ School:_____ District #:_____

Teacher's Name: _____ Teacher's e-mail: _____

BCIT will possibly be using photographs of participating students for promotional material for this program. Parental permission is needed.

My personal information (photographic/video image only) may be collected under the Authority of the Institute Act (RSBC 1996, Ch.225) for the purposes of instruction or promotion. I hereby authorize BCIT exclusive permission to use this information for purposes of promotion of BCIT programs and graduates and marketing in any published or displayed media format for no charge.

Student Name:_____
Parent Name:_____
Parent Signature:_____

✓ **Location and schedule details will be sent 1 week before program start date.**