BCIT™

CIVIL ENGINEERING STUDENT HANDBOOK

2022-23

Cover photo by Getty Images

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Quick Start Guide to find helpful Resources for Student Success

To get familiar with using the Learning Hub (online platform for coursework), refer to the BCIT Learning Hub in Chapter 4 of this handbook.

BCIT continues to provide many resources to help you and ensure your success. You will find the section in Chapter 4 titled Resources for Student Success to be a good starting point in locating these resources. This video on YouTube (https://youtu.be/yZIe-UadKho) is a Quick Start Guide to get you familiar with these resources.

Chapter 1

ABOUT THIS HANDBOOK

This handbook contains **information of use specific to BCIT Civil Engineering students**. Students taking regular day-time studies courses will find information on

- The BCIT Civil Engineering program
- Department Faculty
- Student resources
- Student conduct
- Academic policies and procedures
- Extra-curricular activities
- Civil Engineering and Civil Engineering Technologist careers

Much of the information in the handbook is either not available elsewhere or only available on the BCIT Civil Engineering website: bcit.ca/study/programs/8660beng

Use the Current Version

Note the date on the front cover. This handbook only applies to the academic year in which the handbook is published.

What is NOT in the Handbook?

The handbook does **NOT** contain information that is more generally applicable to the overall BCIT student population and that may be found elsewhere, for example:

- Admissions
- Fees & Financial Aid
- Student Services
- General BCIT Policies

For these and other more general pieces of information refer to the BCIT website: bcit.ca

In the event of any conflict between this booklet and other sources of information, BCIT Policies govern.

To learn about the Institute resources that can help you succeed during your time at BCIT, check out bcit.ca/studentservices

Chapter 2

THE BCIT CIVIL ENGINEERING PROGRAM

- The BEng in Civil Engineering is composed of four years of full-time academic study.
- You will receive a *Diploma in Civil Engineering* credential upon successful completion of the first two years of academic study within this degree program.
- Students who meet the continuation requirements and successfully complete a further two years of full-time study will earn a *BEng in Civil Engineering*.

> The following pages contain the program course flowchart: a full diagram of the required courses and course prerequisites.

- Program course lists and outlines are available online: https://www.bcit.ca/programs/civil-engineering-bachelor-of-engineering-full-time-8660beng/#courses

Program Objectives

The program was developed with the following objectives in mind:

i. Academically prepare engineering students for professional practice through coverage of the broad and varied aspects of the engineering industry, with particular emphasis on Civil Engineering.

ii. Teach skills of direct practical benefit to the industry and equip students with the flexibility to adapt to particular situations and appreciate the limitations of their abilities.

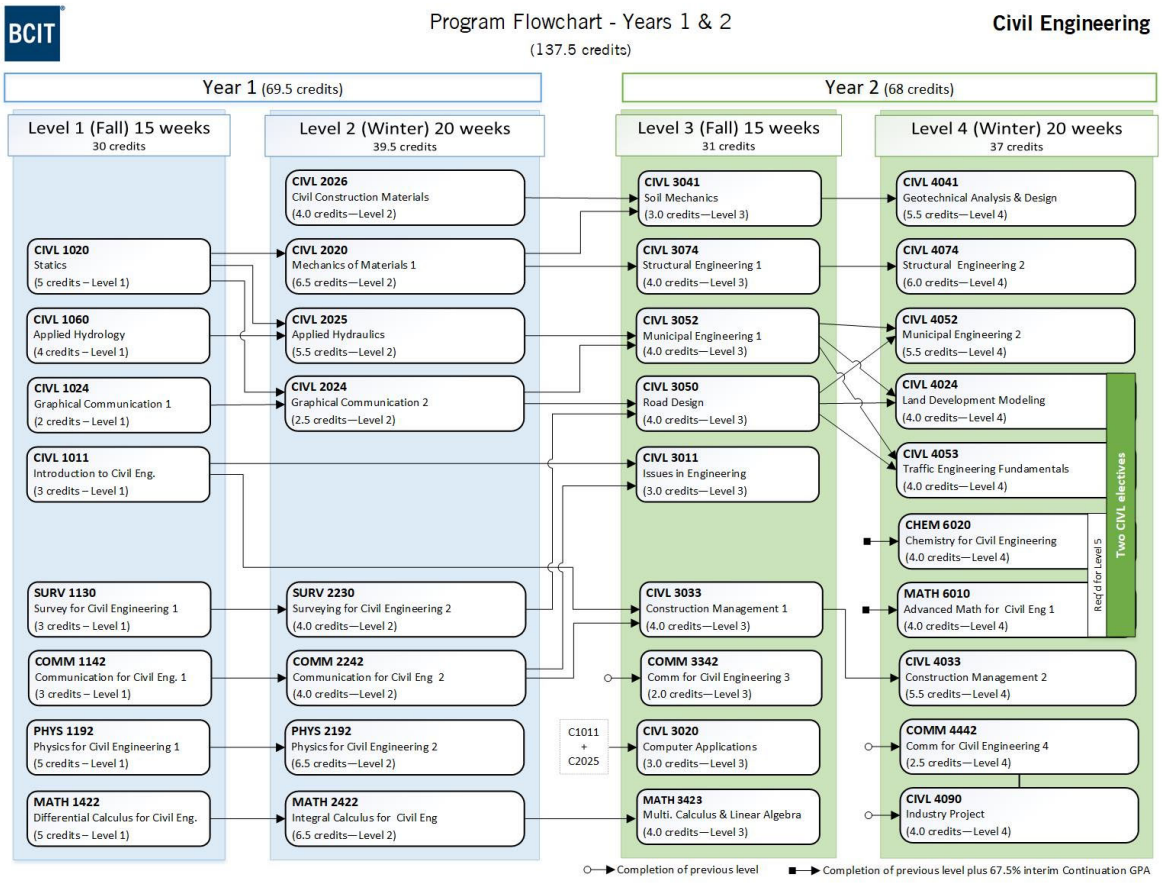
iii. Develop individuals who understand the effects of engineering on society, who can relate technological matters to broader social impacts, and are aware of their responsibilities in this area as a practicing professional.

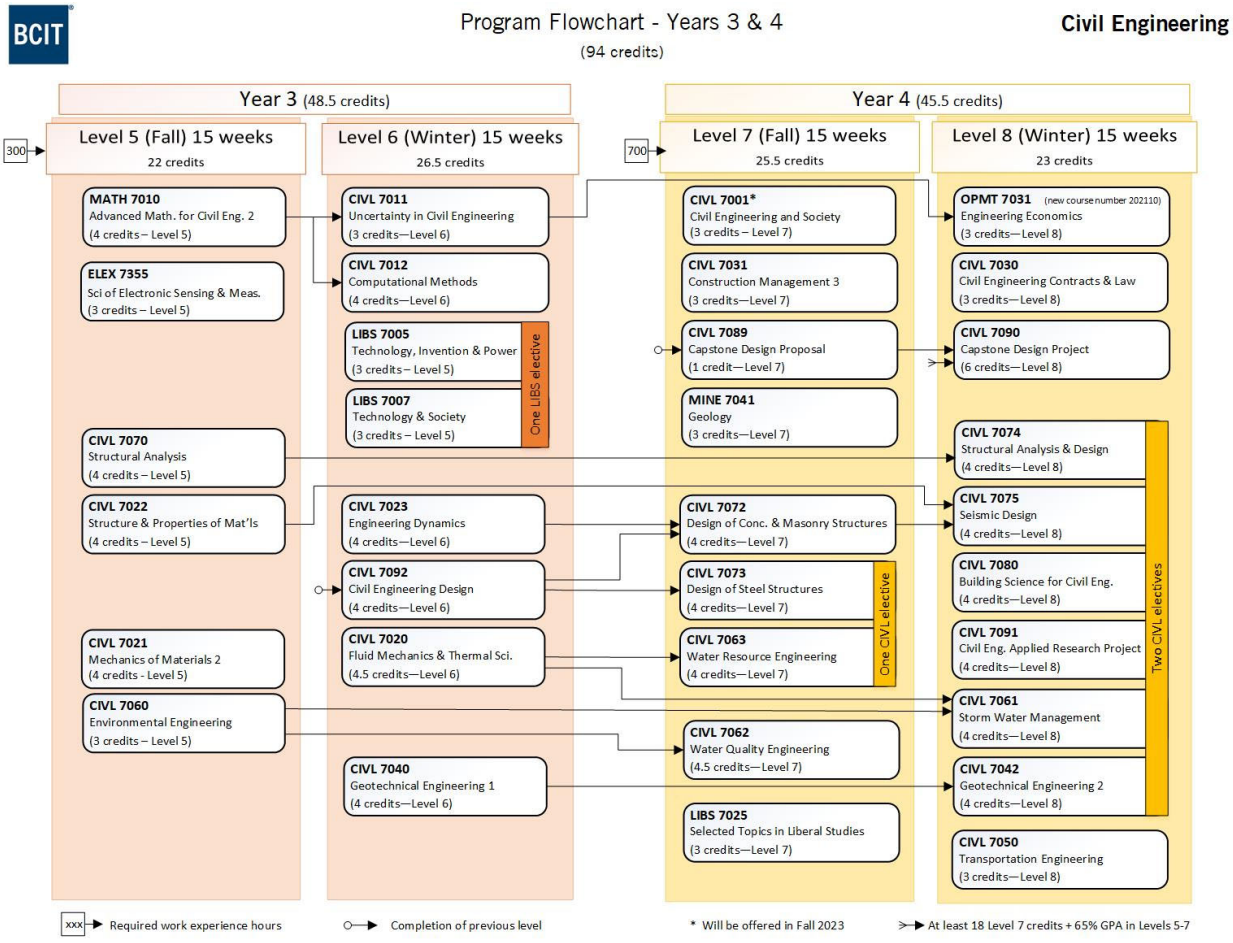
iv. Develop individuals with strong technical understanding.

v. Foster skills related to
   - teamwork,
   - co-operation,
   - communication,
   - leadership,
   - independence, and
   - innovation

vi. Develop an approach to learning and self-development that will continue after graduation from the program.

Program Flowchart Levels 1-8





In keeping with the requirements of accreditation by the Canadian Engineering Accreditation Board (CEAB) the program strives to instill B.Eng. graduates with the following twelve attributes at the time of graduation:

i. **A knowledge base for engineering** – Demonstrated competence in university level mathematics, natural sciences, engineering fundamentals, and specialized engineering knowledge appropriate to the program.

ii. **Problem analysis** – An ability to use appropriate knowledge and skills to identify, formulate, analyze, and solve complex engineering problems in order to reach substantiated conclusions.

iii. **Investigation** – An ability to conduct investigations of complex problems by methods that include appropriate experiments, analysis and interpretation of data, and synthesis of information in order to reach valid conclusions.

iv. **Design** – An ability to design solutions for complex, open-ended engineering problems and to design systems, components or processes that meet specified needs with appropriate attention to health and safety risks, applicable standards, economic, environmental, cultural and societal considerations.

v. **Use of engineering tools** – An ability to create, select, apply, adapt, and extend appropriate techniques, resources, and modern engineering tools to a range of engineering activities, from simple to complex, with an understanding of the associated limitations.

vi. **Individual and team work** – An ability to work effectively as a member and leader in teams, preferably in a multi-disciplinary setting.

vii. **Communication skills** – An ability to communicate complex engineering concepts within the profession and with society at large. Such abilities include reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions.

viii. **Professionalism** – An understanding of the roles and responsibilities of the professional engineer in society, especially the primary role of protection of the public and the public interest.

ix. **Impact of engineering on society and the environment** – An ability to analyse social and environmental aspects of engineering activities. Such abilities include an understanding of the interactions that engineering has with the economic, social, health, safety, legal, and cultural aspects of society; the uncertainties in the prediction of such interactions; and the concepts of sustainable design and development and environmental stewardship.

x. **Ethics and equity** – An ability to apply professional ethics, accountability, and equity.

xi. **Economics and project management** – An ability to appropriately incorporate economics and business practices including project, risk and change management into the practice of engineering, and to understand their limitations.

xii. **Life-long learning** – An ability to identify and to address their own educational needs in a changing world, sufficiently to maintain their competence and to the advancement of knowledge.

Course outlines are published for each course within the program and contain learning outcomes for each course. Each learning outcome in turn lists the graduate attribute that it develops. bcit.ca/study/programs/8660beng#courses

Levels

Each academic year consists of two academic levels. As students progress through the program they will advance to higher term levels. Odd number levels occur in the fall term, and even number levels occur in the winter term. Term durations differ between Year 1 and 2 as compared to Year 3 and 4. The months in attendance at school are summarized as follows:

Year	Level	Term Length (weeks)	Months
1	1	14 weeks (2022)	Sept – Dec.
	2	20	Jan. – May
2	3	15 (2023)	Sept – Dec.
	4	20	Jan. - May
3	5	15 (2024)	Sept.-Dec.
	6	***15***	Jan. – ***April***
4	7	15 (2025)	Sept. – Dec.
	8	***15***	Jan. – ***April***

There are a number of calendars that you may find useful:

- BCIT events: bcit.ca/events , BCIT academic dates: bcit.ca/academic-dates

There are a number of Civil calendars on the Civil Commons site in the Student Resources section:

- Civil Timetables and final exam schedules: civil.commons.bcit.ca/resources
- Important Civil program-related dates and events: civil.commons.bcit.ca/calendar
- Civil set reps for each year are responsible for maintaining the student calendars for their peers. Year 1 Civil Student calendar: civil.commons.bcit.ca/scheduleY1

Term Calendar

Fall 2022 Term

Tuesday, September 6, 2022	Year 1 Orientation
Wednesday, September 7, 2022	Fall term classes start @ 8:30 AM
Friday, September 9, 2022	Year 1 CSCE Welcome Party BBQ
Thursday, September 20, 2022	Deadline to apply for course credit or audit a course and deadline to withdraw from full-time program and receive a refund
Friday, September 30, 2022	National Day for Truth and Reconciliation (no classes)
Monday, October 10, 2022	Thanksgiving Holiday (no classes)
Friday, November 11, 2022	Remembrance Day (no classes)
Tuesday, November 15, 2021	Last day to drop courses and receive a W on transcript
Monday, December 5 - Friday December 9, 2022	Exam week for all levels
Saturday, December 17, 2022	Fall Marks available

Winter 2023 Term

Wednesday, January 4, 2023	Winter term classes begin
January 18, 2023	Deadline to apply for course credit or audit a course and deadline to withdraw from full-time program and receive a refund
Monday, February 20, 2023	Family Day Holiday (no classes)
Monday March 13 to Friday March 17, 2023	Spring Break (no classes)
Wednesday, April 12, 2023	Level 2, 4 last day to drop courses and receive a W on transcript
Friday, April 7, 2023	Good Friday (no classes)
Monday, April 10, 2023	Easter Monday (no classes)
Thursday, May 18, 2023 to Friday, May 26, 2023	Level 2, 4 exam week
Monday, May 22, 2023	Victoria Day Holiday (no classes or exams)
Saturday, June 3, 2023	Level 2, 4 marks available

Chapter 3

DEPARTMENT AND FACULTY ROLES

Engineering Programs at BCIT

You are not alone. BCIT offers four full-time Bachelor's degrees in Engineering:

- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Mining and Mineral Resource Engineering

The Civil Engineering program and the Mining and Mineral Resource Engineering program are both located within the *BCIT School of Construction and the Environment*:

- Dean: Wayne Hand, P.Eng.
- Associate Dean: Steven Kuan, P.Eng.

Department Contacts

Most of your contact will be with faculty and staff within the Department of Civil Engineering. A Departmental Contact List for the fall 2022 term is provided at the end of this Chapter and includes Departmental Faculty as well as external Instructors

Department Roles

You will be interacting with the course Instructor(s) for each of the individual courses you take. The Department has assigned certain Faculty to additional roles in addition to their teaching responsibilities. The fall 2022 term roles are as follows:

Program Head

Phyllis Chong, P.Eng.
pchong26@bcit.ca

- Day-to-day program issues
- Long term program planning
- Dept. meeting coordination/Chair
- Dept. contact for external enquiries
- Tech Entry Day coordination
- Hiring/ Selection Committees
- Program Advisory Committee
- BCIT BIG Info + info session participation

Program Coordinator

Syed Zaki Abdullah, PhD
Syed_Zaki_Abdullah@bcit.ca

- Lab and safety coordination
- Department budget coordination
- Capital equipment list maintenance
- Facilities (classrooms, chairs, etc.)
- Student club coordinator
- WHMIS coordination
- Swipe card access coordination

Student Coordinator

Antone Dabeet, P.Eng.
adabeet@bcit.ca

- Student registration issues
- Electives selection and counselling
- Set rep coordination
- Student counselling re: progression
- Level 5 admissions
- Work experience tracking
- Re-admission enquiries (all levels)
- Transfer of credit

Admissions Coordinator

Poureya Bazargani, P.Eng.
Civil_Adm_Coord@bcit.ca

- 1st year application processing
- Responding to applicant enquiries
- BCIT BIG Info participation

Curriculum Coordinator

Bishnu Pandey, P.Eng.
bpandey@my.bcit.ca

- Curriculum Committee Chair
- Mobilizing effective Curriculum Committee
- Defining faculty expectations for CEAB accreditation maintenance

Student Club Faculty Sponsors

Canadian Society for Civil Engineering (CSCE) Student Club:

- Kian Karimi, P.Eng.
- Poureya Bazargani, P.Eng.
  commons.bcit.ca/csce

Women in Engineering (WiE) Student Club:

- Phyllis Chong, P.Eng.
  commons.bcit.ca/wie

American Concrete Institute (ACI) Student Club:

- Mohammed Farooq, EIT
- Sudip Talukdar, P.Eng.

facebook.com/groups/1519732258125047/

Other Engineering clubs on campus include:

- Engineers Without Borders
- The BCIT Engineering Student Society (ESS)
- The Bridge Building Competition Club

For more information on these and other engineering clubs on campus, refer to Chapter 7 or contact the BCIT Student Association:

bcitsa.ca/campus-life/clubs/

Department of Civil Engineering

Fall 202230

Phyllis Chong, P.Eng.	SW3-2084	604-451-6853	Program Head
Syed Abdullah, Ph.D.	SW3-2085	604-456-1047	Program Coordinator
Antone Dabeet, P.Eng.	SW3-3096	604-451-6854	Student Coordinator
Bishnu Pandey, P.Eng.	SW3-2088	604-432-8579	Curriculum Coordinator
Poureya Bazargani, P.Eng.	Remote	604-453-4010	Timetabler, QAC and Admissions Coordinator
Colleen Chan, P.Eng.	SW3-2080	604-412-7406	Quality Assurance Coordinator
Kristin Maxom	SW3-2086	604-456-1259	Admin. Assistant, Full-Time Program
Michael Baumert, P.Eng.	SW3-3098	604-451-7117	
Martin Bollo, P.Eng.	SW3-2080	604-432-8802	
Ray Daxon, Dipl.T.	SW3-2086	604-432-8849	
Mohammed Farooq, PhD, EIT	SW3 2087	604-451-6852	
Diane Grady, P.Eng.	SW3 2087	604-412-7424	Sessional Instructor
Kian Karimi, P.Eng.	SW3-2088	604-451-6957	
Wai Wah Ng, P.Eng.	SW3-2082	604-456-1228	
Anna Ovanesova, P.Eng.	SW3-2081	604-412-7544	
Sudip Talukdar, P.Eng.	SW3-2087	604-456-1064	On leave until January 2023
Paul Thurston, P.Eng.	SW3-2087	604-432-8422	Sessional Instructor
David Wong, P.Eng.	SW3-2081	604-451-6969	
Qi Zhang, P.Eng.	SW3-2082	604-451-6968	
Part-Time Studies			
Ken Zeleschuk, AScT.	SW3-2655	604-456-1066	AI for Full Time program and Alternate Studies Coordinator

Lab Phones:

SW3 1650 (Materials): 5691	SW3 1690 (Clean Soils): 5694
SW1 1068 (Structures): 5008	SW3 1655 (Environmental): 6958

Other Faculty teaching info the Civil Engineering Program for Fall 2022

1st Year				
Kevin Dunphy	Kevin_Dunphy@bcit.ca	SW3-4608	604-451-7136	Physics Department
Kim Nishimura	Kim_Nishimura@bcit.ca	SW2 -231	604-451-7173	Mathematics Department
John Storm	John_Storm@bcit.ca	SW2–245	604-431-4983	Communication Department
Robert Scott	rscott103@bcit.ca	SW2-313	604-432-8627	Geomatics Department
Darryl Dube	ddube2@bcit.ca	SW2-316	604-456-8097	Geomatics Department
2nd Year				
Jacquie Russell	jrussell38@bcit.ca	SW2-4795	604-432-8229	Communication Department
Andrew McConnell	Andrew_McConnell@bcit.ca	SW2–237	604-451-7179	Mathematics Department
3rd Year				
Scott Hagan	shagan@my.bcit.ca	SW2-223	604-451-7174	Mathematics Department
Bill Maki	bill_maki@bcit.ca	SW01-3069	604-412-7590	Electrical and Computer Eng.
4th Year				
Elspeth Barnes	ebarnes6@bcit.ca	SW1-2570	604-451-7105	Mining Department
Michelle Hawkins	mhawkins16@bcit.ca	SW2-233	604-451-7107	Liberal Studies Department
Megan Murphy	mmurphy67@bcit.ca	SW3-3090	604-456-1083	Liberal Studies Department
Aaron Hunter	Aaron_Hunter@bcit.ca	SW2-321	604-432-8325	Liberal Studies Department
Vasco Castela	vcastela@bcit.ca	SW2-255	604-453-4059	Liberal Studies Department
Scott Hagan	shagan@my.bcit.ca	SW2-223	604-451-7174	Libs/ Math Department
Susana Phillips	Susana_Phillips@bcit.ca	SW03-3086	604-454-2298	Liberal Studies Department

Chapter 4

STUDENT RESOURCES, TOOLS AND EQUIPMENT

Website

The Department website bcit.ca/programs/civil-engineering-bachelor-of-engineering-full-time-8660beng/ contains extensive information relevant to the program. Current students may refer to the following relevant sections:

- Overview
- Program Entry
- Costs & Supplies
- Courses
- Program Details
- Graduating & Jobs
- Faculty, Advisors and Staff
- Contacts

Students will find the following pages linked to from the BCIT Civil Engineering Commons site commons.bcit.ca/civil :

- Student Resources
- Civil Engineering Research
- Civil Lab Facilities
- CSCE Student Chapter
- eduFacts

Email

Every BCIT student receives an email account of the form **abcde12@my.bcit.ca**

IMPORTANT: Make sure your my.bcit.ca account is linked with any other email account (Gmail, Hotmail, etc.) you use frequently, as myBCIT is the principle means for out-of-class communication from Faculty. The AppsAnywhere

Students can access their software applications from any computer by going to appsanywhere.bcit.ca from any web browser. Help can be found kb.bcit.ca/student/logging-in-appsanywhere-3020/

BCIT Learning Hub (see below) also has email functionality which may be used by instructors for course related communication. This email should also be linked.

Textbooks

First year students will be provided with a list of textbooks required for the first term (list can be found at the end of this chapter). Do not buy any texts prior to receiving this list, as requirements may change from year to year. Use caution if purchasing used texts, as publishers may update the textbook edition.

Bring Your Own Device – BYOD

All Civil Engineering students are required to bring their own computing device for course use. More details can be found here:

https://www.bcit.ca/files/construction/civil/pdf/civil_engineering_byod.pdf

Minimum requirements:

- Operating system: Windows 10 or 11
- Memory: 8GB - 16GB
- Graphics Card: Intel XE or AMD Radeon integrated graphics or dedicated graphics card with 4GB+ RAM
- Processor: Intel i5 - Intel i7 or AMD Ryzen 5
- Hard Drive: 500GB SSD or larger
- 13" screen or larger with at least 1920 x 1080 resolution
- Connectivity: 802.11AC - 802.11AX or Wifi6 with 2x2 capability

- Wireless: supports 802.11n or 802.11ac, ideally with a 2x2-capable Wireless card
- Integrated keyboard
- Current Chrome/Safari/Firefox installed web browser
- Battery: 2-hour or longer battery life
- Power chord for recharging

Other recommended accessories:

- A warranty with accidental damage coverage.
- Web camera, speakers and microphone. These can be integrated into your device (preferred option) or purchased and installed separately..
- Minimum high-speed internet of 10Mbps (megabits per second),
- A stand-alone monitor(s) for viewing and editing files at home,
- Computer mouse for ease of use, particularly when drafting in AutoCAD,
- PDF scanning mobile app

AppsAnywhere

Students can access their software applications from any computer by going to appsanywhere.bcit.ca from any web browser. Help can be found kb.bcit.ca/student/logging-in-appsanywhere-3020/

BCIT Learning Hub

The Learning Hub is BCIT's online learning environment. While your courses will be delivered in-person, the Learning Hub will likely be used by your instructor for communications, distribution of course materials for your labs, lectures and tutorials, as well as for assessments such as assignments, quizzes, and tests.

BCIT Knowledge Base

If you encounter problems with software in the computer labs or online, check out the BCIT Knowledge Base – a repository for help and how-to documentation maintained by BCIT IT Services.
In addition, check out the IT services website to manage your access to various software packages:
bcit.ca/its/software/

Student Calendar

The civil department provides on-line calendars to keep track of important events such as exams, due dates and other events. There are four calendars, one for each year of the program and each is maintained by a Set Rep for that year.

Access to the calendars can be found within the 'Civil Commons' site on the 'Resources' page near the bottom:

Year 1 civil.commons.bcit.ca/scheduleY1
Year 2 civil.commons.bcit.ca/scheduleY2
Year 3 civil.commons.bcit.ca/scheduleY3
Year 4 civil.commons.bcit.ca/scheduleY4

If you need additional information or want to participate in maintaining the calendar for your year contact faculty member Ray Daxon at rdaxon@bcit.ca.

BCIT Civil Engineering Facebook Group

While not department-endorsed, the BCIT Civil Engineering Facebook page is meant to strengthen the connection between civil students of all years and encourage the sharing of resources and knowledge.
facebook.com/groups/bcitcivilengineering

ON-CAMPUS RESOURCES

Lockers

Locker usage in our area of BCIT is on a first come first served basis; put a lock on it and it is yours. The best location is on the 3rd floor of building SW3 near room 3675. Note that locker contents must be cleared at the end of the school year.

Classrooms and Faculty Offices

Most classes in the civil engineering program are scheduled in buildings SW03 and SW01. Civil Engineering Faculty offices are located in SW03.

A building map is available at bcit.ca/map

There is a blue map on the wall at the east ground level entrance to SW03 that shows the rooms on all floors of SW01 and SW03.

The BCIT convention for numbering rooms is according to building name and then room number. The four-digit room numbers contain further insight into their location: the first digit is the building floor number and the second digit represents a hallway number. So for example, SW3 3695 means the room is located in building SW3, on the third floor, in the hallway that has all room numbers starting with 36xx. This means, however, that a room numbered 3695 could be in an entirely different hallway than a room numbered 3705.

The most common classrooms used for civil classes, labs, and tutorials are below:

SW01-1021	Large lecture hall
SW01-1025	Large lecture hall
SW01-1068, 60 & 70	Structures lab
SW01-1080	4th/3rd year classroom or tutorial room
SW03-1650	Construction materials and dirty soils lab
SW03-1640	Hydraulics lab
SW03-1655	Environmental lab
SW03-1690	“Clean” soils lab
SW03-1750	Large lecture hall
SW03-1710	Large lecture hall
SW03-2665/2675	Computer lab
SW03-2695	Computer lab
SW03-3695	Tutorial room or 3/4th year classroom
SW03-3675	Tutorial room or 3/4th year classroom
SW03-3660	3/4th year classroom or tutorial room

Safety Equipment

Students are required to provide the following safety equipment:

- Clear safety glasses w/side protectors $5—$10.
  Steel toed boots: Must be CSA-certified with a “Green Triangle” indicating it has sole puncture protection as well as Grade 1 toe impact protection. Either steel or composite toes or plates are acceptable. Estimated cost= $100-$200.

Plotter Usage

Aside from using the Campus Print and Copy Shop in SE2, students may choose to use the department’s HP Designjet T790 Plotter located in SW1-1080 to plot drawings after obtaining faculty approval. Access to the plotter is STRICTLY restricted to times when class is not in session. Students who are found to be disrupting classes by plotting during class times will be asked to leave the room, and will have their usage privileges immediately revoked.

Display Cabinets

There are a number of hallway glass cabinets containing information specific to the Civil Engineering program:

- Department Information Board (employment opportunities sent directly to the Department, timetables, scholarships, etc.): next to SW3 3695.
- Student projects display cabinet between SW3 2087 and 2088.
- CSCE Student Chapter: next to SW3 3096.
- Women in Engineering (WiE): next to SW3 2086.
- ACI display cabinet next to SW3 1690.
- Year 4 display cabinet next to SW1 1080.

RESOURCES FOR STUDENT SUCCESS

Student Success Hub on the Learning Hub:

- Welcome video about student success at BCIT.
- Read about Student Success Hub at Student Services.
- A checklist of "to-do" items for new and returning students
- A welcome and overview of your rights and responsibilities as a BCIT student
- Tutorials on using online learning technologies
- Tips and strategies for effective learning
- An overview of Student Services at BCIT
- Helpful resources for managing your well-being while studying

Counselling and Student Development

If you're a full-time or part-time student at BCIT, your counsellors are here to help you:

- Sort through personal concerns, like anxiety, depression, relationships, assertiveness, and more.
- Enhance your educational performance and maximize your success as a student.
- Build decision-making and problem-solving skills.
- Work toward your educational, personal, and career goals.

Contact the Counselling and Student Development Office at:

bcit.ca/counselling

SE16-128 (co-located with Student Health Services near the Burnaby campus Recreation Centre).

Appointment Phone: 604-432-8608
Virtual Appointment Phone: 604-432-8608

Mental Health

- Mental Health at Home web resource
- Early Assist program – provides support for students based on referrals from BCIT community members
- The Province of BC's Here2Talk Program – connects students with mental health supports.

Level 1 Textbook List Fall 2022

Course	Instructor	Req/Opt	Book Title	Author	Price
CIVL 1011 Introduction to Civil Engineering	Phyllis Chong and Kim Nishimura	No textbook required			
CIVL 1020 Statics	Mohammed Farooq	Required	Engineering Mechanics: Statics Si Ed W/Access Code Pkg. (14th Ed Canadian)	Hibbeler	$139.50
CIVL 1024 Graphical Communication	Zaki Abdullah & David Wong	Course notes available on the Learning Hub			
CIVL 1060 Applied Hydrology	Wai Wah Ng	Required	CIVL 1060 Applied Hydrology Course Manual (Bielenberg September 2020)	Bielenberg	$13.95
COMM 1142 Communication for Civil Engineering 1	John Storm	No textbook required			
MATH 1422 Differential Calculus for Civil Engineering	Kim Nishimura	Optional	CEI Digital : Calculus Early Transcendentals Edition 7	Edwards	$88.95
		Required	Subscription to Mobius Assessment bought at BCIT Bookstore- valid for MATH 1422 and 2422	N/A	$34.50
		Required	Math 1422 Lecture Notes (June 2022)	Math/ Nishimura	$14.50
PHYS 1192 Physics for Civil Eng. 1	Kevin Dunphy	Required	Cei Digital: Physics For Scientists & Engineers W Mmp + Etext, 4Th Ed	Giancoli	$128.95
SURV 1130 Surveying for Civil Eng. 1	Robert Scott	Course notes available on Learning Hub			

* Prices may be adjusted by the BCIT Bookstore at any time. Used books may also be available at a discount.

Chapter 5

POLICIES AND PROCEDURES - STUDENT CONDUCT

BCIT Policies

BCIT has a number of policies that govern all students on campus, available online: bcit.ca/about/administration/policies

The policies listed in this handbook are designed to conform to BCIT policy, but where there is any discrepancy, BCIT policies will supersede the policies in this handbook.

Conduct Expectations

You are in a professional program, and are expected to conduct yourself as such. Your behaviour should replicate that of a professional setting.

- In all settings, be respectful and ensure a harassment-free environment.
- In working tutorials, conduct yourself as you would in an office environment.
- Treat your classmates in the same (or better) professional manner as you would expect to treat coworkers in the workplace.
- Treat the Faculty in the same (or better) professional manner as you would treat a Manager or Supervisor at your workplace.
- Conduct yourself at all times as would be expected by the Codes of Ethics that govern the Engineering and Engineering Technology professions (see below).
- Group work and learning is an important part of our program. It is expected however that individual submissions and exams will represent your own effort.

Please refer to the document at the end of this chapter regarding student conduct during exams.

Engineering is a well-respected profession and it is the duty of all of us to maintain the public's confidence.

Engineers & Geoscientists BC and ASTTBC Code of Ethics

Engineers and Geoscientists BC and ASTTBC (Association of Scientists, Technologists and Technicians of British Columbia) are the two professional organizations governing our graduates. Their Codes of Ethics are essentially the same, and the full wording of the Engineers & Geoscientists BC Code of Ethics is contained in Chapter 8 of this handbook.

The first paragraph of the Engineers & Geoscientists BC Code of Ethics summarizes how students in the BCIT Department of Civil Engineering need to act:

> "Members and licensees shall act at all times with fairness, courtesy and good faith to their associates, employers, employees and clients, and with fidelity to the public needs. They shall uphold the values of truth, honesty and trustworthiness and safeguard human life and welfare and the environment."

Emergencies

Emergency concerns should be brought to the immediate attention of BCIT Safety and Security. Phones for internal use are available in the hallways; look for the signage.

	Non-Emergency	Emergency
Security Office - SW1-1016	604-451-6856	2248 (internal only)

BCIT has an emergency warning alert system – BCIT ALERT – designed to keep the BCIT community connected to key information, and to ensure the continued safety of students and staff at the institute. Students are automatically registered for this free service. See this page to customize your alerts: bcit.ca/safetyandsecurity/emergency/alert

BCIT has a safety app called Safety Wise that features emergency contacts, safety tips, a personal safety toolbox, extensive maps, and much more! Download it here: bcit.ca/safety-security/safety-on-campus/apps-for-staying-safe/

Course Issues and Concerns

Student/Faculty issues and concerns should first be brought to the attention of the Instructor delivering the course. The Student Coordinator or Program Head may get involved if a resolution cannot be made.

Laboratory Use

The Department has developed a Health & Safety Manual that includes specific directions for using the labs and associated equipment.

The purpose is to ensure protection of people and property while using Civil Engineering Laboratory Facilities for student projects and course lab work. It is your responsibility to ensure you have read and understood this Safety Manual prior to conducting any activities in the Civil Engineering Laboratories.

WHMIS

All Civil Engineering students are required to complete WHMIS – Workplace Hazardous Materials Identification System – training. The instructions for completing this online module will be provided to you in the CIVL 1011 course material. It is mandatory to complete the WHMIS training prior to undertaking any Laboratory work required for courses.

Student Use of Rooms

Students are encouraged to work together after school hours on course work, projects, etc. However, it is understood that after-hours use of BCIT classroom facilities is a privilege. Classrooms must be left in perfect condition at the end of each night. Desks and chairs must be left in an orderly, organized manner and no garbage of any kind should be left in a classroom at the end of the day. Classrooms must be kept in clean, hygienic conditions at all times. Students found to be misusing this privilege will not be permitted to work in classrooms after hours.

Recording of Courses

Electronic recording of course material (e.g. video, image, or audio files) is **prohibited** with the following exceptions:

- where the student has obtained prior written permission from the instructor, or

- where the student has obtained permission under BCIT Policy 4501, Accommodation for Students with Disabilities.

Student Conduct During Exams

The BCIT Civil Engineering Department has developed a procedure for student conduct before, during and after the writing of exams. The full procedure is included as a stand-alone page at the end of this section.

Absences

Institute policies on absences can be accessed online and are also referenced on course outlines. In particular, note that there will be no makeup tests, exams or quizzes.

If you miss a test, exam or quiz, you will receive zero marks. Exceptions may be made for extenuating circumstances or for medical reasons documented by a BCIT Student Medical Certificate: https://www.bcit.ca/files/healthservices/pdf/studentmedicalcertificate.pdf

a. In such a case, it is the responsibility of the student to inform one of the course instructors immediately.
b. Students' Medical Certificates are to be delivered to the Student Coordinator, who will coordinate and advise instructors regarding make-up tests, etc.
c. Exceptions will **not** be made for personal events such as vacations, weddings, or travel arrangements.

Student Competition Participation

Absences for participation in student competitions must be coordinated with each impacted Faculty member well in advance of the anticipated competition date.

It is up to the sole discretion of each Faculty member as to whether any allowances can be made for missed course work or evaluations, but it is generally up to the student to decide if they are willing to miss a class activity without accommodation.

Department Policy of Student Conduct During Exams

BCIT DEPARTMENT OF CIVIL ENGINEERING

Student Conduct During Exams

1. Arrive at your exam on time. If you are late, you will not be permitted to write the exam if another student has already left.
2. When you arrive, place everything you will not be using to write your exam (books, bags, jackets, hoodies, etc.) at the front or back of the room as directed by the invigilator. Any pencil cases, notes or other belongings not specifically authorized for use during the exam, including your silenced cell phone, must be in your securely closed bag. Remove hats, toques, hoods, etc. (other than religious head coverings) and leave these with the rest of your personal gear. You may not retrieve your belongings until you have turned in your paper and are about to leave the room. Better yet, leave all this in your locker.
3. Place the items you will need to write your exam on the desk or table. These may include pens, pencils, drafting instruments, permitted calculators, water bottle, and other materials as may be specifically permitted by your instructor.
4. Leave an empty seat between yourself and neighbouring students if the room layout permits. Additionally, you may be asked by the invigilator to change seats during the exam for any reason.
5. Once the exam has started, you may not leave the room *for any* reason before you have turned in your paper. Once you have left, you may not return. To be reviewed once new BCIT policy on student conduct is published.
6. Do all work on the provided test material. No scrap paper is permitted; if you need more paper, the invigilator will provide it.
7. The invigilator will post times on the board if the room does not have a clock. If you finish your exam with more than 5 minutes remaining, you may hand in your paper and leave promptly and quietly. Otherwise, remain quietly seated until the invigilator has collected all the papers.
8. When the invigilator announces that time is up, immediately cease writing and remain quietly seated until the invigilator has collected all the papers.
9. No electronic devices are permitted except as specifically authorized. Electronic devices include, but are not limited to: phones, laptops, calculators other than models specifically permitted, MP3 players, electronic dictionaries, smart watches and smart glasses. Headphones/ear buds may not be used during an exam.
10. If you are suspected of any of the following during the exam, or of any similar practices, the invigilator will submit a report and you may be subject to disciplinary action:
    - communicating with other students, unless otherwise authorized;
    - purposely exposing written papers to the view of other students or imaging devices;
    - purposely viewing the written papers of other students;
    - using or having visible any unauthorized materials or electronic devices.

2019 June Student Conduct During Exams v5

Chapter 6

POLICIES AND PROCEDURES - ACADEMIC

Requesting Course Credit

Course credit/exemption may be granted when an equivalent course has been previously completed. With two exceptions noted below, you may only apply for course credit at the beginning of the term in which you are registered in the course. Use the following procedure:

1. Obtain a Course Credit/Exemption form from BCIT Student Records. bcit.ca/files/pdf/admission/course_credit_exemption.pdf.
2. Complete one form per course.
3. Submit an official transcript along with the form within 14 days of start of term. Submit forms to records@bcit.ca with a copy to Mahnaz_Shahrok@bcit.ca and to adabeet@bcit.ca
4. You only need to submit each official transcript (hard copy, in a sealed envelope) once. Emailed copies may be sent directly from the school where you completed your course(s) to the above emails. Note that you were not required to submit official transcripts with your application to BCIT but they are required for BCIT to grant credit for a course taken at another institution.
5. Once processed, you will be notified via myBCIT of your course assessment status.
6. Continue to attend class until you have been notified that credit has been granted.

The two exceptions are CHEM 6020 and MATH 6010. You may apply for transfer credit for either or both of these courses during the term you expect to complete Level 3. If granted, you may then take CIVL 4024 or CIVL 4053 in Level 4 without affecting your eligibility for Level 5.

In electing to apply for transfer of credit, you are advised to consider:

- Carrying a transfer credit may prevent you being considered for a provisional pass in the term that the transfer credit applies.
- The grades for the courses in which credit has been obtained in Levels 2, 3 and 4 will be factored into the calculation of your Continuation GPA for applying to 3rd year.
- BCIT grades are based on a numerical system – when letter grades are submitted for transfer credit, the low end of the respective numerical range is selected as the equivalent numerical grade.

Dropping Courses

- See the BCIT Academic Dates calendar and the Term Calendar (page **Error! Bookmark not defined.**) in this Handbook for the term deadlines for withdrawing from courses and obtaining a W on your transcript.
- Withdrawals may jeopardize your chances of being able to take courses in subsequent terms and may extend the duration of your program.

- Due to scheduling, it might not be possible to take lower level and upper level courses in the same term.
- Where academic credit has been granted within a full-time studies program a student's course load will be reduced, however full-time tuition will not be reduced. So, it may be in the student's interest to take the course anyway.
- Arrange to meet with the Department Student Coordinator to discuss your options and gain a better understanding of the implications of dropping courses.

Failed Courses

After course grades have been released, the Department of Civil Engineering will contact any students who have failed courses and provide instruction on next steps. For those who are eligible to continue in the program, a modified schedule will be developed that takes into consideration the following:

- Required course prerequisites
- Course scheduling
- Student objectives
- Other considerations affecting workload

Upon failing and/or withdrawing from courses the option for a student to continue in the Program is subject to an evaluation process conducted after the end of each term. The Department of Civil Engineering has developed Guidelines to assist in recommending an outcome. For level 1 students, there are four possible outcomes:

1. Pass all Level 1 courses and move to Level 2 as a full-time student.
2. Be removed completely from the program and consider a different career path. This generally applies if your Level 1 includes 3 or more failures or 2 failures and a GPA below 55%.
3. Course-by-course registration (partial load) for Level 2. This generally applies if you have 1 failure (or 2 failures with a GPA above 55%). You will then take three years to complete the Diploma and will take roughly 2/3 of a full course load each term.
4. Provisional Pass. You will continue into Level 2 as a full-time student with some conditions. This is not an option for students who have received Transfer Credits.

Modified Schedules

Students who continue in the program after failing courses or withdrawing from courses will follow a Modified Program. These students are classified as Part Time Day (PTD) – also known as course-by-course students.

- Tuition fees are calculated on the basis of a certain amount per credit once the number of credits drops below a certain threshold.
- Arrange to meet with the Department's Student Coordinator to develop and register for a Modified Program.
- This may not be an option for students who have received transfer credits.

Progression to 3rd Year

Progression to 3rd year Civil Engineering is coordinated by the Department Student Coordinator. The minimum requirements to be considered for progression are as follows:

a. A completed BCIT Diploma in Civil Engineering.

b. A minimum 70% Continuation GPA under a full-time program load. This is calculated using grades obtained in your first attempt of all courses from Levels 2, 3, and 4, excluding CIVL 4024 and CIVL 4053, but including CHEM 6020 and MATH 6010.

c. If you complete Levels 2, 3, and 4 in a mode other than full-time, you may also be considered for continuation into Level 5 if you meet the 70% continuation GPA requirement.

d. Complete 300 hours of post-diploma practical work experience.

e. Submit a completed Practical Work Experience Form bcit.ca/files/construction/civil/pdf/work_experience_soce to the Department Student Coordinator, within the first two weeks of classes in Level 5 and Level 7.

Progression to Year 3 includes:

1. Continuation (rollover) directly from Level 4; or
2. Re-admission to Level 5 after an absence of greater than three months

Continuation (rollover) is based on seat availability. If the number of students seeking to enter Level 5 exceeds available seats, BCIT will select those deemed to have the best opportunity for success.

Applications for re-admission after an absence of greater than three months are accepted from November 1st* to June 1st*. If you are a Level 5 re-admission student with questions about the process, please contact Student Coordinator, Antone Dabeet at adabeet@bcit.ca

Working for a full year between 2nd and 3rd year is common and has been found to be beneficial by many students. Taking more than 1 year away from studying is not recommended because students tend to struggle when returning to third year, in particular due to forgotten math skills. Such a path may jeopardize chances for admission to 3rd year.

* Or next business day

Chapter 7

EXTRA-CURRICULAR ACTIVITIES AND INTERNATIONAL OPPORTUNITIES

Student Clubs

The BCIT Department of Civil Engineering supports student participation in Engineering-related clubs as a supplement to the education students receive in the classroom. There are a number of Engineering-related clubs active on campus.

To have student club activities, events, talks and competitions posted on the BCIT Civil Calendar commons.bcit.ca/civil/calendar.html please email: Kristin_Maxom@bcit.ca

Canadian Society for Civil Engineering (CSCE)

The BCIT Student Chapter of the Canadian Society for Civil Engineering (CSCE) is one of the most active student clubs on campus. Some highlights:

- Largest / most active Chapter in Canada (out of 26 schools).
- 2021, 2019, 2017, 2016, 2014 and 2011 CSCE President's Award winner for Best Student Chapter in Canada.
- Responsible for events throughout the academic year:
  - Student competitions
  - Civil sports teams
  - Technical talks from Industry Professionals
  - Social events with other disciplines and industry
  - Networking events
- Close to 100% Membership across entire Civil Engineering program.
- Linked to Vancouver Section and CSCE National.

CSCE Chapter will be holding a Welcome Party for all Civil Engineering students on Friday, September 9. Information on the BBQ will be shared at Year 1 Orientation

The Faculty Advisors for the BCIT CSCE Student Chapter for 2022-2023 are:

- Kian Karimi, P.Eng.
- Poureya Bazargani, P.Eng.

Join Now!

Refer to the last page in this Student Handbook for information on how you can sign up for the CSCE through email or Facebook.

Helpful CSCE links:

- facebook.com/cscebcit
- commons.bcit.ca/csce
- president@bcitcsce.ca

American Concrete Institute (ACI)

The BCIT student chapter of the American Concrete Institute (ACI) operates as a subset of the CSCE Chapter and participates in student competitions at the ACI Conferences. See the section below under Student Competitions for more info.

The Faculty Advisors for the 2022-2023 academic year are Sudip Talukdar, P.Eng. and Mohammed Farooq, EIT.

- facebook.com/acibcitchapter

BCIT Women in Engineering – WiE

WiE represents Women in Engineering. The club is a strong community of female engineering students who strive to empower one another to lead, to inspire young females to pursue engineering and to influence views towards women in engineering. Through WiE gender inclusive events like networking, symposiums, and panel discussions, we aim to bridge the gap between being a student and a working professional. The WiE mentorship program aims for easier integration of first-year female engineering students into student life. This program cultivates a lasting bond between the mentor and mentee.

The WIE faculty advisor for 2022-2023 is Phyllis Chong, P.Eng. (Civil Engineering)

- commons.bcit.ca/wie
- wie.bcit@outlook.com

BCIT Engineering Student Society (ESS)

The BCIT Engineering Students' Society (BCIT ESS) is a partnership between Mechanical, Electrical and Civil engineering students, brought together to enrich the life of all BCIT engineering students by coordinating social events, interdisciplinary projects, competitions, and professional seminars. The Society sponsors student participation in the Western Engineering Competition (WEC). BCIT hosted the 33rd Western Engineering Competition in January 2018.

- facebook.com/bcitess
- bcit.ess@gmail.com

Engineers Without Borders (EWB)

The EWB BCIT chapter is committed to bringing positive social change to BCIT. By raising awareness on important issues such as development and fair trade, this club will help create more globally minded individuals. The EWB is also committed to bridging the gap between different engineering disciplines, as well as bring students together from different programs which may not be engineering related.

- facebook.com/ewb.bcit
- bcit@ewb.ca

The Bridge Building Competition Club (BBCC)

The BBCC is a group of passionate engineering students that participate in the Troitsky Bridge Building Competition every year. BCIT students compete with other universities around Canada to design and build the most efficient bridge. This bridge is built using only white glue, Popsicle sticks, and dental floss. BBCC is an opportunity for students to collaborate with each other and obtain new skills that will support them in their engineering careers.

- instagram.com/bcit_troitsky
- bcittroitskyteam@gmail.com

Student Competitions

Troitsky Bridge

The Department of Building, Civil & Environmental Engineering at Concordia University in Montreal hosts an annual competition named the Troitsky Bridge Building Competition. The *Bridge Building Competition Club* coordinates the BCIT Civil Engineering entries into the competition. See the website troitsky.ca for more information.

ACI Competitions

The BCIT ACI Student Chapter last competed at the 2019 ACI Student Eco-Concrete Challenge in Quebec City with a strong showing. Details on upcoming competitions can be found here: https://www.concrete.org/students/studentcompetitions.aspx

You can watch a video from the 2017 ACI Team here: Youtube.com/watch?v=rjn8xQ5Se80

Presentation Idol

Formerly named Engineering Idol, current BCIT engineering and technology students, who have taken at least one BCIT Communication Department course, are invited to deliver a six- to eight-minute oral presentation on a technology-related topic. Students are encouraged to showcase and/or comment on innovation in engineering and technology, for instance by presenting their own designs, or exploring and commenting on new frontiers. Up to 32 participants can enter the first round, and eight proceed to the final round. Registration is on a first-come basis. bcit.ca/idol

Engineers & Geoscientists BC Popsicle Stick Bridge Building Competition

Many of the individual branches of Engineers & Geoscientists BC host an annual Popsicle stick bridge building competition in February, March or April of each year. Many of the competitions are timed to coincide with National Engineering and Geoscience Month (NEGM) in March. See egbc.ca for more details.

WEC

The Western Engineering Competition (WEC) was founded in 1985 and brought together the leading students from across Western Canada to practice and exhibit their problem solving, team-building, and communication skills in seven different events. The most recent competition was held virtually and hosted by University of Yukon in January, 2021. More info at https://www.wesst.ca/western-engineering-competition

2-day challenge

The BCIT School of Construction and the Environment 2-day challenge is a collaborative initiative that brings together students from different programs in teams to solve a real-world issue in 48 hours and present their solutions to a panel of industry, government and indigenous judges. commons.bcit.ca/2daychallenge

Other Competitions

In addition to the above, in which our students regularly compete, there are opportunities to participate in other engineering competitions:

- CSCE Concrete toboggan
- ASCE Concrete canoe
- CISC Steel bridge
- EERI Shake Table Contest
- STEM Spotlight Competition
- And others….

Funding for Student Competitions

Students who plan to participate in student competitions are encouraged to begin the planning process for how to fundraise and who to approach as early as possible during the academic year. The different competition groups are encouraged to coordinate with each other to ensure the same employers and companies are not being repeatedly solicited for funds.

BCIT provides limited funds for students to access each year via the ESS and CSCE Student Chapters. Student competition groups who plan to make use of these funds should contact Civil Program Coordinator, Syed Zaki Abdullah, PhD as early as possible during the academic year.

International Opportunities for BCIT Civil Engineering Students

There are two formal international opportunities open to BCIT Civil Engineering students:

- Exchanges with Biberach University of Applied Sciences in Germany
- Volunteer summer work in Nepal

Exchange Opportunities with Biberach University of Applied Sciences (HBC)

BCIT Civil Engineering has a **formal exchange** agreement in place with HBC, under which a limited number of students may attend the partner institution each term. Due to the differing structures of the programs, visiting students from HBC generally register in a selection of courses from all four years of the BCIT Civil Engineering program, while BCIT students attending HBC are limited to courses taught in English unless they have demonstrated proficiency in German.

The Civil Engineering contact for the HBC exchanges is Bishnu Pandey, P.Eng. Application forms and other information are available at bcit.ca/construction/exchange.

If you are interested in this opportunity, you should attend the presentation by returned students in January. The deadline for applications for Civil Engineering students is February 15th regardless of the term being applied for.

In addition to the formal agreement, HBC offers two different **Summer Schools** in English which BCIT students are invited to attend: a six-week summer school at HBC and/or CalPoly, and a two-week summer school at HBC. Note that these programs vary from year to year and

specific information is not usually available before April. Please contact Bishnu Pandey, P.Eng. for further information.

Volunteer Summer Work in Nepal

Following the 2015 earthquake in Nepal, BCIT School Construction and the Environment (SOCE) engaged in the reconnaissance and recovery efforts. BCIT sent Dr. Bishnu Pandey, a civil engineering faculty, to Nepal to serve as an advisor to the recovery program led by National Reconstruction Authority of government of Nepal. In addition, the SOCE and Department of Civil Engineering facilitated to send civil engineering students to take summer internship with Earthquake Safety Solutions (ESS) in Kathmandu, where students worked in seismic mitigation and rehabilitation works.

While the earthquake reconstruction program in Nepal is formally ending in 2021, ESS is continuing engineering works related to seismic mitigation and long-term infrastructure and housing that need to incorporate seismic hazard in design and construction. As ESS expressed interest to continue the internship for students from BCIT, students may have opportunities to be part of their work as interns in summers. Future opportunities, if any, will be announced to third- and fourth-year students during the winter term.

Chapter 8

BECOMING AN ENGINEER OR TECHNOLOGIST

Regulatory Bodies

Engineers and Geoscientists BC and ASTTBC (Association of Scientists, Technologists and Technicians of British Columbia) are the two professional organizations governing our graduates. Completing your educational qualification is the first step in satisfying the educational, professional experience, suitability of character, and professional examination requirements of becoming a P.Eng. or A.Sc.T.

Student Memberships

ASTTBC

ASTTBC offers free membership to BCIT Civil Engineering students. Along with membership to ASTTBC as a Student Technologist or Student Technician, you'll be kept up to date on association activity, initiatives, and events as well as access to the Canadian Technical Employment Network:

- asttbc.org/careers/students/student_app
- Email: techinfo@asttbc.org

Engineers & Geoscientists BC

An Engineers & Geoscientists BC Student Membership is available to help you connect with your future professional association and ease the transition from student life to professional life.

Membership for Year 1 + 2 students is $25/ year. Membership is FREE for Year 3 + 4 BCIT Engineering students. Gain access to financial benefits, networking opportunities and professional development resources.

- egbc.ca/Member-Programs/Students/Student-Membership
- Email: students@egbc.ca
- www.egbc.ca

Codes of Ethics

The Engineers & Geoscientists BC and ASTTBC Codes of Ethics are essentially the same, and the full wording of the Engineers & Geoscientists BC Code of Ethics is repeated here:

Engineers & Geoscientists BC Code of Ethics

A registrant must adhere to the following Code of Ethics:

Registrants must act at all times with fairness, courtesy and good faith toward all persons with whom the registrant has professional dealings, and in accordance with the public interest. Registrants must uphold the values of truth, honesty, and trustworthiness and safeguard human life and welfare and the environment. In keeping with these basic tenets, registrants must:

1) Hold paramount the safety, health and welfare of the public, the protection of the environment and promote health and safety within the workplace;

2) Practice only in those fields where training and ability make the registrant professionally competent;

3) Have regard for the common law and any applicable enactments, federal enactments, or enactments of another province;

4) Have regard for applicable standards, policies, plans, and practices established by the government or Engineers and Geoscientists BC;

5) Maintain competence in relevant specializations, including advances in the regulated practice and relevant science;

6) Provide accurate information in respect of qualifications and experience;

7) Provide professional opinions that distinguish between facts, assumptions, and opinions;

8) Avoid situations and circumstances in which there is a real or perceived conflict of interest and ensure conflicts of interest, including perceived conflicts of interest, are properly disclosed and necessary measures are taken so a conflict of interest does not bias decisions or recommendations;

9) Report to Engineers and Geoscientists BC and, if applicable, any other appropriate authority, if the registrant, on reasonable and probable grounds, believes that:

a. The continued practice of a regulated practice by another registrant or other person, including firms and employers, might pose a risk of significant harm to the environment or to the health or safety of the public or a group of people; or
b. A registrant or another individual has made decisions or engaged in practices which may be illegal or unethical;

10) Present clearly to employers and clients the possible consequences if professional decisions or judgments are overruled or disregarded;

11) Clearly identify each registrant who has contributed professional work, including recommendations, reports, statements, or opinions;

12) Undertake work and documentation with due diligence and in accordance with any guidance developed to standardize professional documentation for the applicable profession; and

13) Conduct themselves with fairness, courtesy, and good faith towards clients, colleagues, and others, give credit where it is due and accept, as well as give, honest and fair professional comment.

The Iron Ring

The Iron Ring has been registered and may be worn on the little finger of the working hand by any engineer who has been obligated at an authorized ceremony of the Ritual of the Calling of the Engineer. The ring symbolizes the pride which engineers have in their profession, while simultaneously reminding them of their humility. The ring serves as a reminder to the engineer and others of the engineer's obligation to live by a high standard of professional conduct. It is not a symbol of qualification as an engineer - this is determined by the provincial and territorial licensing bodies. (ORIGINAL TEXT BY CAMP NO. 1, TORONTO) 91.07

BCIT Civil Engineering students may participate in The Ritual of the Calling of an Engineer in their fourth year of study. This Obligation Ceremony is organized in Vancouver by Camp #5 of The Corporation of the Seven Wardens Inc. The Ceremony is usually held in March at the Queen Elizabeth Theatre in downtown Vancouver. ironring.ca

Employment Information

There are several BCIT-wide sources of information on employment opportunities. Both job sites listed below allow students and alumni to register online to receive email alerts for relevant job postings.

- BCIT Student Association Career Services bcitsa.ca/careerservices
- BCIT Centre for Workplace Education (eJobs) bcit.ca/ses/students

Department Job Board

Employers will often contact the department directly with information on employment opportunities. Remember to check the Department Information Board next to SW3 3695 frequently.

CSCE Professional Night

The BCIT CSCE Student Chapter hosts its annual Professional Night each year – usually in February. This event is a great opportunity to network with Industry professionals, right on campus. No resumes, though – please! While the focus is on networking and making industry connections, possible employment opportunities are appropriately and tactfully handled with a follow-up email.

Engineers & Geoscientists BC and ASTTBC Student/Industry Networking Night

Engineers & Geoscientists BC and ASTTBC organize a networking night on campus and all students from all of the BCIT Engineering programs are invited to attend.

BCIT SA Industry Days

Industry Days Career Fairs are industry-specific recruitment events where BCIT students and alumni can connect to employers of choice. As well, the BCITSA offers quick and easy "How To" courses several times a week. Check with the BCITSA for updates on their plans for 2021/22.

Salary Guidelines

Engineers & Geoscientists BC and ASTTBC conduct salary surveys of their membership and publish the results. While every situation is different, these results can be a useful reference for engaging in salary negotiations with employers. Based on the most recent surveys conducted (EGBC 2016, ASTTBC 2017),

-
- The Median annual salary for ASTTBC members with under 2 years of experience was approximately $48,000.
- The Median annual salary for Engineers & Geoscientists BC members with under 2 years of experience was approximately $60,000.

Salaries are dependent on responsibility level and other factors, but can be expected to increase with experience.

- The Median salary for ASTTBC members with 10 years of experience was $78,500.
- The Median salary for ASTTBC members with 20 years of experience was $81,000.
- The Median salary for Engineers & Geoscientists BC members with 10 years of experience was approximately $90,000.
- The Median salary for Engineers & Geoscientists BC members with 20 years of experience was approximately $113,700.

Source: egbc.ca/Compensation-Survey-2016

Be sure to consult these surveys and others for more details and context.

Chapter 9

CLOSING REMARKS

This handbook was developed specifically for BCIT's Civil Engineering students. In putting it together it quickly became evident that there was a lot of specific information that we needed to get to our students. We hope this Handbook is useful for you.

Updates

This edition of the Handbook is specific to the particular academic year on the cover. It will (need to) be updated each year.

If you would like to recommend changes or additions please contact Kristin at Kristin_Maxom@bcit.ca

Some Advice

We would like to leave you with the following eight pieces of advice. They are the thoughts and opinions of the author and not necessarily 'official BCIT material'. Consider their meaning and justification in making your own assessment of their merit.

#1: Good Habits

"We are what we repeatedly do. Excellence, then, is not an act but a habit" – Aristotle.

This saying applies to all facets of life, but within the context of your education and time at BCIT, you should consider it as a guideline for how you approach your studies. Get in the habit of behaving in a professional manner, just like the graduate engineer or technologist you will be after graduation.

#2: Self-care

Your body is an incredible piece of machinery. But it needs looking after. Endeavour to give it the fuel it needs, and the necessary tune-ups from time-to time. This means making sure you get enough rest, eat well, exercise, and maintain and develop your relationships with friends and family. Look after yourself!

#3: Well-roundedness

Be well-rounded. Yes, employers want someone who possesses the specialized technical knowledge that you learn through your studies at BCIT, but they also want people who can communicate, who can problem-solve, who work well both individually and in teams, and who can be a leader. Consider ways to become that well-rounded individual; some ideas to improve outside of the classroom could include being active in a student club or volunteering.

#4 On Marks

What do marks mean? Yes, they are an indicator of achievement in a particular class, but they are by no means an end-all. Don't catch yourself chasing marks at the expense of learning. And chasing after more marks – also known as marks-grubbing – can get you a reputation you don't want to have follow you. More on that below.

#5 Network, Network! It Is a Small World

You've probably heard it already – it is not just WHAT you know, but also WHO you know. Take advantage of the

myriad opportunities available to you to get to know your classmates and members of industry; it will serve you well. Engineering is a small world, and you will cross paths with people over and over again. On that note, be aware that how you act at BCIT can follow you well after graduation. Someone who cheats or otherwise acts unethically or unprofessionally will carry that label with them, even if they are not necessarily caught while at BCIT.

#6 Keep Everything in Perspective

The BCIT Civil Engineering program is intense, and includes a lot of hard work. It is important that you keep everything in perspective (and perhaps as a motivating tool). Whether you bombed a test, failed a course, or had some unfortunate event happen to you, try to keep it all in perspective by considering whether anyone got hurt (hopefully not!). It is all part of your education, and learning to bounce back (resiliency) is an important life skill. We are so lucky to be living in Canada, with shelter over our heads and food on our plates; sometimes thinking about the challenges that others across the globe or in history have faced can help you feel better. It is always a good idea to talk to someone if you are having trouble recovering from a set-back.

#7 Walk in the Other Engineer's Shoes

WOES, or Walk in the Other Engineers Shoes is a piece of advice that was given to me and made a lasting impression. Whether it is trying to figure out what is intended in a particular assignment, conducting a job search, or even just trying to understand someone else's opinion on something, it is always useful to try to understand things from the other person's perspective.

#8 Be good. Be proud.

Engineers are held in high esteem by society because by and large they do a good job and hold themselves to the high standards expected by the Code of Ethics. Be a good person and be proud of being an engineer (proud yet modest; not boastful!). Even when not actively 'engineering', conduct yourself in a professional manner. You represent the profession to all the non-engineers you meet and interact with.

Engineering is an admirable career. Make the most of it - for yourself, for society, and for our planet Earth.

By faculty member Martin Bollo, P.Eng.
June, 2017

Notes

BCIT CSCE Welcome Message

BCIT CSCE
Student Chapter
2022 - 2023

WELCOME

The BCIT CSCE Student Chapter is a club dedicated to all BCIT Civil Engineering Students. The goal of the club is to bridge the gap between being a student and being an involved professional through hosting technical seminars, fun events, and an annual networking event with industry professionals. Our chapter has repeatedly won the 1st place out of all Canadian institutions due to our dedication and engaged members. We welcome and encourage everyone to join the club and enjoy your BCIT life to the fullest!

MEMBERSHIP

Are you a BCIT Civil Engineering Student? If so, congratulations! You are a member of the BCIT CSCE Student Chapter.

Non-BCIT Civil Engineering Students can also be members through inquiry with the current student chapter President.

MEETINGS

Meeting times will be posted on the chapter's discord server (see below for access link). They will be held bi-weekly.

The first meeting of the year will be Sept. 7th, at lunch, in SW3 3675

STAY INFORMED

Main contact is through our discord server:
https://discord.gg/teA2P447z3

We are also on:
Instagram: @bcit_csce
Linkedin: @BCIT CSCE Student Chapter
Facebook: @bcitcsce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EDUCATION
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