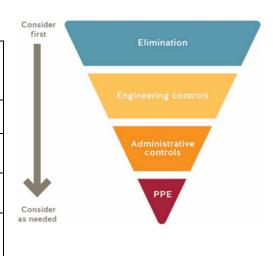


The BCIT COVID-19 Go-Forward Plan outlines the risk assessments, control measures, and the organizational process for our safe return to campus. All returning programs/courses must adhere to this process. Please refer to the <u>BCIT COVID-19 Go-Forward Plan</u> for additional information.

CONTACT INFORMATION

Course/Program Name:	CIVL 7062 "Water Quality Engineering" Civil Engineering – Bachelor of Engineering program								
Proportion of program offered on campus:	Program = total of 67 courses of which 2 courses offered in the fall term have some 'on campus' activity Civil 7062 lab on campus activity = 16 hours								
Start date:	October 8, 2020		End date:	November 15, 2020					
# of students:	24		# of employees:	2 (1 for Labs 1,2 and 3; 2 for Labs 4 and 5)					
Completed by:	Name Colleen Chan	Position Instructo	r	Date August 25, 2020					



ROOM INFORMATION

In this section, please identify all of the rooms that will be used by this returning program/course.

NOTE: Common areas are covered by the BCIT COVID-19 Go-Forward Plan.

NOTE: Common areas are covered by the ben covid 15 do norward han.												
Campus/ Building	Room Number Floor Plans found <u>here</u>	Type of Space Include washrooms and breakout rooms	Capacity Current capacity due to COVID-19									
Burnaby, Building SW3	SW3-1655 and SW3-1695	Laboratory	SW3-1655: Capacity = 4 (3 students + 1 instructor)									
	(Note: both rooms connected, divider removed)		SW3-1695: Capacity = 4 (3 students + 1 instructor or technician)									
	SW3-1610	Women's washroom										
	SW3-1620	Men's washroom										
·												



RATIONALE FOR ON-CAMPUS ACTIVITY

Please provide a short description explaining the need for students to be on campus. Your narrative should be focused on the practical elements of the program or activity that are critical to achieving learning outcomes, and why on campus components cannot be replicated in an online or alternative environment (e.g. student bringing learning equipment home).

CIVL 7062 (Water Quality Engineering) is a core course offered to the Level 7 Civil Engineering students in the fall term. The course components include lectures, tutorial and labs. The lectures and tutorials can be delivered virtually online. However, some lab components (Labs 1, 2 and 3) should be delivered in a campus face-to-face setting, in order to provide students with the hands-on experience of conducting water quality experiments including the use of equipment which cannot be replicated in an online delivery mode. (Note *CLO #11: Conduct experiments to determine relevant water quality parameters*).

Components that cannot be replicated in online environment

Lab 1 – Alkalinity experiments – familiarity with use of titration equipment

Lab 2 – BOD experiment – familiarity with use of pipettes and oxygen probe to measure DO in Winkler bottle

Lab 3 – COD experiment – familiarity with use of spectrophotometer to measure COD of water samples

(Note: Labs 4 and 5 -- 2 instructors will conduct demonstrations online, with no students in attendance in SW3)

CONTROL MEASURES

COVID-19 SAFETY PLAN: CONTROL MEASURES CHECKLIST

Directions for completing a Safety Plan:

- 1. First step of this process is to review the <u>BCIT COVID-19 Go-Forward Plan</u> as the overall planning document for this process.
- 2. Use this checklist as a tool to assess COVID-19 control measure preparedness for students and employees and the spaces they will be using. Refer to the BCIT COVID-19 Go-Forward Plan for standardized safety guidelines and procedures.
- 3. For each control measure, state the details. If the control measure is a 'No' or 'NA', please provide a brief explanation.
- 4. The manager requests all PPE requirements by submitting this draft Safety Plan to the PPE@bcit.ca.
- 5. Implement all the safety measures in this Safety Plan.



- 6. The manager completes a site visit to ensure all control measures and safety supplies are in place.
- 7. The manager signs the completed Safety Plan and submits it to returntocampus@bcit.ca for approval.
- 8. Once approved, the COVID-19 Safety Plan is posted in all work areas identified within this plan.

Note: The workspaces cannot be used until all applicable control measures are in place and Safety Plan is approved. For additional resources the <u>Risk</u> <u>Assessment Controls Guidance and Hierarchy of Controls.</u> For assistance email <u>ssemohs@bcit.ca</u>.

#	Control Measure	Yes	No	NA	Details (as per Directions)
ELIN	INATION				
1.	Room(s) set up to allow for 2 metres physical distancing during instruction and practice. Note: Contact returntocampus@bcit.ca for room capacity and layout if needed.				Exceptions allowed as per <u>BCIT COVID-19 Go-Forward Plan</u> , Risk Matrix Summary (explain): 4 work stations will be set up in SW3-1655 and 4 stations will be set up in SW3-1695. There is at least 2m distance between workstations, demonstration area and walkway.
2.	Demonstration, work and assessment stations are set-up to allow for 2 metres physical distancing.				Exception allowed as per BCIT COVID-19 Go-Forward Plan, Risk Matrix Summary (explain): Same as above The classroom has a large monitor on the wall for instruction and demonstration by the instructor to all students at the same time and also without the need of the instructor to go close up to each workstation.
3.	Identified area(s) where students wait outside of teaching space until allowed inside by instructor.				Physical distance tape marking placed 2 m apart on floor in hallway outside lab. Spots are also marked to identify the order in which the students would enter the room one by one.
4.	Work has been scheduled to minimize numbers of individuals on campus at one time.	\boxtimes			Class is divided into 4 groups/cohorts (6 students per group). Each group/cohort will remain together for the lab sessions. There is a 2 hour gap between each lab session to minimize mingling of groups/cohorts on campus.
5.	In shared spaces, safety protocols have been put in place to reduce close contact between users.				Students are pre-assigned workstations, and students are asked to remain in their own work station throughout the lab session. Workstations are clearly identified with sign and tape. No sharing of lab equipment, handouts etc. is required and permitted. If, for some reasons, the 2m physical distance cannot be maintained, face masks are available for the students and the instructor to wear.

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#	Control Measure	Yes	No	NA	Details (as per Directions)
6.	Movement within the room is identified, such as with directional arrows, for walkways and entrances/exits.				Arrows on the floor identifying walking directions in the lab, and from entrance to exits. All aisles are one-way.
7.	Water fountains are put out of service, and only touchless water bottle filling station available.			\boxtimes	No potable water fountain in lab.
8.	Mobile fans have been removed or put out of service.			\boxtimes	No mobile fans in lab.
9.	Washrooms have been identified.	\boxtimes			If yes, Washroom occupancy limit1_ Students will use the common space washrooms, SW1-1610 or 1620, located a short distance down the hallway from the lab room.
8.	Break area(s) for student use have been identified.				If yes, what control measures are in place to maintain physical distancing? Occupancy Limit If there is an occupancy limit, is sign posted? Y \(\subseteq \ N \) \(\subseteq \) Labs are approx.1.5 hours long, and so students are not expected to take breaks, but may go outside to common space washroom if needed.
9.	Break areas for employee use have been identified.				If yes, what control measures are in place to maintain physical distancing? Employee returns to personal office space. Occupancy Limit If there is an occupancy limit, is sign posted? Y \(\subseteq \ N \) \(\subseteq \) Labs are approx 1.5 hours long; instructor will not take breaks during lab sessions. After labs, instructor may return to their individual office space or outdoor areas for breaks.
10.	Other:				
ENGIN	IEERING CONTROL MEASURES				
11.	Barriers are implemented to separate work areas or walk ways, when physical distancing not practical.			\boxtimes	No barriers are required – adequate physical distancing measures in place
12.	Barriers are stable and do not introduce other safety hazards, e.g. tripping.				No barriers are required – adequate physical distancing measures in place
13.	The impact on ventilation requirements have been considered if there's been a significant use change for the instructional space.				Complete a Facilities and Campus Development work requisition for assessment, as needed. SW3-1665 and 1695 are originally lab spaces with no change for instructional space.
	Other:				3W3 1003 and 1033 are originally lab spaces with no change for instructional space.
SIGNA	GE (ADMINISTRATIVE) Signage is available @ <u>BCIT online Inventory</u> . Guidel	ines for	posting	signs o	are available on <u>ShareSpace</u> .
13.	Posted: Physical distancing (2 m) sign(s) Item 1A	\boxtimes			10 signs posted
14.	Posted: Hand washing sign(s) Item 29B				3 signs posted

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#	Control Measure	Yes	No	NA	Details (as per Directions)	
15.	Posted: Health screen sign(s) Item 3C	\boxtimes			1 signs posted large and small ones	
16.	Posted: Hand washing sink location sign(s) Item 14A	\boxtimes			2 signs posted	
17.	Posted: Hand sanitizing station location sign(s) Item 13A	\boxtimes			2 signs posted	
18.	Posted: Protect yourself sign(s) Item 21A	\boxtimes			2 signs posted	
19.	Posted: Occupancy limit of this room sign(s) Item 37A	\boxtimes			4 signs posted	
20.	Posted: Other signs	\boxtimes			Please list:	
					10B "Entrance Only (1 pieces)	
					11B "Exit Only" (2 pieces)	
					6A "Do not use this equipment" (4 pieces)	
					19F "Please Wait Here" (6 pieces)	
ORIEN	ITATION AND TRAINING (ADMINISTRATIVE)					
21.	Routine safety discussions held to review control measures and safety protocols.	\boxtimes			Discussions around typical lab safety, and primarily Covid-19 transmission, are planned as regular during online lecture sessions. Students will be reminded of safety concerns ahead of each lab and will monitored by Instructors.	
22.	All students have completed the online COVID-19 Pandemic On-	\boxtimes			How will compliance be checked:	
	<u>Campus Guidelines</u> training.				Students will be instructed and reminded to take the online training. The instructor will use the tool, COVID-19 PANDEMIC Course Completions Report available in the Employee Learning Hub at bcit.ca/pd, to see which students have, and have not, met the criteria for in-person class attendance.	
23.	COVID-19 safety Site orientation for students has been	\boxtimes			Procedure for orientation found <u>here</u> .	
	developed and posted in the Learning Hub.				Student COVID-19 Orientation Checklist found <u>here</u> .	
					Site orientation checklist will be posted in course Learning Hub. Instructor will go through orientation checklist with the students during lecture sessions online, prior to start of lab sessions.	
24.	All employees have completed the online BCIT Pandemic Exposure Control Plan Training.	\boxtimes			The instructor has completed the training with proof of completion to the AD.	
25.	All employees have completed the online New Employee Orientation module.				New and Returning Employee Orientation Checklist found <u>here</u> . Each employee to save the checklist to their online New Employee Orientation course	
					Upon completing the training, faculty and lab techs will forward email confirming completion to their AD (and will cc the AD's assistant)	

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#	Control Measure	Yes	No	NA	Details (as per Directions)
26.	Other:				
RULES	S AND GUIDELINES (ADMINISTRATIVE)				
27.	All unnecessary and self-serve items have been removed from the spaces. e.g., pens, paper, etc.				All supplies asked for prior to class and stocked at each workspace The lab space is decluttered. Only required equipment will be provided at each work stations. Additional items (i.e. lab chairs) have been removed to declutter lab space. Items not intended to be used are placed in bins to reduce unnecessary or unintended contact or use.
28.	Doors that students are to use to enter and exit have been clearly identified.				Signs or arrows on the floor provided. Sign posted on entrance and exit doors.
29.	Handouts, papers, and items are not physically provided to students.				If items are provided, they are cleaned between student use or disposed, or other control measures are in place – Describe: Handout materials will be posted to the Learning Hub in advance of labs. Student are asked to print out their own handouts and bring to labs. The handouts are also accessible via student smartphone/tablet, in case student forgets to bring their own handout. Instructor will place apparatus and samples on the table at each workstation prior to the start of each lab session.
30.	Students have dedicated tools/equipment, e.g., items are not shared between students.				All students will have their own set of apparatus and samples at their individual workstations. These are placed at each workstation prior to the start of each lab session. There is no sharing of equipment/tools during lab sessions.
31.	If cleaning common touch points or tools/equipment not practical, then it is identified when hands are washed/sanitized before and after use.				Explain: No shared equipment during labs. Students have all required equipment at their workstation
32.	Work spaces/stations are dedicated for an individual or group use and not shared with others.				Students are pre-assigned workstations, and students are asked to remain at their own workstation throughout the lab session. Workstations are clearly identified with sign and tape. No sharing of lab equipment, handouts etc. is required and permitted. Students and instructors are provided with face masks and are encouraged to be worn during lab sessions, in case 2m physical distance cannot be maintained.
33.	Single-use (disposable) products are used where feasible.	\boxtimes			Gloves, wipes, paper towels are available. A garbage can is provided by the exit door.
34.	Measures are in place to accommodate student sick at home.				Accommodation plan: As laid out in the students guide, to reduce the burden on the medical system, medical documentation is not required in cases where students need to be absent from inperson course activities due to having to quarantine or self-isolate. Appropriate lab make up exercise will be provided if student is unable to attend the lab sessions.

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#	Control Measure	Yes	No	NA	Details (as per Directions)
					Depending on symptom severity, students with COVID-19 may need an academic
					accommodation such as a deadline extension.
35.	Procedures in place to screen students on a daily basis.				The <u>health screen</u> poster is available for reference and is posted on building doors. Students and employees are expected to self assess daily, and the <u>BCCDC self-assessment</u> tool can be used to support this. Self-assessment techniques and the self assessment link (above) are to be widely distributed at the start of classes.
36.	There is a procedure in place if a student or employee becomes ill on campus.				Refer to the COVID-19 Pandemic Scenario Playbook for more information. If the person is reporting symptoms, ask them to avoid others and return home. If they require immediate medical attention, call First Aid and 911. If someone is reporting symptoms, or has a temperature, ask them to avoid others and return home. In addition, have them: • Refer the student to the BC Centre for Disease Control for additional information. • Encourage the student to complete the COVID-19 self- assessment and instructions: https://bc.thrive health/covid19/ • Submit an Early Assist referral and let the student know someone from SLO will reach out shortly. Ask the student for the best phone number to be reached. Include that information in the referral. If they require immediate medical attention, call First Aid and 911.
37.	There are procedures in place if a student or employee travels before coming to campus, or has been in close contact with someone who has tested positive for COVID-19.				Refer to the COVID-19 Pandemic Scenario Playbook for more information. Confirm if the person is aware of self-isolation requirements and protocols. As instructed by the BC Ministry of Health: Anyone arriving from outside of Canada must self-isolate and monitor for symptoms for 14 days upon their arrival and complete/register a self-isolation plan and complete the federal Arrive CAN application. https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery/covid-19-provincial-support/self-isolation-on-return#federal-plan
38.	Provisions made for students to maintain same lab/class cohort throughout the Term.	\boxtimes			Students remains in same group for all labs with no physical mingling with other groups. There are 4 groups/cohorts (6 students in each group)
39.	Other:				
PERSO	ONAL PROTECTIVE EQUIPMENT (PPE). Refer to the PPE Flowchart to dete	rmine w	hat PPI	E is req	uired for COVID-19 purposes.
40.	Appropriate PPE for the hazards of employee and student tasks are available to be provided (non-COVID-19 related ppe).				List the ppe and tasks/activities it is required for, and provide the quantity and unit of measure, if applicable (e.g. 2 boxes of 20 each box):



#	Control Measure	Yes	No	NA	Details (as per Directions)
					CSA approved Safety Eye Glasses(Each student bring their own safety glasses which is available for purchase from BCIT Bookstore)
					Lab Coat (Each student bring their own lab coat which is available for purchase from BCIT Bookstore)
					Disposable Nitrile Gloves (Provide by BCIT):
					1 box of medium 100 each box 1 box of large 100 each box 1 box of extra large 100 each box
					The classroom has a large monitor on the wall for instruction and demonstration by the instructor to all students at the same time and also without the need of the instructor to go close up to each workstation.
					Note: Extra lab coat and safety glasses will be available in case a student forgets to bring it. After use instructor will sanitize and place in a bin not to be used for a week.
41.	Training is provided for the above PPE to students and employees.	\boxtimes			Training will be provided during online class prior to start of lab
42.	Appropriate PPE for COVID-19 is available to be provided to	\boxtimes			Based on circumstances allowed for in the <u>BCIT COVID-19 Go-Forward Plan</u> , Risk
	students and employees. Supply requests emailed to ppe@bcit.ca .				Assessment Matrix Summary. List PPE and tasks/activities required for and provide the quantity and unit of measure, if applicable (e.g. 2 boxes of 20 each box):
					Disposable Gloves (3 boxes ordered – Medium, Large, X-Large) Disposable Face masks for student and employee (1 box ordered) Hand Sanitizer – one at lab entrance and one at lab exit (2 bottles ordered) Hand Sanitizer Stands – for more free space by entrance and exit (2 stands ordered) Disinfecting sprays – to be used by instructor/technician for cleaning after lab sessions (8 bottles ordered)
					Note: As much as possible the 2 m physical distance between student/instructor will be observed in lab. However, wearing face masks is strongly encouraged during lab sessions. In the event that the instructor needs to intervene or approach the student during lab session (i.e. unsafe lab situation, equipment malfunction), face masks will be required by both student and instructor.



#	Control Measure	Yes	No	NA	Details (as per Directions)
43.	PPE safe <u>donning</u> , <u>doffing</u> , <u>disposal</u> , <u>and disinfecting instructional</u>	\boxtimes			Post applicable signs in a visible location if ppe required. Use the <u>Student Orientation checklist</u> to assist orientation/training by instructors.
	materials are available for students and employees.				Use the <u>Employee Orientation checklist</u> to assist orientation/training by their supervisors.
					A link will be provided to instruct on the safe donning, usage, and disposing of all PPE. At
					this point PPE is limited to face masks, goggles, gloves, and hand sanitizer.
44.	Other:				
CLEAN	IING	_			
45.	Facilities is aware of the cleaning needs for the area. Facilities	\boxtimes			Cleaning includes common touch points and appropriate frequency for the area. This
	work requests have been submitted.				includes high touch areas. Provide FCD work request number(s).
					Lab sessions are held on Fridays. Cleaning is requested before and after the lab sessions
					(Thursday afternoon, and Friday after 4 pm). FCD Work Request number: 1449643
46.	Training will be provided to faculty and students performing	\boxtimes			Cleaning Standard Operating Procedures have been located <u>here</u> . What are the cleaning
	cleaning duties and cleaning materials have been provided.				products/materials:
					What ppe is required: Nitrile gloves, safety glasses
47.	Assessment of sufficient number of hand wash stations	\boxtimes			Consider time it will take for hand washing to take place, to determine what is e.a.
	conducted, and an appropriate number of handwashing stations				sufficient number of hand wash stations. Some areas find a ratio of 8:1, students to sink,
	are available				effective. The minimum amount of hand washing required is once before class starts, after class ends and before and after breaks.
					after class erius una before una after breaks.
48.	Handwashing station(s), stocked, easily accessed, and have been	\boxtimes			Sink Location: At back (along north wall) of room for both Sw3-1655 and Sw3-1695
40.	identified to students and employees.				Stocked with soap Y \boxtimes N \square paper towel Y \boxtimes N \square
49.	Hand sanitizing station(s), stocked, and have been identified to	\boxtimes			ABHS (Alcohol-Based Hand Sanitizer): Location(s)At lab entrance and exit locations
	students and employees.				
					Will hand sanitizer be refilled by department: $Y \boxtimes N \square$ If No, describe:
50.	All Safety Data Sheets (SDS) and cleaning procedures used are	\boxtimes		П	If not, describe:
	found <u>here</u> .				
51.	The area(s) have been decluttered so that cleaning is simplified.	\boxtimes			The lab space is decluttered. Only required equipment will be provided at each work
					stations. Additional items (i.e. lab chairs) have been removed to declutter lab space.
52.	Barrier cleaning process has been arranged if the barrier(s) could			\boxtimes	Barriers can become contaminate if they are a touch point or if the contaminated with
	become contaminated.				droplets by e.g. coughing or sneezing.

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#	Control Measure	Yes	No	NA	Details (as per Directions)
53.	Common touch points and tools/equipment that must be shared are identified and cleaned between students and classes.	×			Cleaning/sanitizing procedures for common touch points and shared items are posted e.g. shared machinery, equipment, tools, etc. Identify who will clean and how often (e.g. staff and/or students): Equipment at each workstation: Lab 1 and 2a – digital titrator and stand, chemical cartridges, YSI oxygen probes and reader, pipettes Lab 2b and 3 - YSI oxygen probes, pipette, COD vials and vial stand, spectrophotometer Instructor and technician will clean equipment at each workstation, at the end of each lab session.
54.	Storage space for personal articles have been identified and are cleaned regularly.	\boxtimes			Who will clean: Instructor and technician after each lab session Where is the storage: On work bench adjacent to workstation
55.	Other:				
AUDI1	AND CONTINUOUS IMPROVEMENT				
56.	There is a plan to conduct <u>regular inspections</u> of all control measures and safety protocols to ensure they are in place.				Ensure this COVID-19 Safety Plan is posted. Who will conduct these inspections and how often? Instructor will routinely ensure these control measures are followed by using the items in this plan to prepare a checklist (of control measures) to aid in a complete inspection and regular monitoring. Instructor will send regular/weekly reports to the AD.
57.	Audits of inspections are planned to ensure that control measures continue to be effective.				Who conduct the audits and how often? AD will conduct once a week during lab sessions (October to Nov)

APPROVAL

All COVID-19 risk control measures for this campus activity are in place.								
	Name	Position	Date					
Manager								
	Steven Kuan	Associate Dean, SOCE	September 4, 2020					
	Name	Position	Date					
EOC	Glen Magel	EOC Director	September 6, 2020					