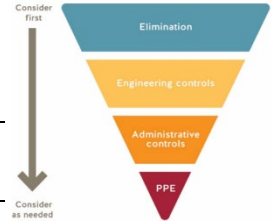
BCIT COVID-19 SAFETY PLAN
ACADEMIC SPACES

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 BCIT COVID-19 Go-Forward Plan for additional information.



CONTACT INFORMATION

Course/Program Name:		**Mechatronics and Robotics Technology Diploma**		
Proportion of program offered on campus:		**20%**		
Start date:		**Sept 14, 2020**	**End date:**	**May 31, 2021**
# of students:		25-30	**# of employees:**	**6**
Completed by:		Name Brent Dunn, Greg Scutt	Position Associate Dean, Faculty Instructor	Date Sept 2, 2020 Dec 2, 2020 Amendment 1 March 11, 2021 Extended Access Request

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.

Campus/ Building	Room Number Floor Plans found here	Type of Space Include washrooms and breakout rooms	Capacity Current capacity due to COVID-19
Burnaby SW3	SW3-1985	Electronics lab	10 students, 1 instructor
	SW3-1920	Computer lab, used as extension to SW3-1985 Electronics lab	4 students, 1 instructor
Burnaby SW9	SW9-115	Robotics lab	6 students, 1 instructor

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).
Hands-on training is required in many of our programs due to the practical nature of the programs. Students cannot access specialized equipment outside of the classroom. See justification in the plan for each learning space.

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 BCIT COVID-19 Go-Forward Plan 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.*

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

#	Control Measure	Yes	No	NA	Details (as per Directions)
ELIMINATION					
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 BCIT COVID-19 Go-Forward Plan, Risk Matrix Summary (explain):* Please see individual room plans for barriers where 2m distancing cannot be maintained.
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):* Please see individual room plans for barriers where 2m distancing cannot be maintained.
3.	Identified area(s) where students wait outside of teaching space until allowed inside by instructor.	☒	☐	☐	Classrooms will be opened 10 minutes prior to start of class and students will be instructed to maintain 2m distancing when entering the space. Please see individual room plans for room management instructions.
4.	Work has been scheduled to minimize numbers of individuals on campus at one time.	☒	☐	☐	For all programs, sets are further divided in half or in thirds to match the capacity of the spaces. Where possible, students are scheduled to minimize trips to campus.
5.	In shared spaces, safety protocols have been put in place to reduce close contact between users.	☒	☐	☐	No shared spaces. Students are working at their own workstation for the duration of the lab.
6.	Movement within the room is identified, such as with directional arrows, for walkways and entrances/exits.	☒	☐	☐	*Signs or arrows on the floor identifying directions.* Markings will be placed. Students will be required to exit in sequential order to maintain social distance.
7.	Water fountains are put out of service, and only touchless water bottle filling station available.	☐	☐	☒	No water fountains
8.	Mobile fans have been removed or put out of service.	☐	☐	☒	No fans
7.	Washrooms have been identified.	☒	☐	☐	There are no washrooms within the lab spaces - all washrooms are in common spaces.
8.	Break area(s) for student use have been identified.	☒	☐	☐	When students are on campus for a short duration, a break has not been planned. In labs where students are working at workstations/desks, students will be encouraged to take breaks and/or eat lunch at their individual workstations. Hand sanitizing will be available. Rooms SW3-1985 and SW3-1920 have been identified as break rooms for students. Cleaning requests will be submitted once the timetable is available.

#	Control Measure	Yes	No	NA	Details (as per Directions)
					Students are also aware of break areas in the Great Hall and Library where they can attend online classes while on campus.
9.	Break areas for employee use have been identified.	☒	☐	☐	Faculty will take breaks in their offices. These areas are covered under the Administrative Safety Plan GFP#75.
10.	Other:	☐	☐	☒	
ENGINEERING CONTROL MEASURES					
11.	Barriers are implemented to separate work areas or walk ways, when physical distancing not practical.	☒	☐	☐	Please see individual room plans for barriers where 2m distancing cannot be maintained.
12.	Barriers are stable and do not introduce other safety hazards, e.g. tripping.	☒	☐	☐	
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.* The usage has not changed for any of the spaces.
	Other:	☐	☐	☒	
SIGNAGE (ADMINISTRATIVE) *Signage is available @ BCIT online Inventory. Guidelines for posting signs are available on ShareSpace.*					
13.	Posted: Physical distancing (2 m) sign(s) Item 1A	☒	☐	☐	
14.	Posted: Hand washing sign(s) Item 29B	☐	☐	☒	No sinks in the spaces
15.	Posted: Health screen sign(s) Item 3C	☒	☐	☐	
16.	Posted: Hand washing sink location sign(s) Item 14A	☐	☐	☒	No sinks in the spaces.
17.	Posted: Hand sanitizing station location sign(s) Item 13A	☒	☐	☐	
18.	Posted: Protect yourself sign(s) Item 21A	☒	☐	☐	
19.	Posted: Occupancy limit of this room sign(s) Item 37A	☒	☐	☐	SW9-115 (7 max: 6 students + 1 instructor); SW3-1985 (11 max: 10 students + 1 instructor); SW3-1920 (5 max: 4 students + 1 instructor)
20.	Posted: Other signs	☐	☐	☒	*Please list:*
ORIENTATION AND TRAINING (ADMINISTRATIVE)					
21.	Routine safety discussions held to review control measures and safety protocols.	☒	☐	☐	
22.	All students have completed the online COVID-19 Pandemic On-Campus Guidelines training.	☒	☐	☐	*How will compliance be checked:* Check on-line data base for student compliance prior to first lab session.

#	Control Measure	Yes	No	NA	Details (as per Directions)
23.	COVID-19 safety Site orientation for students has been developed and posted in the Learning Hub.	☒	☐	☐	*Procedure for orientation found here.* *Student COVID-19 Orientation Checklist found here.*
24.	All employees have completed the online BCIT Pandemic Exposure Control Plan Training.	☒	☐	☐	
25.	All employees have completed the online New Employee Orientation module.	☒	☐	☐	*New and Returning Employee Orientation Checklist found here.* *Each employee to save the checklist to their online New Employee Orientation course*
26.	Other:	☐	☐	☒	
RULES 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*
28.	Doors that students are to use to enter and exit have been clearly identified.	☒	☐	☐	*Signs or arrows on the floor*
29.	Handouts, papers, and items are not physically provided to students.	☒	☐	☐	All materials are electronic and available online.
30.	Students have dedicated tools/equipment, e.g., items are not shared between students.	☒	☐	☐	No sharing during a class session. There are no multiple session occurring in a single day, so inter-session cleaning during the middle of the day is not required. Equipment will be cleaned between uses by students.
31.	If cleaning common touch points or tools/equipment not practical, then it is identified when hands are washed/sanitized before and after use.	☒	☐	☐	
32.	Work spaces/stations are dedicated for an individual or group use and not shared with others.	☒	☐	☐	*No sharing during a class session. All equipment to be cleaned between sessions.*
33.	Single-use (disposable) products are used where feasible.	☒	☐	☐	
34.	Measures are in place to accommodate student sick at home.	☒	☐	☐	*Accommodation plan: Students who miss a lab will be given an alternate assignment or allowed to make up the lab at a later date.*
35.	Procedures in place to screen students on a daily basis.	☒	☐	☐	*The health screen poster is available for reference and is posted on building doors. Students and employees are expected to self assess daily, and the BCCDC self-assessment tool can be used to support this.*
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.*

#	Control Measure	Yes	No	NA	Details (as per Directions)
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.*
38.	Provisions made for students to maintain same lab/class cohort throughout the Term.	☒	☐	☐	Students are normally grouped into sets of 12 to 14 and will stay in their cohort (set) for the term. Depending on the capacity of the spaces, these sets may be further subdivided into smaller groups, and students will typically stay with the same smaller subset for the course.
39.	Other:	☐	☐	☒	
PERSONAL PROTECTIVE EQUIPMENT (PPE). **Refer to the PPE Flowchart to determine what PPE is required 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):* Appropriate non-Covid PPE for the lab spaces and activities are unchanged from pre-Covid PPE requirements. Students are responsible for providing their own basic PPE such as safety glasses and safety footwear. SW9-115 requires only safety glasses and footwear; SW3-1985 and SW3-1920 do not require non-COVID PPE. The program areas have enough PPE on hand for the term.
41.	Training is provided for the above PPE to students and employees.	☒	☐	☐	This is part of our normal operation. Instruction is given at the first lab session of the course and/or in safety courses. Instructors enforce PPE use continuously throughout each course.
42.	Appropriate PPE for COVID-19 is available to be provided to students and employees. Supply requests emailed to ppe@bcit.ca.	☒	☐	☐	*Based on circumstances allowed for in the BCIT COVID-19 Go-Forward Plan, Risk 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):* • See PPE requirements within each lab plan.
43.	PPE safe donning, doffing, disposal, and disinfecting instructional materials are available for students and employees.	☒	☐	☐	*Post applicable signs in a visible location if ppe required.* *Use the Student Orientation checklist to assist orientation/training by instructors.* *Use the Employee Orientation checklist to assist orientation/training by their supervisors.* In most spaces, COVID-related PPE is not required. In areas where COVID-related PPE is required such as masks and gloves, signs will be posted. • Please see individual room plans for more details and 46 below.
44.	Other:	☐	☐	☒	
CLEANING					

#	Control Measure	Yes	No	NA	Details (as per Directions)
45.	Facilities is aware of the cleaning needs for the area. Facilities work requests have been submitted.	☐	☒	☐	*Cleaning includes common touch points and appropriate frequency for the area. This includes high touch areas. Provide FCD work request number(s)* Specific non-electrical equipment to be cleaned between lab sessions. This will be limited to table surfaces, chairs, doors and door handles. Cleaning spray must not be used on the Robots and Electrical Equipment. These requests need to be updated after extended request approval: 1464588 1464587
46.	Training will be provided to faculty and students performing cleaning duties and cleaning materials have been provided.	☒	☐	☐	*Cleaning Standard Operating Procedures have been located here. What are the cleaning products/materials:* *What ppe is required:* At the end of each lab session, students will clean all electronic/electrical equipment or other such equipment deemed sensitive. Such equipment will be cleaned by students or by faculty to prevent damage and disposable gloves will be required to apply the disinfectant. • Please see individual room plans for more details
47.	Assessment of sufficient number of hand wash stations conducted, and an appropriate number of handwashing stations are available	☒	☐	☐	
48.	Handwashing station(s), stocked, easily accessed, and have been identified to students and employees.	☒	☐	☐	*Sink Location:_No sinks in labs. Washrooms in common spaces have sinks.* *Stocked with soap Y ☒ N ☐ paper towel Y ☒ N ☐*
49.	Hand sanitizing station(s), stocked, and have been identified to students and employees.	☒	☐	☐	***ABHS** (Alcohol-Based Hand Sanitizer): Location(s)* Hand sanitizer will be available in all spaces. Where students are working at individual stations, sanitizer will be made available at each station to encourage students and instructors to sanitize before and after touching shared equipment e.g. when the instructor has to touch student work or tools to demonstrate technique. *Will hand sanitizer be refilled by department: Y ☒ N ☐* *If No, describe:* Hand pumps will be used and replenished with new bottles when empty.
50.	All Safety Data Sheets (SDS) and cleaning procedures used are found here.	☒	☐	☐	*If not, describe: SDS are always available for materials normally used in the lab. SDS sheets are not provided for special cleaners that will be used by cleaning contractors.*
51.	The area(s) have been decluttered so that cleaning is simplified.	☒	☐	☐	
52.	Barrier cleaning process has been arranged if the barrier(s) could become contaminated.	☐	☐	☒	*Barriers can become contaminate if they are a touch point or if the contaminated with droplets by e.g. coughing or sneezing.* Barriers are arranged so students will not need to touch them.

#	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, electronic measurement equipment etc. Identify who will clean and how often (e.g. staff and/or students):* Varies by space. In some cases, students will clean benches or shared equipment. In other spaces, facilities work requests will be submitted for between-class cleaning. Cleaning requests will be submitted once the timetable is available.
54.	Storage space for personal articles have been identified and are cleaned regularly.	☒	☐	☐	*Who will clean:* Varies by space. Students and/or cleaners. *Where is the storage: S*tudents will take their supplies with them to their workspaces.
55.	Other:	☐	☐	☒	
AUDIT AND CONTINUOUS IMPROVEMENT					
56.	There is a plan to conduct regular inspections 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?* Faculty will review space on a weekly basis.
57.	Audits of inspections are planned to ensure that control measures continue to be effective.	☒	☐	☐	*Who conduct the audits and how often?* Program head will audit on a monthly basis.

APPROVAL

All COVID-19 risk control measures for this campus activity are in place.			
Manager	Name **Brent Dunn**	Position **Associate Dean**	Date **Mar 12, 2021**
EOC	Name *Glen Magel*	Position EOC Director	Date March 30, 2021

DOCUMENT HISTORY

March 11, 2021	Added extended access request Added FCD work request numbers	Greg Scutt, Faculty
Nov 27, 2020	Changed end date to May 31 Added layout for SW3-1920 to include 4 workstations from SW3-1985	Brent Dunn, Associate Dean

	Added break room SW3-1985 and SW3-1920 Added list of winter courses and activities for SW3-1985, SW3-1920, SW9-115	
Sept 29, 2020	Initial submission	Brent Dunn, Associate Dean

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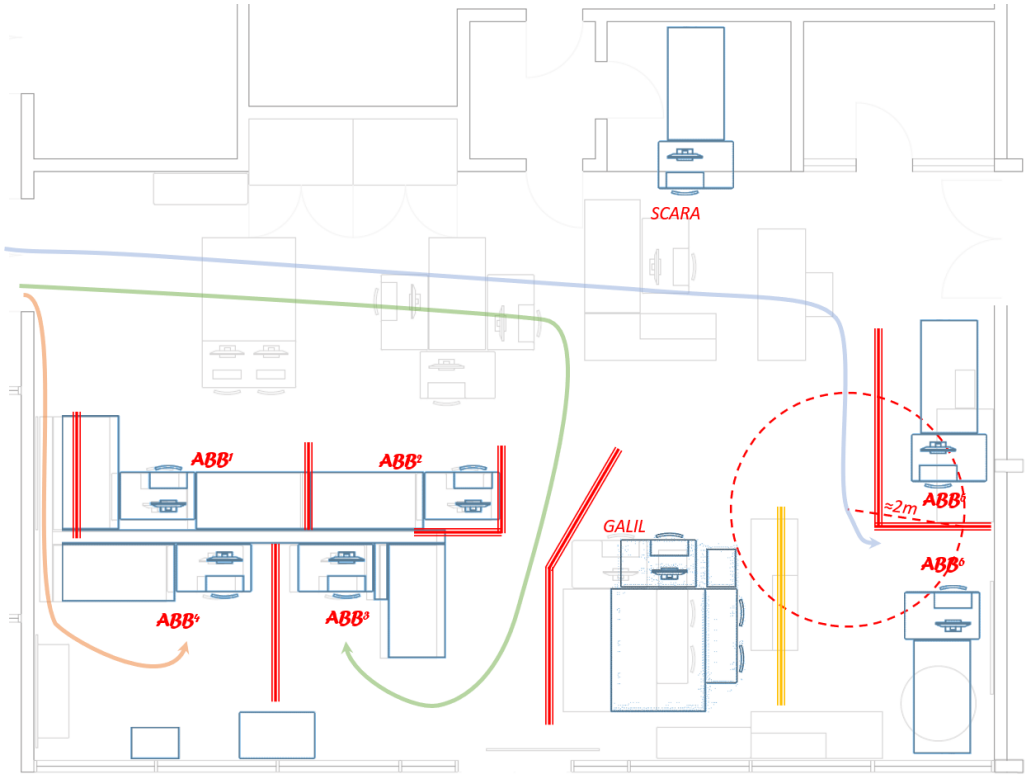
Mechatronics: SW09-115

SW9-115 is the robot application laboratory. It is home to 6 ABB robot stations, 2 mechatronics work stations, referred to as SCARA and GALIL, and other miscellaneous automation equipment.

To maintain a physically distanced path from the room entry to the workstations, a physically distanced pathway must be established. A typical layout is as shown below. The same principles will be applied if additional equipment is required to support student projects. Max capacity would see students at all stations. All remaining pieces of equipment will be moved to the perimeter of room to ensure path is clear of obstruction.



Use Description

Course	ROBT 4491 Mechatronics Projects Note: Uses SW3-1985, SW3-1920, and SW9-115
Program	Mechatronics and Robotics
Number of students	6 max.
Description of Equipment used	Students will work individually on selected equipment including ABB Industrial Robots, SCARA Robot, GALIL CNC Router Table, Modular Production System, Conveyors, and other miscellaneous robot peripherals. Students will select a project and will be using the same equipment for the entire term.
Why do students need to use this space? What's special that cannot be done at home?	Students require access to specialized, expensive robotics and automation equipment. Students need access to the actual lab equipment to acquire competency in hands-on troubleshooting, system modification skills and to connect/interface industrial controllers to other devices. Simulation cannot emulate all the possible scenarios which are accommodated with hands-on labs with real equipment.

Barriers

Location	**Quantity**	**Size (WxH inches)**	**Mounting (Free standing, table top, etc.)**	**Opaque/Clear**	**Comment**
Typical layout is shown in red in layout figure above. Barriers may be rearranged depending on additional equipment used for student projects.					https://www.uline.ca/BL_582/Welding-Screens https://www.uline.ca/Product/Detail/H-6704/Welding/Clear-Screen-6-x-8'

PPE

Item	**Quantity:**	**Consumption rate**	**Location**	**Comment**
Hand sanitizer pump	8	3ml/ application, 7 persons * 2 applications/session 3 sessions 126 ml/week	At lab door sanitizing location At each active workstation + At instructor table	Used upon entry and prior to exit of lab Used before and after manipulating lab equipment and personal items

Isopropyl Alcohol wipes	~7 x Box 100	**Per station:** 3 wipes/station/session 3 sessions/week 12 wipes/week/station 12*10weeks = 108	Box at each workstation + At instructor table	Cleaning of personal items and sensitive electronic/robotic equipment.
Nitrile gloves (medium)	2xBox 50	7 pair/session * 10 sessions		For applying ISA
Nitrile gloves (large)	2xBox 50	7 pair/session * 10 sessions		For applying ISA
Face Coverings	2x Box 50		At sanitizing station	Students are expected to provide their own face coverings, however, spare face coverings will be available if needed

Procedures

Include all COVID-related safety procedures (room management, student movement, cleaning, hygiene) that will be shared with students

1. **Room Management Procedure**
    - **Entry and Sanitization**
        - The session instructor will unlock the lab door at least 10 minutes prior to the start of the lab.
        - Students will be required to use room entry hand sanitizer prior to transit to their assigned station. Barriers, walkways, and spacing maintain social distancing as students move to and from their workstations.

    - **Activity and Movement during lab session**
        - Students will be instructed to remain within their marked workstation space at all times while in the lab. Requests to leave their assigned space will be managed by the instructor.
        - Any student or instructor moving about the room will be required to wear a mask.
        - When the instructor is required at a student workstation, both parties must be masked, and work as far as possible from each other, while maintaining space with neighbouring students.
        - One student at a time will be permitted to leave the lab room for a washroom break or similar activity. This will require coordination by the instructor.
        - Students will be permitted to drink water from a closable-top container of water.

    - **Lab completion and exiting the room**
        - Upon completion of the lab activity, students will be asked to wipe down touch points on equipment using ISA wipes (on sensitive electronics/robot equipment). They will be instructed to sanitize their hands with hand sanitizer when complete and are ready to leave the lab room.
        - Students assigned to ABB work stations will perform ABB P-Start prior to sanitizing their stations.
        - Students will exit the lab room in an orderly manner to maintain social distancing.
2. **Procedures for cleaning equipment/surfaces**
    - Gloves should be worn when using ISA wipes.
    - **Sanitizing ABB Robot Pendants and Controller**
        - Students will use ISA wipes to sanitize Robot Pendants, Robot Controller Buttons, Robot Arm
        - Students will use ISA wipes to sanitize ABB[1,2] Station Conveyor belt touch points; The electrical I/O interface connector bus will be de-energized and wiped with ISA wipes

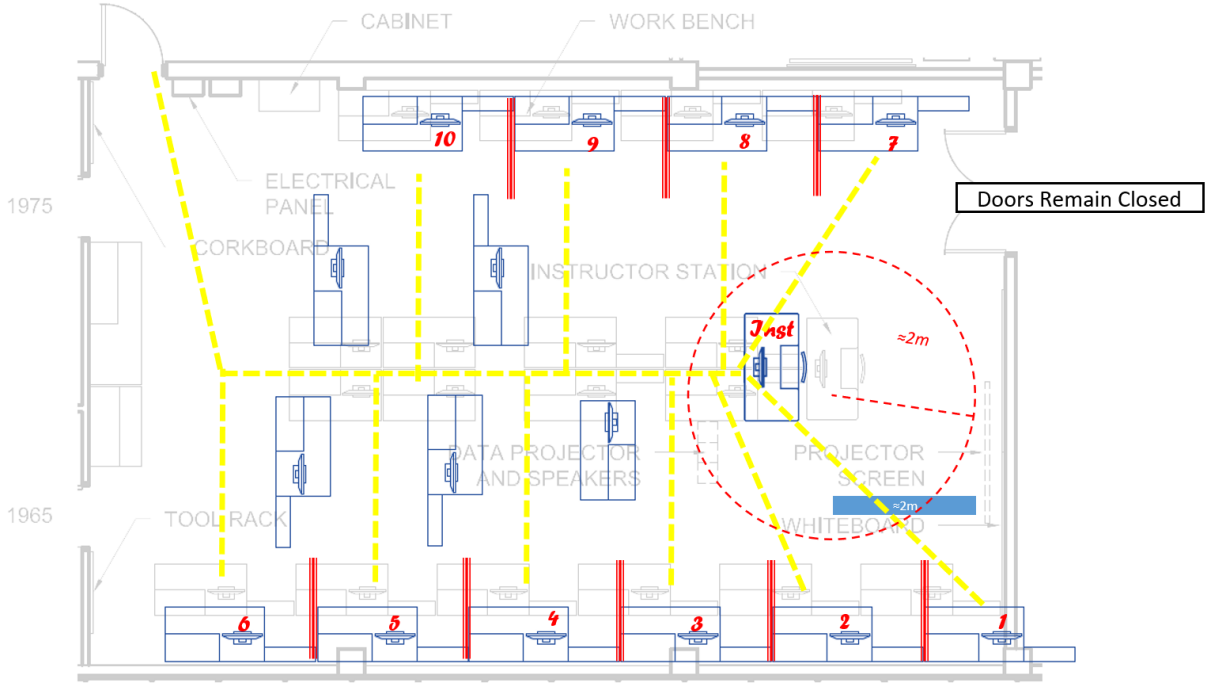
    - **Sanitizing SCARA Work Station**

- Students will use ISA wipes to sanitize the SCARA Arm, plastic pen drawing surface and power supply buttons.

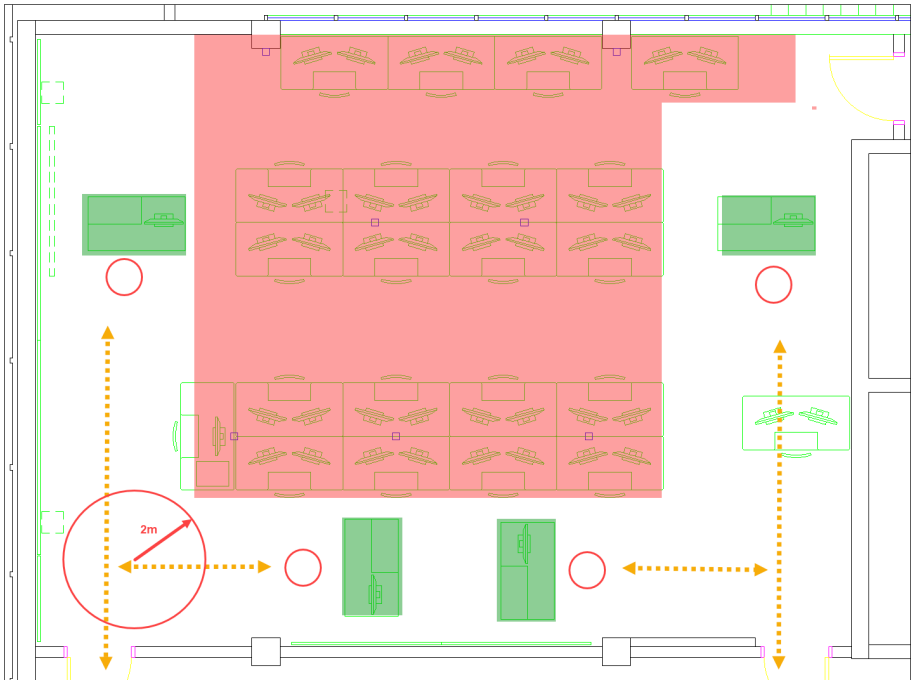
- **Sanitizing GALIL Work Station**
  - Students will use ISA wipes to sanitize any surface of the GALIL robot that was handled including the controller and linear axis.
- **Sanitizing Computers**
  - Students will wipe down keyboard, mouse, and other touch points using ISA wipes.

Mechatronics: SW3-1985 & SW3-1920

SW3-1985: The capacity for this computer-electronics lab is 10 students, provided barriers can be installed in noted locations. The 10 workstations contain a desktop PC, programmable logic controller, electronics measurement equipment, and a panel with various input/output devices for programmable logic controllers. Idle workstations are utilized to compliment barrier locations and direct students through the space. If an instructor station is necessary, the instructor will need to vacate their station to allow movement of students 1, 2, 3, 7, 8. With this density of students, line demarcations are recommended. This room will be used for microcontroller and electronics troubleshooting, PLC programming, student projects, and as a break room for students.



SW3-1920: The capacity of this room is 4 students. This is normally a computer lab but the computers in this room will not be used. Four workstations will be moved from across the hallway in SW3-1985 so that 14 students (1 set) can be accommodated simultaneously between the two labs. Barriers are not required as 2m distancing is maintained if the workstations (in green) are positioned as shown in the layout. This room will be used for microcontroller and electronics troubleshooting, student projects, and as a break room for students.



Use Description

Course	ROBT 4451 Sensor Interfacing Note: Uses both SW3-1985 and SW3-1920
Program	Mechatronics and Robotics
Number of students	10 max in 1985, 4 max in 1920
Description of Equipment used	Each individual work bench is equipped with power supplies, multi-function oscilloscopes, multimeters, and function generators. In addition students will bring their own single board microcontroller units and in many cases their own laptops.
Why do students need to use this space? What's special that cannot be done at home?	Students require access to specialized test and measurement equipment so that they can build and verify digital hardware systems. Students need access to the actual lab equipment to acquire competency in hands-on troubleshooting, system modification skills. Simulation cannot emulate all the possible scenarios which are accommodated with hands-on labs with real equipment.

Course	ROBT 4456 PLC Applications Note: This course primarily uses SW3-1985 and may use SW3-1920.
Program	Mechatronics and Robotics
Number of students	10 max in 1985, 4 max in 1920
Description of Equipment used	Each individual work bench is equipped with a programmable logic controller, specialized software, and a demonstration board with various input and output devices.
Why do students need to use this space? What's special that cannot be done at home?	Students require access to specialized equipment so that they can build and verify PLC programs. Students need access to the actual lab equipment to acquire competency in hands-on troubleshooting. Simulation cannot emulate all the possible scenarios which are accommodated with hands-on labs with real equipment.

Course	ROBT 4491 Mechatronics Projects Note: Uses SW3-1985, SW3-1920, and SW9-115
Program	Mechatronics and Robotics
Number of students	20 (10 + 4 + 6) max on-campus at a time spread over three rooms with 2 faculty in attendance
Description of Equipment used	Each individual work bench is equipped with electronics test equipment, a programmable logic controller, specialized software, and a demonstration board with various input and output devices.
Why do students need to use this space? What's special that cannot be done at home?	Students require access to specialized equipment so that they can build and verify PLC programs and test electronic projects for their final projects. Students need access to the actual lab equipment to acquire competency in hands-on troubleshooting.

Course	Mechatronics and Robotics program – break room Note: Both SW3-1985 and SW3-1920 will be used as break rooms so that all 14 students in a set can be accommodated at the same time.
Program	Mechatronics and Robotics
Number of students	10 max in 1985, 4 max in 1920
Description of Equipment used	Students on their break may be working on homework and will access PLCs, power supplies, multi-function oscilloscopes, multimeters, and function generators.
Why do students need to use this space? What's special that cannot be done at home?	Students often have on-campus labs and online classes on the same day and require a space to access their online classes. This room will be used for students to take breaks, attend online classes, and complete homework using the specialized test and measurement equipment.

Barriers

Location	Quantity	Size (WxH inches)	Mounting (Free standing, table top, etc.)	Opaque/Clear	Comment
Shown in red in layout figure above.					https://www.uline.ca/BL_582/Welding-Screens https://www.uline.ca/Product/Detail/H-6704/Welding/Clear-Screen-6-x-8'

PPE

Item	Quantity:	Consumption rate	Location	Comment
Pump bottle hand sanitizer	12	3ml/ application, 11 persons * 2 applications/session 2 sessions 132 ml/week	At lab door sanitizing location At each active workstation + At instructor table	Used upon entry and prior to exit of lab Used before and after manipulating lab equipment and personal

				items or returning from washroom
Isopropyl Alcohol wipes	~11 x Box 100	**Per station:** 3 wipes/station/session 2 sessions/week 6 wipes/week/station 6*10weeks = 60 wipes/station	Box at each workstation + At instructor table	Cleaning of sensitive electronic/robotic equipment.
Nitrile gloves (medium)	~2xBox 50	11 pair/session * 10 sessions		For applying ISA
Nitrile gloves (large)	~2xBox 50	11 pair/session * 10 sessions		For applying ISA
Face Coverings	~2x Box 100	11 stations*2sessions/week * 10 weeks	At sanitizing station	Face coverings required

Procedures

Include all COVID-related safety procedures (room management, student movement, cleaning, hygiene) that will be shared with students

Room Management Procedure

- **Entry and Sanitization**
  - The session instructor will unlock the lab door at least 10 minutes prior to the start of the lab.
  - Students will be required to use room entry hand sanitizer prior to transit to their assigned station. Barriers, walkways, and spacing maintain social distancing as students move to and from their workstations.

- **Activity and Movement during lab session**
  - Students will be instructed to remain within their marked workstation space at all times while in the lab. Requests to leave their assigned space will be managed by the instructor.
  - Any student or instructor moving about the room will be required to wear a mask.
  - When the instructor is required at a student workstation, both parties must be masked, and work as far as possible from each other, while maintaining space with neighbouring students.
  - One student at a time will be permitted to leave the lab room for a washroom break or similar activity. This will require coordination by the instructor.
  - Students will be permitted to drink water from a closable-top container of water.

- **Lab completion and exiting the room**
  - Upon completion of the lab activity, students will be asked to wipe down touch points on equipment using ISA wipes (on sensitive electronics/robot equipment). They will be instructed to sanitize their hands with hand sanitizer when complete and are ready to leave the lab room.
  - Students will exit the lab room in an orderly manner to maintain social distancing.

Procedures for cleaning equipment/surfaces

- Gloves should be worn when using ISA wipes.
- **Sanitizing Test and Measurement Equipment**
  - Students will use ISA wipes to sanitize oscilloscope control knobs, probes (if instrument used).
  - Students will use ISA wipes to sanitize multimeter control knobs, probes (if instrument used).
  - Students will use ISA wipes to sanitize power supply, function generator control knobs (if instrument used).
- **Sanitizing Computers**
  - Students will wipe down keyboard, mouse, and other touch points using ISA wipes

REFERENCES

BCIT Pandemic Program – Documents and Templates
https://sharespace.bcit.ca/sites/sas/Exposure%20Control%20Plan/Forms/AllItems.aspx
Clorox Total 360 Disinfecting System https://sharespace.bcit.ca/sites/sas/Exposure%20Control%20Plan/SDS%20-Clorox-Total-360-Disinfectant-Cleaner%202016-2019.pdf
MSDS - Clorox Anywhere Hard Surface Sanitizing Spray https://www.thecloroxcompany.com/wpcontent/uploads/2019/09/Clorox-Commercial-Solutions-Clorox-Anywhere-Hard-Surface-Sanitizing-Spray.pdf
MSDS - Clorox Total 360 Disinfectant Cleaner https://www.thecloroxcompany.com/wpcontent/uploads/2019/09/Clorox-Commercial-Solutions%C2%AE-Clorox%C2%AE-Total-360%C2%AE-Disinfectant-Cleaner1.pdf

REVISION HISTORY

Issue	***Date***	***Modifications***	***Author***
1.0	October, 2020	Created for SW3-1985, SW3-119. Non-Break Rooms. Fall Semester	Greg Scutt, Brent Dunn
1.1	December, 2020	Modified to include "break room" status to SW3-1985, SW3-1920. Include SW3-1920.	Brent Dunn
1.2	March 3, 2021	Modified to included cleaning request numbers (See Cleaning 45), Extended Access Request. Removed old yellow highlighting from previous approved issue 1.1. Highlighted new additions in yellow.	Greg Scutt

Extended Access Request

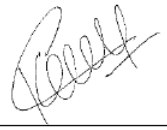
Under normal circumstances (pre-COVID) Mechatronics and Robotics students have evening and weekend access to SW3-1985 in order to complete required course assignments and projects. SW3-1985 contains the electronics workstations and PLCs required to complete assigned course work in ROBT 4451, ROBT 4456 and ROBT 4491. In addition to SW3-1985 which allows only 10 students during the pandemic, SW3-1920 across the hall is outfitted with an additional 4 work stations. This allows Mechatronics and Robotics to run full capacity on-campus labs.

SW3-1985 and SW3-1920 are also designated "break-rooms" that allow students a space to attend on-line lectures on the day(s) they are attending on-campus labs. Current student access is, to our understanding, only permitted on weekdays (6:30AM to 5:00PM), while the building is open, and requires an instructor to be present. This is limiting student's ability to complete the course requirements.

We are requesting that this approved COVID-19 Safety Plan be extended to allow students card access to SW3-1985 and SW3-1920 on:

- Weekdays. 5:00PM to 10:00PM (unsupervised)
- Weekends. 8:00AM to 8:00PM (unsupervised).

We understand this extended access request will need approval from:

	Name	***Signature***	***Date***
Acting Dean, School of Energy	Kacem Habiballah		12 Mar 2021
Vice President, Academic	Tom Roemer		12 Mar 2021

See Revision History for document modifications.

Regards,
Greg Scutt
Faculty Instructor, Mechanical Engineering