COVID-19 Workspace Safety Plan – Lab Specific

Use of this template: _All light italicized grey font are instructional and must be removed before final copy is approved._

This workspace safety plan will assist Principal Investigators who wish to continue or resume research activities in their lab. This plan will include a review of activities to be undertaken in the lab to ensure effective controls are in place to prevent the spread of COVID-19. Principal Investigators are responsible for ensuring this document reflects current government guidance and notices which can be found, along with information about UBC's response to the pandemic at https://covid19.ubc.ca/.

This plan must be reviewed by your Local Safety Team, and signed by your Unit Head/Director. Once complete, the plan can be submitted with your online application to return to research.

Resources to Consult

The following guidance documents and resources were used in the development of this plan:

⊠ Preventing Exposure ⊠ Communications Resources
⊠ Personal Protective Equipment ⊠ UBC Research Resumption webpage
⊠ Physical Distancing Guidelines ⊠ WorksafeBC
⊠ Reporting COVID-19 Exposure

Section #1: Lab information

Department	Electrical and Computer Engineering
Faculty	Applied Science
Building(s)	Kaiser Building
Lab(s)/workspace(s)	Communications Group Laboratory, KAIS 4090

Introduction to Your Lab

Provide a brief overview of your lab(s) and other used/shared facilities, current size of your group and your general research area (1-2 sentences).

The Communications Research Group at UBC focuses on protocols and algorithms design of wireless communications and networking. One of the Communications Research Group Laboratories is in room 4090 of the Kaiser building. This lab is a shared workplace for graduate students and visiting students/researchers. Before COVID-19, around 30 graduate students and postdocs under the supervision of Professors Lutz Lampe, Cyril Leung, Victor Leung, and Vincent Wong could access Kaiser 4090.

In this document, the principal investigators (PIs) correspond to Professors Lutz Lampe, Cyril Leung, Victor Leung, and Vincent Wong.

Section #2 - Risk Assessment

1. Lab/workspace Occupancy (under proposed COVID-19 operations)
List the number of people that will be present in your lab/workspace at the same time. List this by every room/lab/workspace you occupy.

Confirm that you have discussed each employee's comfort level with returning to work and have addressed any concerns, or will require further assistance in doing so. *Any worker (staff, students, faculty, post docs, research associates, technicians and other research personnel) who has concerns about returning to work on campus can request an exemption to his/her supervisor.*

Capacity: Kaiser 4090 is a large workspace with the maximum capacity of 42 people. On an average day before the COVID-19 situation, around 30 students could work simultaneously in the lab.

Our Request: We are requesting access for three graduate students to access Kaiser 4090. Occasionally, Professors Lutz Lampe, Cyril Leung, Victor Leung, and Vincent Wong will require access. Please see the appendix which includes a drawing and photograph of the Lab. Please refer to "APSC PI Request to Restart Research: Stage I" online form (i.e., APSC qualtrics survey) for the list of requested graduate students.

Justification for Laboratory Access: Although most of the graduate students in the communications research group can use their laptops at home and remote access to his/her desktop computer in the lab, three PhD students have personal issues and requested to access the lab in Kaiser 4090. Their individual justification can be found in the "APSC PI Request to Restart Research: Stage I" online form (i.e., APSC qualtrics survey).

PPE Plan and Concerns: We confirm that we have discussed the plan with the graduate students and solicited their comments and potential concerns. The main concerns are regarding the availability of sanitizers, face masks, and seat arrangement. The communications research group together developed our PPE plan described in Section #6.

2. Hazard Identification
Describe what hazards exist in your lab/workspace; both research- related (chemicals, heavy machinery) and COVID-19-related (areas that require closer personal interaction, equipment/instruments that cannot maintain social distancing i.e. that require >1 person to operate)

Hazards (COVID-19): (1) Work surfaces, (2) Handling of tools, (3) buttons and knobs on equipment, (4) Physical distancing: The seats are arranged such that 2-meter distance between graduate students is maintained. No personal interaction is necessary to perform the tasks. Each student will work on one computer/device to avoid close personal interaction. Entering and exiting the lab will be coordinated by designating one door as the entrance and another door as the exit. Please refer to the lab layout in the Appendix for more information.

non-COVID-19: No such hazard exists in all our projects.

3. Employee (HQP, research staff, other) Input/Involvement Detail how you have involved frontline workers (HQP and research staff) and Joint Occupational Health and Safety Committees (JOHSC) and/or Local Safety Teams (LST) in identifying risks and protocols as part of this plan. Describe how you will **publish** your plan (online, hardcopy) and otherwise communicate workplace health measures to employees. Guidelines from SRS are available here: https://srs.ubc.ca/covid-19/health-safety-covid-19/working-safely/
My Training Actions: We attended the town hall meetings on research curtailment and resumption. We also read all of the COVID-19 related guidelines published on the UBC website. To identify strategies to mitigate risks, we do not work directly with frontline workers. *Plan Publishing Strategies:* After approval by our head, our safety plan will be published according to UBC directives, e.g. in one of the PI websites. We will also discuss the plan with the graduate students in the communications research group via Zoom meeting.

Section #3 – Hazard Elimination or Physical Distancing

The following general practices shall be applied for all UBC buildings and workspaces:

- *Where possible, workers (HQP, research staff, others) are instructed to work from home.*
- *Anybody who has travelled internationally, been in contact with a clinically confirmed case of COVID-19 or is experiencing "flu like" symptoms must stay at home.*
- *All employees are aware that they must maintain a physical distance of at least 2 meters from each other at all times*
- *Do not touch your eyes/nose/mouth with unwashed hands*
- *When you sneeze or cough, cover your mouth and nose with a disposable tissue or the crease of your elbow, and then wash your hands*
- *All employees are aware of proper handwashing and sanitizing procedures for their workspace*
- *Supervisors must ensure large events/gatherings (> 50 people in a single space) are avoided*
- *Supervisors must ensure that all workers have access to dedicated onsite supervision at all times; via their own presence, members of safety committees, campus security or other. When working alone, HQP and staff must be aware of working alone procedures and how these have been adapted for COVID-19.*
- *All staff wearing non-medical masks are aware of the risks and limitations of the face covering they have chosen to wear or have been provided to protect against the transmission of COVID-19. See SRS website for further information.*
- *Note transportation/vehicle guidelines if applicable: 1 Person per vehicle, unless the vehicle is large enough to maintain 2m between occupants.*

Our Actions:

Handling Devices: Disinfectant wipes and hand sanitizer will be placed in dedicated spots. Disposal of cleaning supplies will be carried out in designated areas in the building. All devices will be cleaned after every usage.

Other Equipment (keyboard, mouse, desk, monitor, pen, pencil, printer, and papers): All places and stuffs that may be touched by multiple users will be cleaned frequently. Furthermore, each student will be assigned to one desk and one personal computer to avoid multiple users for each computer.

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4. Scheduling

For those required or wanting to resume work at UBC, detail how you are rescheduling employees (e.g. shifted start/end times) in order to limit contact intensity at any given time at UBC.

Discuss your **working alone procedures** and how they will be adapted for this safety plan. Also describe how you will track those entering/leaving work i.e. sign in/sign out process

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Pre-Scheduling Strategies: An online platform (e.g., Google Docs) will be used for booking time slots to work in the lab. Each time slot is one hour. A booking is successful if it satisfies all the constraints below:

1) At most three students can be in the lab in any time slot.
2) Two meters distance constraint is satisfied when three students are working in the lab.
3) Each student can only work in the lab during the operation hours of the building (i.e., 7 am – 6 pm, Monday to Friday).

Each student will clean and sanitize his/her desk and computer when he/she enters the lab. Before the student leaves the lab and returns home, he/she has to clean and sanitize his/her desk and computer.

Follow COVID-19 Kaiser Building (Common Areas) Safety Pls: The graduate students read and agree the Kaiser building safety plan for COVID-19.

Safety Guideline Documents: The students read and post the relevant available documents in "Communication Resources (https://srs.ubc.ca/covid-19/communications-resources/)" on the door of Kaiser 4090.

Tracking Rules and Actions: Complete safety documents will be posted on the main door of Kaiser 4090. The following rules will be posted on our safety document.

1. When a student wants to work in the lab, he/she will organize in advance via the Slack on "#WorkinLab" channel, and Google Docs for documentation.
2. When a student enters the lab, he/she will send an "entry notification" in the Slack on "#WorkinLab" channel, update the Google Docs, and inform how long he/she will be there.
3. When a student exits the lab, he/she will send an "exit notification" in the Slack on "#WorkinLab" channel and update the Google Docs.
4. The students are strictly required to notify their presence in the lab.

According to the building safety plan, students will confirm that they followed the posted sanitization processes when they sign out, and are not experiencing any symptoms of infection when they sign in and sign out.

Monitoring Strategy with Virtual Buddy on Slack Channel: Students will be monitored by a virtual buddy system communicated via Slack on a "#WorkinLab" channel. In particular,

1. When a graduate student enters the lab, he or she will notify a remote buddy via Slack.
2. The connection will be confirmed via Slack on a "#WorkinLab" channel and all communications will happen on that channel.
3. When a graduate student sends an "entry notification" in the Slack on "#WorkinLab" channel, the virtual buddy replies with "Confirmed" in the channel, and notes how long the student will be there.
4. When the student sends an "exit notification" in the Slack on "#WorkinLab" channel, the virtual buddy replies with "Confirmed" in the channel, and notes the time of leaving the lab.
5. If the student does not notify the virtual buddy with an exit notification at the end of the deadline, the virtual buddy tries to contact the student by his/her mobile phone.
6. If the student does not reply after three tries, the virtual buddy, the virtual buddy tries to contact the mobile phone of Professors Lutz Lampe or Vincent Wong.
7. If the student does not notify the buddy within 30 minutes, a phone call is placed to emergency services, 604-822-2222.
8. The PIs of the lab (Profs. Lampe and Wong) will perform random inspections of the lab, in order to ensure the compliance of the safety procedures.

5. Occupancy limits, floor space, and traffic flows

APSC recognizes that labs are dynamic environments and it may be challenging to adhere to physical distancing guidelines. Nonetheless, controls must be in place to keep personnel spaced at least 2m apart at all times. Clear communication of this to employees, monitoring of implementation, in addition to physical controls (signage) are needed.

As such: Using floor plans and/or photographs of your lab/workspace:

1) Identify and list the rooms and **maximum occupancy** for each workspace/area;
2) Illustrate a 2 metres radius circle around stationary workspaces/benches/instruments and common areas or equivalent approach to social distancing; and
3) Illustrate one-way directional traffic flows

Maximum Occupancy: Kaiser 4090 is a shared workplace and can accommodate 42 people. Please refer to the Appendix for a drawing of lab space and photographs.

Traffic Flow: According to the building plan, one-way traffic flow will be marked with yellow tape. One of the two doors of the lab will be designated as the entrance and the other door will be designated as the exit.

Washroom Use: Students using the lab will wash their hands in the washroom according to the building safety plan.

Sharing Equipment: Each graduate student in Kaiser 4090 has his/her cubicle, with his/her desk and desktop computer. If an equipment or device (e.g., printer) needs to be used by different students at different time, the student will clean and sanitize the equipment before and after the usage.
The printer will also be sanitized daily by the students.

Section 4 – Engineering Controls

6. Cleaning and Hygiene

Detail the cleaning and hygiene regimen required to be completed by HQP, research staff and the PIs for common areas/surfaces (Custodial has limitations on cleaning frequency, etc.).

Outline specific cleaning processes and schedule for high-touch equipment, specialized/sensitive equipment or other unique circumstances to your lab/workspace. Detail how and what types of cleaning products and disposal options you will provide. If possible, include cleaning stations/infrastructure on your lab photos/plan.

Safety Plan and Checklist: Each student is responsible to sanitize his/her desk, keyboard, mouse, monitor, instrument knobs and buttons with disinfectant wipes upon arriving and before leaving the lab. A sanitation checklist will be posted on the door of Kaiser 4090. Each student is also asked to bring his/her own sanitizer (as a backup) and use it frequently when staying in the lab. Students are suggested to use non-medical face mask when they work in the lab. They will also be informed of the limitations and effectiveness related to the use of non-medical face masks.

Sanitation Checklist Monitoring: Students will follow the cleaning protocols and complete the checklist when enters and exits the lab. Students will confirm daily sanitations by sending an "Sanitations notification" (when enters and exits the lab) in the Slack on "#WorkinLab" channel and update the Google Docs.

Placing Sanitizers: According to the building safety plan, the disinfectant wipes and hand sanitizer will be placed on a sanitation station near the entrance door. Additional sanitizers will be stored under the sanitization stations. Disposal of cleaning supplies will be carried out in designated areas in the building. Please refer to the lab layout in the Appendix for the location of the designated sanitization station. The PIs of the lab (Profs. Lampe and Wong) will monitor the stock of sanitizers in the lab and make additional purchase when the stock is running low.

7. Equipment Removal/Sanitation

Detail your appropriate removal of unnecessary tools/equipment/access to areas and/or adequate sanitation for items that must be shared that may elevate risk of transmission, both research-related (i.e. instruments, tools) and general (i.e. coffee makers in break rooms)

Each student will be assigned one personal computer. If a device (e.g., printer) needs to be used by different students at different time, the student will clean and sanitize the equipment before and after

the usage. We provide adequate sanitization for all of the equipment in the lab. According to the building safety plan, the disinfectant wipes and hand sanitizer will be placed in dedicated spots near entrance door and close to the desks. Disposal of cleaning supplies will be carried out in designated areas in the building. No general and shared equipment such as coffee maker will be allowed to be used in the lab.

8. Safety Infrastructure Requests (Partitions, Plexiglass installation)
Describe any needs for safety infrastructure i.e. physical barriers, plexiglass installation required for your lab/workspace and if possible include them on your photos/room plan.

No physical barriers or plexiglass installation is required in the workspace.

Section 5 – Administrative Controls

9. Communication & Training Strategy for Employees
Describe how you (the PI) have or will communicate the risk of exposure to COVID-19 in the workplace to your HQP/research staff/other employees and the safety controls in place to reduce such risk. Detail how you will ensure that all employees successfully complete the **Preventing COVID-19 Infection in the Workplace** online training and orientation to your specific safety plan

Training: Once approval is obtained on the plan, it will be disseminated to those three graduate students. They will participate in a mandatory online group meeting for reviewing the instructions. Moreover, according to UBC policy, everyone coming to UBC campus needs to complete the following training course: https://wpl.ubc.ca/browse/srs/courses/wpl-srs-covid

Posting Exemption Approval Document: Once we have been formally approved to resume research, we will post our lab's exemption status/ approval document from the VPRI on the door to the lab.

Actions and Monitoring: We will implement both Google Doc and Slack-based sign-in/sign-out procedures to log each student's entrance and exit of the lab. Students need to update the Google Docs as well. It will be the responsibility of the PIs to check that students are following all of the rules and post their presence in the Slack channel "WorkinLab" and Google Docs. A large part of the tasks is carried out remotely via computer. Students are expected to work remotely from home as much as possible, and return to the workplace only when it is necessary. Online meetings will be set to remind all necessary safety instructions and hear concerns. The students can also raise concerns via email or phone call.

10. Signage
Detail the type of signage you will utilize and how it will be placed (e.g. floor decals denoting one-way walkways and doors, 'cleanliness state' of equipment/instruments, hand-washing guidance). See WorksafeBC for signage guidelines and templates.

According to the building safety plan, tapes with signage will be pasted on the floors to guide students keep social distancing when moving in the lab. Safety instruction will be printed and posted on the main door and on top of the desks. The instructions include signage with the schedule, a list of procedures for entering and exiting the room, maximum occupancy, washing of hands, and sign-in and sign-out procedures.

11. Emergency Procedures & Reporting
PIs must ensure that all employees entering the lab should be aware of the Building Emergency Response Plan (BERP) and have access to it. If applicable, detail your strategy to amend your lab's emergency response plan procedures during COVID-19.

See the SRS guidelines for handling potential COVID-19 incidents here: https://srs.ubc.ca/covid-19/health-safety-covid-19/reporting-covid-19-exposure/

12. Monitoring
Describe how you will monitor your workplace (supervisor, departmental safety representative, other) and update your plans as needed; detail how employees can raise safety concerns (e.g. via the JOHSC or Supervisor).

The PIs of the lab (i.e., Prof. Lutz Lampe, Cyril Leung, Victor Leung, and Vincent Wong) are responsible for monitoring the workplace by ensuring compliance with work-alone and safe-work procedures, and for communicating with the graduate students of the communications research group. The PIs will monitor (a) records of sign-in/sign-out from the web application, (b) Google Docs in order to ensure they are filled out properly and signed, and (c) Slack channel for general records and details. The PIs will engage in discussion with the students about the efficacy of the process. The PIs will also perform random inspection of the lab, to ensure that the safety protocols are closely followed.

Section #6 – Personal Protective Equipment (PPE)

13. Personal Protective Equipment
UBC has a central process for purchasing PPE. Describe what PPE you will require for your lab.

#	Type of PPE	Activity and PPE Use Rationale
3	Hand sanitizer	Sanitization of hands. Assuming 100 mL per bottle and 6 mL per use, and what is needed until September, 2020.
3	Disinfectant wipes	Assuming 100 wipes per pack and what is needed until September. Sanitization of workspace, computer, keyboard, and mouse.

The PPEs will be disposed regularly in the designated areas of the building. There will be a bucket containing a bag to place used PPE. Please refer to the layout of the lab in the Appendix for the location of the bucket storing the PPEs. The PIs of the lab (Profs. Lampe and Wong) will monitor the stock of PPEs in the lab and make additional purchase when the stock is running low.

Section #7 – Justification of Request and EDI

Special circumstances to go back to the lab:
1. Our research tasks do not require constant access to the lab, only intermittent access. A significant amount of research can be done remotely from home. However, occasional configurations workstations require laboratory access.

Justification to request access for all users at a lower occupancy (7.5%):
1. Our workspace (please refer to the Appendix) is completely safe for three people. The students can maintain social distancing of at least 2 meters.
2. We are requesting the occupancy of at most three people at any time in the lab. Sanitization of the workspace has been detailed above. Professors Lutz Lampe, Cyril Leung, Victor Leung, and Vincent Wong requested lab access to be less than 1 hour per week.

EDI: We are avoiding exclusionary practices and biases and aiming for equality of outcome among all,
1. By requesting access to the lab for all individuals in a way that is safe.
2. By keeping contact with all members of the lab and encouraging their feedback.

The name, email address, and mobile phone number of the students who request access to Kaiser 4090, can be found in the "APSC PI Request to Restart Research: Stage I" online form.

Acknowledgement

I confirm that this Safety Plan has been shared with all workers (HQP, research personnel, etc.) who will be accessing this space both through email and will be made available as a shared document. Workers can either provide a signature or email confirmation that they have received, read and understood the contents of the plan.

This plan was submitted and signed by the corresponding applicants and has been approved by the ECE Department Head Steve Wilton.

Appendix

Please attach any maps, pictures, departmental policies or risk assessments applicable UBC Guidance documents, where necessary, and other regulatory requirements referred to in document.

APSC specifically requests photographs of your current lab layout, as well as your proposed usage layout i.e. where HQP will work, what areas will be closed off, where signage will be placed, etc. If floor plans of your lab/shared workspace is available, please append these as well.

Floor plan:
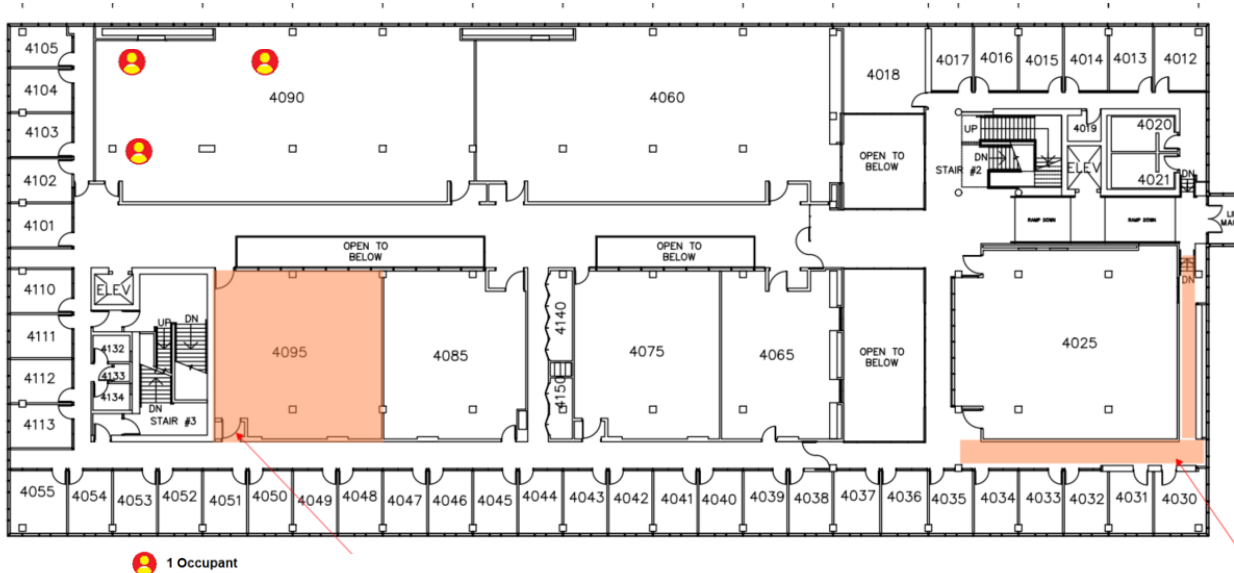
Detailed layout of the lab (Kaiser 4090):
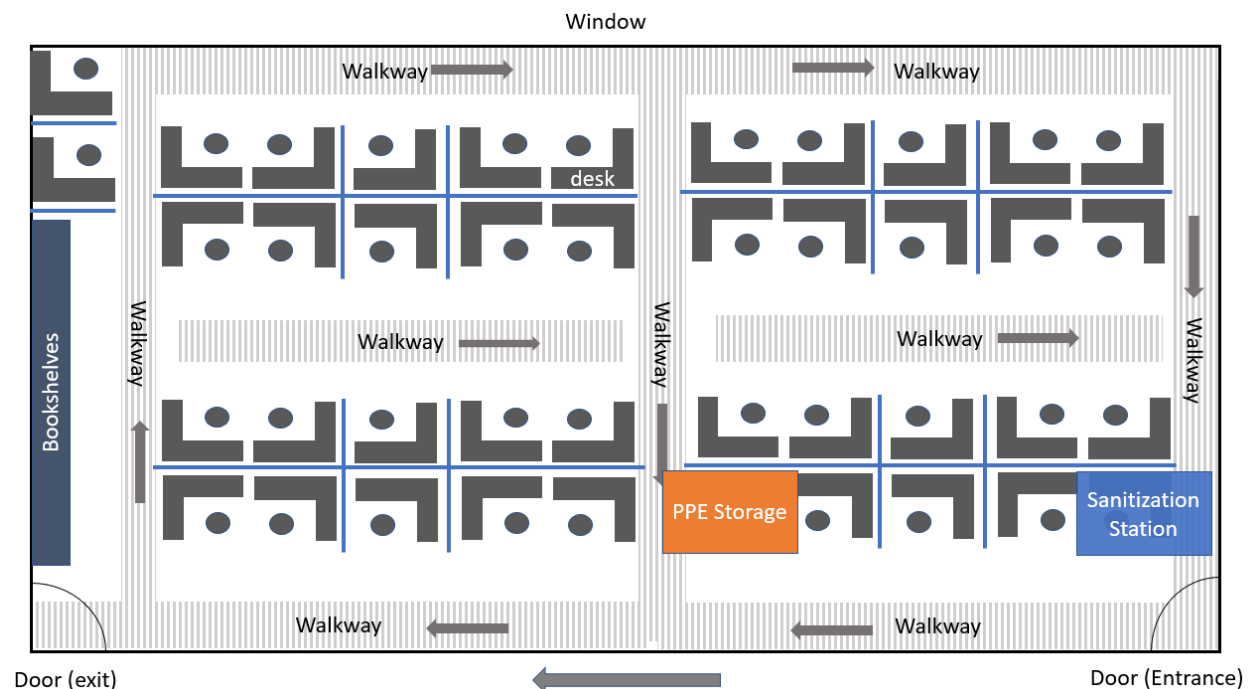
Example layout when 3 students are simultaneously in the lab:

Snapshot of the lab (Kaiser 4090):

Entrance
(No Exit)