COVID-19 Workspace Safety Plan – Lab Specific

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.

Standard hours of return: Phase I occupancy 7 AM to 6 PM Monday to Friday.

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

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

Section #1: Lab information

<table>
<thead>
<tr>
<th>Department</th>
<th>Materials Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>Applied Science</td>
</tr>
<tr>
<td>Building(s)</td>
<td>Brimacombe</td>
</tr>
<tr>
<td>Lab(s)/workspace(s)</td>
<td>263 (including 263A, 263B)</td>
</tr>
</tbody>
</table>

Introduction to Your Lab

Biomaterials lab in Room 263 (including 263A and 263 B) connected to the main corridor with a door that is always locked and can be opened by electronic keycard. Typically, 5 researchers (1 PDF, 4 PhD students) would use the lab.

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.

For stage 1, only one student will be allowed to work in the lab (including room 263, 263A, 263 B) at the same time.
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.

My group has discussed a detailed plan and each individual’s comfort level.

List the users of the lab space and the approximate number of hours per week in the table.

- Provide a list of all lab members and members of other groups that you anticipate working in the lab space during this period, along with an estimate of the number of hours per week. Note that standard hours of opening in Brimacombe will be 7 AM to 6 PM M-F.

The following students/staff will be using the lab at 1/3 of normal operations, i.e. maximum 13 hours a week for each. All those listed will be working in the lab due to experiments and tests to be done.

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
<th>Email</th>
<th>Mobile number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qiong Wang</td>
<td>Post-doc</td>
<td><a href="mailto:wangqiong04@gmail.com">wangqiong04@gmail.com</a></td>
<td>7786689766</td>
</tr>
<tr>
<td>Ayse Arkaz</td>
<td>PhD</td>
<td><a href="mailto:ayseincearkaz@gmail.com">ayseincearkaz@gmail.com</a></td>
<td>6047049700</td>
</tr>
<tr>
<td>Sijia Chen</td>
<td>PhD</td>
<td><a href="mailto:morninghaixin@gmail.com">morninghaixin@gmail.com</a></td>
<td>7789267171</td>
</tr>
<tr>
<td>Shukun He</td>
<td>Visiting PhD</td>
<td><a href="mailto:dkdkdkhsk@gmail.com">dkdkdkhsk@gmail.com</a></td>
<td>2369880123</td>
</tr>
<tr>
<td>Xin Zhang</td>
<td>PhD</td>
<td><a href="mailto:jessica1.ubc@gmail.com">jessica1.ubc@gmail.com</a></td>
<td>7786360910</td>
</tr>
</tbody>
</table>

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)

The hazards in the lab include general chemicals (salts, ethanol as solvent, low concentration acids (2N HCl), bases (ammonium hydroxide). These are low hazards that is dealt with routinely in my lab. COVID-19 related hazard is social distancing. However, we have decided to limit one person in the lab at a time.

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.
COVID-19 Lab Safety Plan Brimacombe Template 2 June

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/

Our safety plan has been discussed during the team meeting, and communicated with the chair of Brimacombe safety committee Gary Lockhart. We have also created a share folder to share our plan, and will post it on lab entrance.

Section #3 – Hazard Elimination or Physical Distancing

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

We have created a Google calendar for booking the lab, together with a 10-point safety plan (Appendix). Briefly, only one person is allowed to use the lab at a given time. Users will need to book the lab ahead of the time, and use the sign on the lab door to indicate current occupancy of the lab. Google calendar is used for tracking of users remotely, and the sign on the lab door will be used to reflect current user status in the lab.

Working alone procedures are clearly communicated with the team. We will follow the working alone procedures recommended by UBC Working Alone or in Isolation Program (Appendix C-E attached). Each user will complete the form before starting working in the lab. Designated persons (PI or Christina Chen) will check the users every five hours (details in Working alone section). Each user should follow the booking schedule and should let their contact person be aware of the working schedule. Experiments are limited to those that can be done by one person.

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 metre radius circle around stationary workspaces/benches/instruments and common areas or equivalent approach to social distancing; and
3) Illustrate one-way directional traffic flows

For Phase I, Brimacombe 263 (including 263A and 263B) is limited to one person at a time. This is managed by our online booking system, and a sign will be posted on the door.

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.

- An ethanol-based cleaning product has been suggested in the Brimacombe cleaning plan. This or a similar product (or self-made solution) in squirt bottles, plus paper towels or similar, should be suitable for disinfecting surfaces. We also require hand sanitizer and/or soap and water for frequent hand washing in each lab. Hands will be washed upon entry, exit and routinely during the work period.

- Before each researcher starts and after each researcher finishes using the lab, door knobs, table surfaces and touched surface of the lab equipment (knobs, key boards) need to be cleaned. We will use Lysol Disinfectant Spray Model S-13835 for this purpose. After cleaning, the researcher will make a note on Google shared calendar on this task. A group Zoom training session will be provided before we start using the lab.

- We have specifically identified shared equipment in the lab, which is the mechanical polishing machine and the associated table. Members are instructed to pay special attention to this equipment.

- Minimize the waste to paper towel.

- Researchers need to wash their hands before exiting the lab. A hand sanitizer station will be place at the exit.

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)

- In lab 263, each researcher has his/her own table with their specific equipment. These have been made clear in group shared folder. We have identified one shared facility, the polishing machine by two persons. Cleaning procedures (before and after use) will be followed on that machine: users will wear gloves when cleaning the machine with the Lysol Disinfectant Spray followed by paper towel drying.

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.

We will allow only one person in the lab at a time, no need for partitions.

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.

- We have discussed general measures to prevent COVID-19 Infection during group meetings, together with individual challenges (e.g. transportation means, masks etc). A Google folder has been created to share the information.
- Users will also read Building and UBC regulations posted on AMPEL website.
- We have clearly indicate that employees with symptoms MUST stay home.

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.

One person is allowed using the lab at a time. Each person is instructed to use those lab equipment only when necessary. A sign will be displaced at the main entrance on current use (Occupied vs not). A cleaning checklist on equipment will also be posted on the door.

Hand washing instructions will be posted on the door, as well as at washing stations. COVID-19 Lab Safety Plan will be posted on the door.

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.


The Brimacombe BERP is available in the new lobby and posted on the AMPEL.ubc.ca website.

We have also shared the BERP in our Google share folder.

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).

- We have made it clear that one person will be allowed in the lab. This will be communicated with Brimacombe building manager and floor warden.
- Lab safety procedures will be monitored by Christina [REDACTED] (who has been in charge of lab safety in the past five years), together with PI (Rizhi Wang). We will make sure our Google calendar is used properly for booking.
- We will follow the check-in procedures recommended by UBC Work Alone Procedures (Appendix A to E). Specifically, each user will go through the procedures and fill in the Working Alone or in Isolation Form form (Appendix). Each time the designated persons (PI, or Christina) will check by phone at the
beginning, every five hours afterwards, and at the end of the shift. Check-in forma will be used for record. When the Check-in Designate fails to make contact within 10 min of calling, he/she will contact Campus Security at 604-822-2222 for an in-person check. Before contacting security, a call may be made to the building manager or floor warden to provide a faster means of checking.

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.

<table>
<thead>
<tr>
<th>#</th>
<th>Type of PPE</th>
<th>Activity and PPE Use Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nitrile gloves</td>
<td>Worn at all times to reduce spread of virus and for chemical safety.</td>
</tr>
<tr>
<td></td>
<td>Safety glasses</td>
<td>Worn at all times to protect from splashing of chemicals, and also to reduce spread of COVID-19, which can infect the eye.</td>
</tr>
<tr>
<td></td>
<td>Lab Coats</td>
<td>Each user will have their own lab coat, which will be stored separately to avoid cross-contamination.</td>
</tr>
<tr>
<td></td>
<td>Hand Sanitizer</td>
<td>For cleaning hands and gloves. Disinfectant will also be used to clean surfaces to reduce the spread of germs.</td>
</tr>
</tbody>
</table>

- Users will need to wear gloves, safety glasses, and user-specific lab coats. Hand sanitizer will be available at the entrance.

Researcher Agreement

Please have all those who will enter your lab during Phase I (including the PI if applicable) sign the statement on the next page. Keep a copy in the lab as a record. PIs should sign the page that follows the researcher agreement.
SAFE-RETURN-TO-WORK AGREEMENT
THE BRIMACOMBE BUILDING

Signature line for researcher (faculty, student, research staff, post-doc etc.) and administrative staff acknowledgment

I ____________________________ have read and understand the additional precautions being taken during this time, as outlined in the Brimacombe Phase I Safety Plan, my lab’s Workspace Safety Plan. I have read and agree to abide by the safety plans, and to undergo training that will be required by UBC once it is put in effect (we anticipate video training that all those entering the building will be required to complete):

RESEARCHER/ SIGNATURE ____________________________
or STAFF

DATE ____________________________

SUPERVISOR/ SIGNATURE ____________________________
or DIRECTOR in case of PIs

DATE ____________________________

Supervisor is to keep a copy of this document in the lab and/or accessible electronically from the lab, in case of Local Safety Committee, SRS or WorkSafe BC audit.
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. For shared labs, please add the number of signature lines needed to cover all PIs who intend to have researchers use the space, e.g. including for students who will visit for a short period of time to use an instrument.

Date: June 4, 2020
Name (Manager or Supervisor): Rizhi Wang
Title: Professor

Date: 
Name (Additional PI): 
Title: 

Signature: 
Signed

Director Approval

John Madden, AMPEL Director 17 June 2020
Name, Title Date

Signature: 
Signed

Department Head Approval

Daan Maijer 22 June 2020
Name, Title Date

Signature: 
Signed
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.

The following Group Policy has been shared with the team on Google shared folder:

Return to work policy for using Brimacombe 263 lab (Biomaterials)

June 3, 2020

In preparing for returning to work and based on our discussions, here are the guidelines that each of us should follow when getting access to AMPEL lab (Room 263):

1. For Phase I, we have decided to limit one person at a time in the lab.
2. Each person should book the lab using the google link Ayse provided below. We will start with 4 hours each day per person. You can book longer time on the day you are working. The lab is open only from 7 am to 6 pm Monday to Friday.  
   (https://calendar.google.com/calendar/embed?src=m4f74km7e003vtvdh445ioglo%40group.calendar.google.com&ctz=America%2FVancouver)
3. In general, we will use the lab only when we need to.
4. Keep me or AMPEL manager/Local safety team co-chair (Gary) posted of any issues and concerns when COVID-19 related hazards (e.g. social distancing) are difficult to avoid.
5. When entering the lab, turn the sign pad to “Occupied” on the door. Wash hands and clean all listed items on the lab checklist, plus any other items and surfaces you will be touching.
6. When working in the lab, make sure you follow safety rules when dealing with chemicals and biohazardous materials. At this stage, avoid working on any experiments that need persons be to present.
7. Wear gloves and goggles or safety glasses when using the equipment. Clean surfaces, handles after finishing the experiment and before leaving the lab.  
8. When leaving the lab, clean all surfaces listed on the checklist, plus any other items and surfaces you have been in contact with, wash hands and then turn the sign pad to “Un-occupied” on the door.
9. Follow group’s guideline on working alone policies. Specifically, work in the lab only during your booked time. Make sure your contact is aware of your lab work schedule for the day.
10. A share folder has been created in Google drive/Biomaterials lab safety and maintenance/Covid-19 and return to work procedures, and will posted relevant documents and policies.

Additional information:

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.
Appendix C: Check-in Procedure Template

Procedure

NOTE: A complete check-in is two way communication between the worker and the check-in designate. A separate check-in procedure should be completed per risk assessment and per person.

1. The Check-in Designate will check in on the worker as indicated on the Working Alone or in Isolation Form (Appendix D).

2. If the worker is not available at the predetermined check-in time, the check-in designate will attempt to check-in with the worker within 5 minutes of predetermined time.

3. If the Check-in Designate does not make contact with the worker, they will make another attempt within 10 minutes of the predetermined time.

4. If the check-in designate is unable to make contact with the worker after the second attempt, they will follow: steps 5-10.
   a. NOTE: If the individual working alone is not available at the determined check-in time, this individual will attempt to call the check-in designate within 5 minutes of the predetermined check in time.

5. The Check-in Designate will call UBC Campus Security at 604-822-2222 (or equivalent if the work location is off UBC-V campus) and provide the following information about the worker: name of worker, location, phone number, last time of contact and potential hazards.
   a. If the work location is off UBC-V campus, indicate the equivalent name and number that will be called in the box below:

6. UBC Campus Security (or equivalent) will attempt to call the worker’s mobile number. If there is no answer, they will visit the work location and check in on the worker in-person.

7. UBC Campus Security (or equivalent) will call the Check-in Designate and inform them if they were able to locate or make contact with the worker or not.

8. If UBC Campus Security (or equivalent) was unable to locate or make contact with the worker, the Check-in Designate will contact the worker’s emergency contact to verify it is not a false alarm (this must be done delicately so as not to cause alarm to the family).

9. If the worker was not located or contacted through communications with their emergency contact, the Check-in Designate will travel to the worker’s location to ascertain their status.

10. If necessary, call 911 and request help

By signing, you have participated in the development of this written check-in procedure, have been trained on the procedure, and understand its purpose/content. If this check-in procedure applies to several workers, please ensure all workers understand and sign this check-in procedure document.
<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>(Print Name)</td>
</tr>
<tr>
<td>Check-in Designate</td>
<td>(Print Name)</td>
</tr>
<tr>
<td>Worker 1</td>
<td>(Print Name)</td>
</tr>
<tr>
<td>JOHSC Representative</td>
<td>(Print Name)</td>
</tr>
</tbody>
</table>
## PART 1: GENERAL INFORMATION

<table>
<thead>
<tr>
<th>Employee Name:</th>
<th>Description of employee’s vehicle and license plate (optional):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Title:</td>
<td>Employee’s Emergency Contact Name:</td>
</tr>
<tr>
<td>Employee Phone Number:</td>
<td>Emergency Contact Phone Number:</td>
</tr>
</tbody>
</table>

## PART 2: WORK INFORMATION

<table>
<thead>
<tr>
<th>Supervisor Name:</th>
<th>Department:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor Title:</td>
<td>Regular Office Hours of Department:</td>
</tr>
</tbody>
</table>

Location where work will be performed:

Describe the job/tasks that will be performed and document the highest risk score from the risk assessment:

## PART 3: CHECK-IN DESIGNATE

<table>
<thead>
<tr>
<th>Name of Check-in Designate:</th>
<th>Title of Check-in Designate:</th>
</tr>
</thead>
</table>

Method of Communication (check one that applies):

- [ ] In person. Location for visual check-in:
- [ ] By telephone. Employee’s Phone Number: ____________
  
  Check-in Designate’s Phone Number: ____________
- [ ] By other method (please specify):

Frequency of Check-in (Choose the shortest time interval identified in your Risk Assessment):

- [x] Beginning of scheduled work each day (mandatory). Indicate the time: ____________
- [ ] Every 30 minutes to 3 hours (Potentially High Risk). Indicate exact interval to be used: ____________
- [ ] Every 3 hours to 5 hours (Potentially Moderate Risk). Indicate exact interval to be used: ____________
  
  5 hours
- [x] Every 5 hours to 8 hours (Potentially Low Risk). Indicate exact interval to be used: ____________
- [x] Completion of scheduled work each day (mandatory). Indicate the time: ____________
# Appendix E: Check-in Record

Check-in Designate Name:

<table>
<thead>
<tr>
<th>CHECK-IN RECORD</th>
<th>Location of work:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Name:</td>
<td></td>
</tr>
<tr>
<td>Check-in Intervals:</td>
<td></td>
</tr>
<tr>
<td>Shift Start:</td>
<td>__________ am/pm</td>
</tr>
<tr>
<td>Shift End:</td>
<td>__________ am/pm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Check-in Time</th>
<th>Method of Communication</th>
<th>Check-in Designate Initials</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>