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.

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
- Communications Resources
  - UBC Research Resumption webpage
  - WorksafeBC
- Reporting COVID-19 Exposure

Section #1: Lab information

<table>
<thead>
<tr>
<th>Department</th>
<th>Mechanical Engineering</th>
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<tr>
<td>Faculty</td>
<td>Applied Science</td>
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<tr>
<td>Building(s)</td>
<td>CEME</td>
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<tr>
<td>Lab(s)/workspace(s)</td>
<td>1054</td>
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Introduction to Your Lab
Dynamics and Applied Mechanics Lab (CEME 1054, PI: Phani) conducts experimental, computational and analytical studies on mechanics of materials and structures. This lab has material testing (Instron), Vibration testing (Impulse and shaker testing), Optical instruments (Doppler laser, line laser), Cameras, and custom made test rigs. The proposed request is to resume the experimental work on an NSERC CRD project (2 Canadian and 2 American partners) and collaborative work with surgeons from Vancouver General Hospitals (VGH). This lab accommodates 3 PhD and 2 MASc students. Access is requested for 1 MASc working on CRD project.)
and 1 PhD (working on VGH project). These two students were unable to make any progress on their project over the past two months. The present request is for them to access the lab so that they can complete their research in time for graduation.

Section #2 - Risk Assessment

1. Lab/workspace Occupancy (under proposed COVID-19 operations)

2. [Name] and [Name]

Confirm that you have discussed each employee's comfort level

Yes. We have discussed this arrangement before and suitable PPE and cleaning supplies have been purchased. Both students agree with and are comfortable with this plan.

- 2/4 of normal operations
- Three other students and a research engineer (hiring in progress) will work remotely

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)

Heavy machinery, material testing system equipped with air supply, students are trained on this; Lasers (class 2, green and red lasers) for vibrometry, illumination and imaging using safety goggles - students have been trained and are aware of laser safety. Students must wear laser safety goggles at all times during their use. Both students have used this equipment before for more than a year now. Adequate safety measures have been in place before the lockdown. Trainees are aware of the safety hazards and are comfortable using these equipment with appropriate signage already in use for more than a year now.

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/
This plan is prepared and discussed with HQP and the Mech LST.
A copy of this document along with lab safety rules will be posted on the entrance door. Work stations will be marked to ensure adequate physical distancing.

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 that all workers have access to dedicated onsite supervision at all times; via their own presence, members of safety committees, campus security or other. There will be no working alone.
- 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.

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

- A sign-in and out spreadsheet is posted on Google drive and a physical sign-in is also enforced at the time of entering and leaving the lab.
- At all time, both students should be present.
- Working alone is strictly not allowed.
- Students will use the spreadsheet and share it with the PI every week.
5. Occupancy limits, floor space, and traffic flows

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

There will be exactly 2 students at any given time. Their desk spaces are 5 m apart. Their experimental apparatus are also 5 m apart, as shown in the photographs provided in the appendix. This space typically holds 5-6 people, and is large enough for more. Verbal cueing will be used to safely navigate within the lab.

Only one person can use the entry/exit at a time. See the appendix.

HQP will wash their hands or use hand sanitizer after touching doorknobs. The instruments the two trainees will be using are distinct. Where they share common tools they will be sanitized with wipes/cleaning supplies.

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.).
At the beginning of each day the trainees will wipe the computer key boards, hard surfaces in the experimental area. The cleaning supplies and wipes are located in the lab.

The door handles will be sanitized by the user immediately after entering the lab using the supplies provided.

Three times in a day (10am, 1pm and 4pm) all the surfaces and door knobs will be cleaned.

The fridge and microwave will not be used as are other amenities including the kettle.

There is no sink in the lab. Hand sanitizer is provided near the entrance. A sink is available down the hall at the washroom.

Common tools will be sanitized and kept in a box labelled ready to use. Only those tools will be used by the next user. Tools to be sanitized will be in a different box labelled “to be cleaned”

### 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)

- Separate tools are maintained and common tools will be cleaned after use
- Microwave, freezer, and kettle will be switched off and not be used. Signage will be posted.

### 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.

- Refer to Worksafe’s [“Designing Effective Barriers” guidance](#)

N/A

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**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.
• All safety and working procedures were discussed and each HQP will be asked to sign their compliance before accessing the facilities
• Researchers will complete online training on COVID-19 infection in the workplace
• Working from home is required for data processing and lab will be used mostly for data collection
• Researchers will be reminded of COVID-19 symptoms through signage
• Researchers will maintain physical distance at all times and must avoid contact by communicating through digital means.
• No other trainee (friend etc.) is allowed for socializing/coffee time
• Trainees will be given the option to wear a mask and protect their eyes throughout their stay in the lab
• Trainees will regularly wash their hands, sanitize their keyboards and other equipment using wipes.
• The working desks are more than 2 meters apart
• If workers experience any flu-like symptoms, they will be instructed to stay home


- Non-medical masks do not protect the person wearing them as they do not seal to the face and allows virus particles to pass through them.
- Do not offer complete protection for others if the wearer is ill, as only the largest droplets are captured, and are not a substitute for physical distancing.
- Wearing a mask can provide a false sense of security, leading to decreased attention to physical distance and hand washing.
- Self-contamination occurs when touching and reusing contaminated masks. Frequent changing/laundering and proper donning/doffing is required.
- Have potential to cause breathing difficulties, and can be dangerous to wearer with underlying health conditions

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.

- **Signage is through posters on the walls and at the entrance door, see the appendix for the signage**
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 Building Emergency Response Plan (BERP) and BERP amendments for CEME can be found at http://safety.mech.ubc.ca/resources/ “. All accident and incident reporting should be submitted at www.cairs.ubc.ca

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).

- **PI:** Srikantha Phani
- **Senior student:** [student designate responsible for overall safety]
- **Researchers will contact PI via phone / email at the start of every shift, four hours into a shift, and at the end of every shift**

Students are aware of their right and responsibility to refuse unsafe work. Issues regarding unsafe work can be raised to their supervisor, the Local Safety Team, the Joint Occupational Health and Safety Committee, the Department Head, or the Head’s designate.

All accidents, incidents, and near misses will be reported through www.cairs.ubc.ca

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.

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<tr>
<th>#</th>
<th>Type of PPE</th>
<th>Activity and PPE Use Rationale</th>
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<td></td>
<td>We have purchased the laser goggles, gloves, and cleaning supplies</td>
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</table>

- We have purchased the laser goggles, gloves, and cleaning supplies
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.

Date

13 June 2020

Name (Manager or Supervisor)

A. Srikantha Phani

Title

Associate Professor

Department/School Head/Director Approval

Steve Feng

June 14, 2020

Name, Title

Date

Signature

[Signature]
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.