



COVID-19 Workspace Safety Plan Stage 2 Amendment for: Prof. Edmond Cretu, Adaptive Microsystems Lab (AdaMist), AMPEL 442 and AMPEL 443

UBC is starting Phase/Stage II of the COVID-19 response. Timing of the restart and requirements may vary by Faculty. This form is intended to amend the original workspace plan submitted as part of the Phase I/Stage I return to research. The amendment will be reviewed by members of the Local Safety Team and/or by others appointed by the Director of AMPEL.

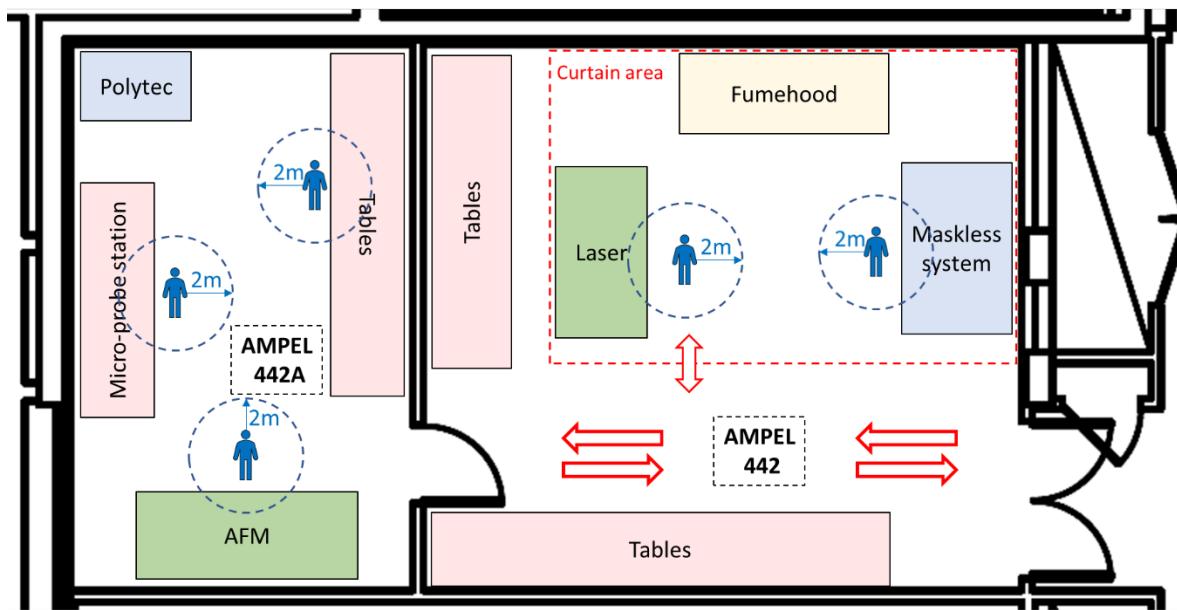
During Stage II, the overall laboratory occupancy should be the lower of either 2/3rds of normal occupancy, or the maximum number of people allowable given physical distancing requirements and access considerations. Weekend access may now be requested. Office use may also be requested, as described below.

1. Occupancy

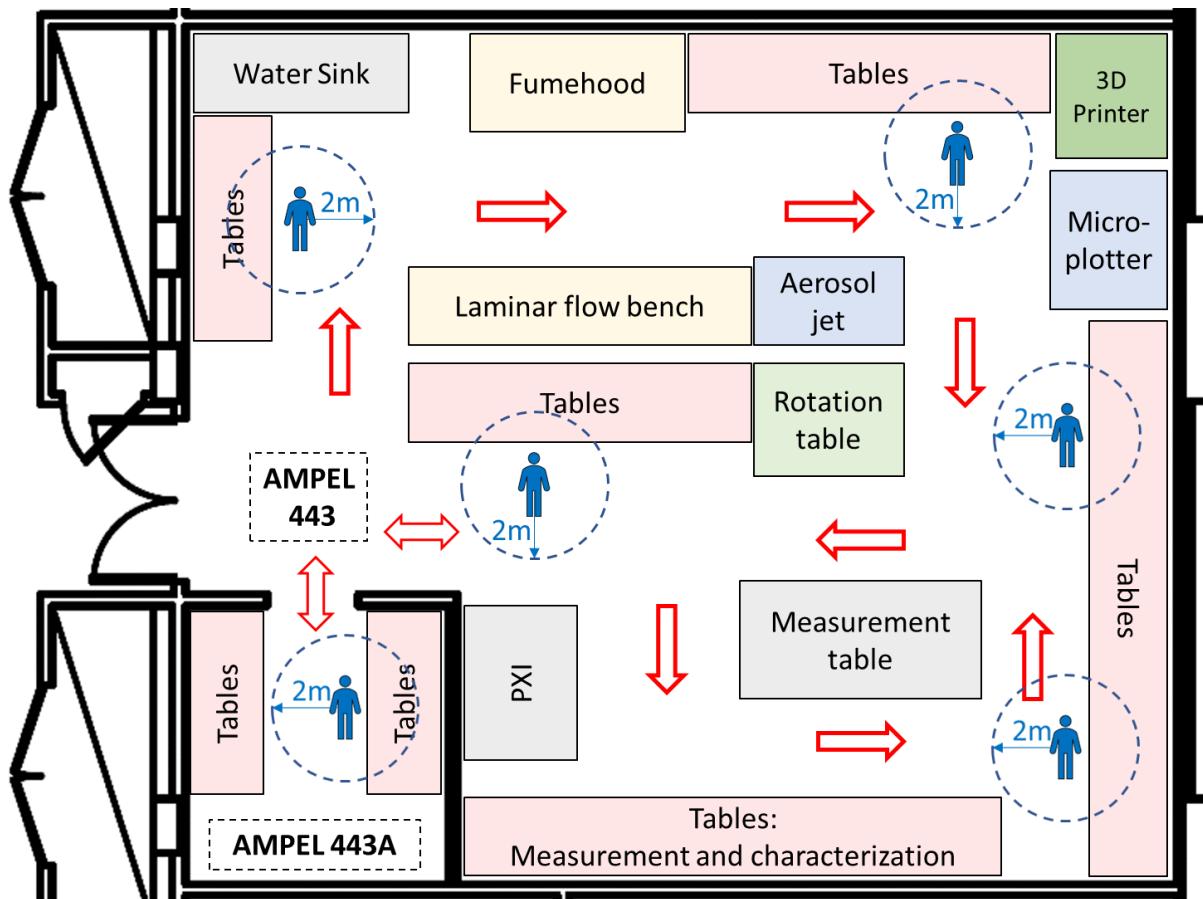
We request an increase in the occupancy levels in both laboratories AMPEL 442 and AMPEL 443.

For AMPEL 442 and 442a (depicted below) we request an increase of the number of people **from 3 to 5**. There is enough room to allocate 1 extra person in the 442A area while maintaining safe social distancing rules. Our Atomic Force Microscope (AFM) is located near the door (but not blocking the entrance) while the controlling computer is located at the corner. This will allow us to maintain a safe physical distance among the users in the laboratory. Given that there is only one door to enter and leave, the person exiting the lab has always the right of way.

We are also requesting one more person to be allowed in the yellow room in 442 that allocate our laser system and a maskless system for microfabrication. To enter the curtain area in 442, it is mandatory for a user to wear a gown, hair cover, face mask, gloves and googles; this is to mirror the dressing requirements from the AMPEL microfabrication laboratory (cleanroom). In addition to this dress code, we will make mandatory the use of a personal face shield when two people are working inside the curtain area in 442. As an extra safety measure, we have installed Wi-fi adapters to the equipment in 442 (laser and maskless system) so they can be controlled remotely when possible.



For AMPEL 443 and 443a (depicted below) we request an increase of the number of people from 5 to 6. There is enough room to allocate 1 extra person in the 443 area while maintaining safe social distancing rules.





The seating locations are assigned in order to minimize contacts between users and positioned where empty table space exists. For example, the measurement equipment is located in the southwest side of the lab, where users run their experiments. The equipment dedicated for fabrication (aerosol jet printer, CNC, microplotter, etc) is located in the center of the lab away from any dedicated workspace.

Lab users are encouraged to work from home when possible. We also encourage users to plan experiments ahead so that they minimize their presence inside the laboratory. If two users need to use equipment that is within 2m from one another, priority will be given to the experiment/measurement with the shortest duration. Communication between users is encouraged.



2. Updated Access List for Laboratory Space:

How many researchers and others normally have access to the laboratory space?

How many do you plan to have return at this time? Only those for whom access is important for completing their work should be admitted.

See list below.

Please provide a list of all those who you wish to have access to laboratory space in Stage II.

We will be accommodating stage-2-nominated users from various PI groups across QMI, AMPEL and UBC that need access to our equipment in both labs (AMPEL 442 and AMPEL 443). The difference now, during stage 2, will be that these users were previously trained and qualified to use our tools and processes, and those who are not, will require more training and interaction with the already approved members of the AdaMist team. These interactions will be carried out as per our approved plan of phase 1 in all respects.

3. Working within 2 m:

Working in close proximity should be avoided where possible. Double protection is required (face mask plus face shield) for people working within 2 m. Nitrile gloves and a lab coat are recommended.

Are there situations (training, special procedures etc.) where two or more people will need to work in close proximity?

YES or NO: **Yes**

If Yes, describe the situations, including frequency, duration, and any hazards associated with them. How will the hazards and COVID-19 risks will be mitigated? If you have already covered these in your original workspace plan, please refer to the section and page number where it is discussed.

*As described in section 1. To enter the curtain area in 442, it is mandatory for a user to wear a gown, hair cover, face mask, gloves and googles; this is to mirror the dressing requirements from the AMPEL microfabrication laboratory (cleanroom). In addition to this dress code, **we will make mandatory the use of a personal face shield** when two people are working inside the curtain area in 442. As an extra safety measure, we have installed Wi-fi adapters to the equipment in 442 (laser and maskless system) so they can be controlled remotely when possible.*

Some additional safety measures will include:

1. We will aim to avoid physical interaction within 2 meters in the first place, everywhere this is possible, and by using all available means in our disposal, including, for example, online presentations and videos.
2. Where interaction within 2 m cannot be avoided, we'll still try and minimize the session duration.
3. We will be using the “BookIt” online tool to track the reservation and use of all the equipment in our labs. This will allow the lab manager to have real-time information of the equipment that is being used
4. A log-in sheet will still be maintained for both of the labs at the entrance door.

4. Weekend and After-Hours Access:



Access is now possible on weekends. During the weekend (and after hours in general), occupants should not make use of building common areas, except washrooms. Only the washroom nearest to the lab should be used. Researchers must not impede building cleaning, and should post signage if working during cleaning times. Do you plan to have researchers access the lab over the weekend (Saturday/Sunday 7 AM to 6 PM) or after hours?

YES/NO: **YES.** Note: Only for experienced users (not newly trained ones) and only after permission following request. The user must send an email to the lab manager (Carlos *** and Chang ***) or to the PI with their request. This message will include **the location, equipment, activity to be performed and the time duration**

After Hours: Standard hours will be 7 AM to 6 PM. If you are requesting access during hours outside that range, please explain the need.

We will try to avoid it and will only allow experienced users, as above, if occasionally required and only after permission following request. The user must send an email to the lab manager (Carlos *** and Chang ***) or to the PI with their request. This message will include **the location, equipment, activity to be performed and the time duration**.

The laboratory activities and processes performed in Ampel 442 and Ampel 443 are considered as low-risk. No high voltages, or acids are present. Some processes in microfabrication require lengthy and constant monitoring that frequently extend beyond the working hours. If a user is scheduled to work after hours and alone (nobody else either in Ampel 442 or Ampel 443) then the user needs to be in regular communication with the lab manager (Carlos *** or Chang ***) every 4 hours by using the WhatsApp group dedicated for the lab.

Describe how will occupancy limits and records of those who were present in the lab will be maintained. You may refer to the pages and sections of the Phase/Stage I workplan.

We have currently migrated to a different reservation system from the original Phase I plan (Google Calendar). Since September 2020, we have migrated to a semi-professional online reservation system called BookIt (<https://www.clustermarket.com/>). A screenshot of the system is shown below:



The screenshot shows the 'Lab Dashboard' interface of the clustermarket software. On the left, a sidebar menu includes 'My Dashboard', 'My Bookings', 'My Orders', 'My Projects', 'My Reviews', 'Create a lab', 'Lab Dashboard', 'Equipment', 'Services', 'Users', 'Projects', 'Announcements', 'Reports', 'Settings', 'Reviews', and 'Refer a lab'. The main area is titled 'Lab Dashboard' and contains sections for 'My Activities' and 'Lab Activities'. Below these is a 'Calendar' for the week of Oct 19 - 25, 2020. The calendar grid shows various equipment slots booked by different users. A legend at the bottom right identifies the colors: red for 'Unavailable', orange for 'Announcements', green for 'My booking', grey for 'Member booking', and blue for 'External booking'. A search bar at the top says 'Click to search equipment and services outside of your lab'.

This system is highly customizable, and each user has its own profile. Restriction on the equipment, schedules, and lab spaces are also included. Currently, it is MANDATORY for all the users to utilize this system for working in the lab.

5. Faculty Offices

The number of faculty returning should not exceed about 25% in stage 2. All returning faculty must complete the mandatory safety training and must be. If you are requesting the use of faculty offices .

6. Staff and Researcher Office Space

Researchers and office staff who can work from home are expected to continue to work from home. However, with permission of the Director of AMPEL, staff and researchers may be permitted to use their offices. Physical distancing rules apply, and typically only one person will be permitted per office.

N/A

6. Food Preparation

In stage 2, food preparation will not be encouraged, but it will not be expressly forbidden. What policies will your department/unit put in place to ensure proper cleaning of shared cooking equipment.

We will use a single microwave oven to occasionally warm food and is located in the office space in Ampel 443A. This microwave oven will be sanitized before and after each use. The internal and external surfaces will be thoroughly cleaned using disinfecting wipes and spray.



Brimacombe COVID-19 Safety Plan: Stage 2 Amendment



Signatures

I/We agree to abide by the procedures described in the approved phase I workspace plan, as amended by this document. I/We will ensure that all researchers and staff who have access to the spaces covered in this document are aware that they also need to abide by these procedures, and that they complete safety training, including COVID-19 training, before returning to work. They have been made aware of physical distancing requirements, procedures for working in close proximity (where relevant), scheduling, working alone procedures and other safety considerations. I/We will arrange to keep track of and maintain records of occupancy during the period of COVID-19 restrictions. I/We will arrange for records of completed training and of the procedures (workspace plan and this amendment) to be accessible from the workspaces. All users of my space will complete the Brimacombe user access agreement (copy below). Occupancy limits will also be posted in each space.

Principal Investigator (Director or Manager in case of shared facilities).

Edmond Cretu, PI

Name, Title

Date

Signature

Additional PI/Manager (copy as needed)

Carlos D Gerardo, Lab. Manager

Name, Title

Date

Signature

Approvals

Director of AMPEL or Designate

John D Madden, Director of AMPEL

Name, Title

Date

Signature

Name, Title

Date

Signature