

# LASH MILLER RETURN TO RESEARCH PLAN

## Overview

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## Phased Return to Research

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The lifting of the current restrictions will require a phased return to research in order to be flexible and evaluate/mitigate potential issues that may develop. It is critical that people adhere to the guidelines that describe various safety protocols. Flexibility is a key feature to the following process, since there it is envisioned that the situation on the ground could very well change based on the external situation.

Please refer to the following resources and overarching principles/guidelines:

[Recovery & Adaptation Principles](#)

[COVID-19 Approach for Research Recovery & Adaptation](#)

**Particularly:** [Guideline for Reopening Research Spaces](#)

**To consider are the following guidelines received from the Faculty of Arts and Science.**

- During the phased re-start process, PIs, research trainees and staff who can perform work from home will be required to do so.
- Only research that requires the use of infrastructure and resources that can only be utilized on campus will be considered for on-campus research activity.

- PIs with research groups that need to be on-campus should propose plans that ensure 6 feet distancing in all rooms they occupy at any given time. To prepare your return plan, please refer to the floor plan and schedule example on the right for further guidance.
- Only individuals with approved building access will be allowed to access buildings. The buildings will remain closed to the public at this time.
- In addition to prioritizing critical research activities, late stage graduate trainees, and time-sensitive externally funded research, we will prioritize early career researchers and consider principles of equity, diversity and inclusion.

#### Physical Distancing Plan

- [Physical distancing floor plan example](#)
- [Lab schedule](#)

## ***Guiding Principles***

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Every PI who decides to ramp up their research must be prepared for a sudden shut down following University or government directives or should other circumstances arise that would limit activities (e.g., a reported case of a COVID infection in a lab group).

Every PI must take responsibility for not only adhering to safety protocols but must ensure that such protocols are adhered to by personnel under their supervision or guidance.

Every PI should ensure they have a clear plan for meeting all public health regulations.

- Practice physical distancing; ensure all workers can be spaced 2 m (6 ft) apart and continue virtual meetings.
- Frequent hand hygiene, cleaning of high touch surfaces as per Ministry guidelines
- The Department of Chemistry **strongly recommends** the use of masks if physical distancing is not possible and in common spaces such as hallways, stair wells and elevators. To support this initiative, Chemistry (St George Campus) has secured COVID19-PPE for all research personnel (2 cloth face masks and one optional face shield) at no cost.
- Please note these masks are non-medical masks. **Non-medical face masks must not be used instead of medical-grade masks** (e.g. N95 or surgical masks) where required by EHS to either conduct research or where physical distancing measures are not possible.
- The use of cloth face masks is allowed when handling chemicals with the exception of handling ***flammable and pyrophoric*** chemicals  
If you are working with flammables and or pyrophoric chemicals, your cloth mask should have at least as high a flame resistance rating as your lab coat. For example, if your lab coat needs to be Nomex, your mask's outer layer should also be Nomex. **Chemistry is not providing this type of masks.** Please use the [General Laboratory PPE Assessment Tool](#) to determine what your lab coat material type should be and place a request for

PPE Nomex masks, if appropriated via email to [ehs.ppe@utoronto.ca](mailto:ehs.ppe@utoronto.ca). Please use subject line: LAB PPE Needs Assessment – Division/Faculty name

- Use passive and active screening; this includes self and peer monitoring.
- Limit interacting groups to cohorts of 5 people; discourage intermixing between cohorts.
- Strongly encourage all research personnel to have up to date routine immunizations including influenza.

All PIs and personnel who are granted permission to pursue research have a duty of care for themselves and others to protect all from the transmission or exposure to the virus. During phase 1; all activities that can be done remotely, will remain remotely (example: data analysis, literature review, etc.)

The Department of Chemistry has developed a series of SOPs and tools to aid preparing the laboratories for a safe return while maintaining research operating under the principles and guidelines that are applicable to phase 1 research recovery. (refer to page 4 for links to these SOPs)

## ***Lash Miller - Stages for Implementing Research Recovery and Adaptation***

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### **LM-Stage 1:**

**Goal:** To ensure the integrity of the safety systems that were in place prior to the shutdown, this group will make all the necessary preparation to permit a safe return to work. This will involve faculty, managers, technicians, group safety officers and selected senior lab-personnel from the individual research laboratories that were approved under the phase 1 application procedures delineated by FAS.

The main emphasis to the Stage 1 is putting in place procedures to ensure the safety of all research personnel, which includes building, infrastructure and safe working practices to maintain physical distancing. DO NOT start research operations before taking the time to inspect and prepare your workspace (lab, offices and group room)

Once the request to re-start research has been approved, the research group's supervisor will assign the tasks associated with inspecting and preparing the work space to those approved under the Stage 1-application process. Tasks are delineated in this [checklist](#).

**Completion of this checklist must take place BEFORE research operations resume**

## LM-Stage 2: Approved Personnel Return to Research following staggered schedules:

During this phase (current state as per June 2020) all people remain working remotely on all tasks that do not require for them to be on-site

For tasks that require people to be on site:  
(*wet lab experiments for example*)

- Staggered return based on Phase 1 of research-priority criteria following your approved return plan
- Ensure schedule of students on-site based on allowed occupancy are strictly followed. Allowed occupancy criteria is driven by room's size, group's size and the ability to maintain 6 feet distancing at all times during each schedule
- Plan for continuing monitoring for illness
- Prepare for delays in deliveries, services, and potential backorders (shortage of supplies)
- **Do not start experiments unless you have the supplies and reagents on-site**
- **Surfaces in individual laboratories, offices and group rooms, are the responsibility of the group members.**
- Surfaces that are frequently touched by more than one person, such as doorknobs, floor phones, shared equipment, must be disinfected frequently (several times per day) using a bleach solution, Lysol wipe or other disinfecting solution ([Surface Disinfection SOP](#)) DO NOT use a flammable disinfectant or sanitizer on any electrical device such as light switches, as the vapours may ignite. Surfaces in common areas are the responsibility of the building manager or their delegate.
- **During Phase 1 return to research use of common fridges, microwaves, and kitchenettes is prohibited.** Viable alternatives are for every lab member to bring their own cooler with food needed for the duration of the experiment (**NOTE: food in the labs is OFF LIMITS**)
- Maintain 2 m interpersonal distance. If you have coffee or lunch breaks, try to stagger them with your colleagues to minimize crowding in the eating area

## Standard Operating Procedures

The Department of Chemistry has developed a [checklist](#) to review the lab-site before reopening and series of SOPs to aid research groups ensuring the health and safety of lab-personnel while navigating operations during COVID19

These SOPs include:

- SOP 1 – [Workspace Preparation](#)
- SOP 2 – [Entry/Exit Protocols](#)

- SOP 3 – [Reusable Cloth Facemasks](#)
- SOP 4 - [Surface Disinfection](#)
- SOP 5 – [Hazardous Waste Management During COVID19](#)
- SOP 6 – [Key Pickup and Drop Off](#)
- SOP 7 – [Flame Resistant Face Mask](#)

It is the responsibility of every PI to ensure compliance with these SOPs. The Department has secured COVID19 PPE (cloth face masks and face shields). It is the responsibility of Faculty, staff and students to [properly use and maintain this PPE](#).

The number of people in a lab or other research area should not exceed 25%-30% of the nominal capacity of the room. For example, a lab designed for 8 people should never have more than 2-3 people in the room unless 2 m distancing can be ensured at all times (approval of densities above 25% will be evaluated on a case by case). An instrument room (typically half the size of an 8-person lab) should have no more than 1-2 people in the room.

The [Workspace Preparation](#) SOP includes a sample for social distancing plan. LM-floor plans that could be used to develop the group-specific/room-specific distancing plans are available upon request in the Faculty Teams Channel

Supervisors should create schedules that allow a subset of their research group to work without violating these restrictions. If a room is shared between two or more supervisors, those supervisors should develop the schedule together.

At the start of each shift, staff and students working in a lab should sanitize all surfaces frequently touched by more than one person, such as doorknobs, lab phones, light switches and faucet taps must be disinfected frequently. (Please see [Workspace Preparation](#) and [Surface Disinfection](#) SOPs)

- Supervisors are encouraged to prioritize lab time for student researchers who are about to finish their degrees or about to finish a manuscript.
- Only work that cannot be done remotely will be allow on-site during phase 1 of research revamping.
- Lab personnel should only use their desks while waiting for experiments to finish and they should continue all work that can be done remotely away from LM.
- Students that are only doing computer work must remain doing so remotely.
- Researchers should not work alone. Schedules should not call for anyone to work alone. No scheduled lab-work can take place between 12:00 AM and 7:00 AM)
- Normal safety rules still apply. Do not allow the focus on COVID-19 to distract you from practicing normal safety protocols

## **Technical Services & Support Units**

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### **General Operations Guidelines during COVID19**



Please expect that everything will take longer.

Technical Services will operate as follow:

*\*Details will be available on each website*

#### **ANALEST**

The facility will remain locked and only users with instrument bookings may enter. Drop-in usage of instruments will not be permitted, and only one person may attend each instrument booking. The number of users in each room at any time will be restricted and instruments closer than 2 m will not be booked concurrently. Users will use clean gloves on computers and instruments. Elemental Analysis service will operate normally, but the sample drop-off location will be moved to the hallway. Ultrapure water will be dispensed by staff with a volume limit. Entry will be controlled by manager ensuring appropriate people-density. Strict entry SOPs and health triage will be enforced. People must wear cloth face- masks and clean gloves to come in.

Details: <https://sites.chem.utoronto.ca/analest/content/covid-19-operations-information>

#### **NMR**

Curb-side service and open-access SOPs are available on request and are posted at the NMR@Chemistry Quercus page (see <https://sites.chem.utoronto.ca/csicomp/> for additional information). Disinfection protocols have been implemented and SOPs ensure low client density within the facility. Strict entry SOPs and health triage is enforced; clients must wear face masks, don clean gloves, and maintain 2m physical distancing when working in the facility.

#### **Weekdays (business hours): curb-side service**

- A contactless curb-side sample drop-off and pick-up protocol will be instituted during weekday business hours. Students will submit experiments using *on-line* forms after sample drop-off. Samples and associated experiments will be scheduled for batch submission to the autosampler spectrometers periodically during the day by staff. Similarly, samples will be collected and placed for curbside pick-up throughout the day so that students have the opportunity for same-day and next-day sample retrieval.
  - Students may consolidate group samples and drop them off batchwise to limit traffic at the NMR facility.

- Students can select and submit experiments from any network-attached device using on-line forms. This can be done on-site or off-site.
  - Students will be expected to maintain 2m physical distancing and wear masks during sample drop-off and pick-up.
- Staff service requests will also be available to clients during business hours. These requests will be reserved for complicated or set-up intensive experiments (e.g. variable temperature, kinetics, etc.) and will be arranged on-line. The associated samples will be dropped off and picked up as outlined above.
- All other staff-student interactions will occur remotely (e.g. data processing, analysis, assistance, troubleshooting, and other NMR-related activities).

### **Weeknights / Weekends: open access**

- Weekends and weeknights will revert to open-access workflow at all spectrometers according to existing SOPs (available on request and at the [NMR@Chemistry Querus page](#)). Briefly:
  - the number of clients allowed into the NMR facility will be limited to 3 at any one time
  - traffic will be directed sequentially through three stations from entrance to exit to ensure 2m physical distancing at all times
  - stations will consist of 1) an entrance, 2) a cleaning station to obtain/don clean gloves and, 3) collectively, the spectrometers. Only one client may occupy a station at any given time.
  - clients are expected to submit samples in an efficient manner and use auto-logout features at non-autosampler spectrometers such that they do not linger at spectrometers or in the facility
- Clients are expected to wear masks prior to arrival at the facility and maintain strict cleaning protocols at the workstations before and after submitting samples.

### **AIMS**

- Relevant SOPs ([available on the AIMS website](#))
- [AIMS-SOP-001-COVID-19](#)
- COVID-19 Surface Disinfection SOP
- MS Services
- Client sample submission service will be operating as usual for DART, EI, ESI and MALDI.
- New COVID-19 Sample submission procedures have been implemented.
- Facility Access
- Access to LM18 will be restricted to key-fob credential holders only.
- Access will be restricted to ONE person per instrument bay or office at a time.
- AIMS User instruments will be scheduled through Calcium Calendar (API4000, MALDI, QStarXL).

- AIMS designated user groups will be responsible for managing access to their respective instruments (Mabury, Peng, Wheeler, EPR).

## **X-RAY**

Samples will be submitted as usual. Groups with instruments in the X-RAY facility will have to book the use so that only 1 instrument is used at any given time. Strict entry SOPs and health triage is enforced. People must wear face masks to and clean gloves come in.

## **CNI**

Samples will be drop in. Instruments can be booked. Training and troubleshooting will be done remotely with the use of tablets. Strict entry SOPs and health triage is enforced. People must wear face masks and clean gloves to come in.

<https://sites.chem.utoronto.ca/cni/>

## **STORES**

Will operate with contactless curbside pickups and drop-offs as the entrances will be stanchioned off. All orders for supplies will need to be submitted online using the Microsoft Forms link provided on the Stores' website. (Note: we are working hard to open an on-line store for easier ordering)

No drop-ins will be permitted, and curbside pickups of orders and received shipments will be scheduled for specific time-slots. Furthermore, drop-offs of packages for shipping, solvent cans for refilling, and acetone for recycling will need to be scheduled. Individual research groups will be given specific timeslots for the drop-off of hazardous waste in LM705. Strict entry SOPs and health triage will be enforced.

Personnel must wear face masks and clean gloves during curbside pickups and drop-offs, and personnel will only be granted permission to enter if there is a need to transport heavy material through Stores to and from the loading dock or freight elevator.

Refer to [Chem-Stores COVID19-Operation SOP.pdf](#)

## **SHOPS (machine, glassblowing & electronic)**

Will only accept electronic work-orders and visit to the shops will be by appointment ONLY. Strict entry SOPs and health triage is enforced. People must wear face masks and clean gloves to come in. Detailed information is available in the respective websites



[Machine Shop](#)  
[Glass Blowing Shop](#)  
[Electronic Shop](#)

## CITS

Will provide remote support. No in person visits for now.

## Administration and Administrative Staff

- Administrative departmental staff will continue to work remotely unless there is a need for essential work to be completed in the Main Office. Administrative staff will be available by email and virtual meetings during regular work hours (Monday-Friday, 8:30am – 4:00pm). Staff required to return to in-person work will be determined on a case-by-case basis and in accordance with Public Health recommendations.
- When administrative staff need to use space in the building, office surfaces that are frequently touched by more than one person, such as doorknobs, photocopy machines, lab phones, light switches and faucet taps must be disinfected frequently (several times per day). This is the responsibility of the people managing of those rooms.
- Office of Administration: Restrict access to the main office and avoid using paper. Switch to an entirely electronic platform to permit administrative staff to work remotely unless essential.
- Key pick-up and return will be done by appointment and following strict entry procedures. Linda Scott will be sending the details
- All key-form requests must be submitted electronically to [linda.scott@utoronto.ca](mailto:linda.scott@utoronto.ca) together with the signed on-boarding training checklist (onboarding training will be done remotely until further notice).

## Management of Chemistry Common Areas

### General Operations Guidelines during COVID19

- During phase 1; the 4<sup>th</sup> floor graduate students lounge (LM406/406A), the library and the meeting rooms LM128, Davenport East and West will remain closed. **NOTE:** for those groups that may need to use the 4<sup>th</sup> floor graduate student's room; please include this in your opening plan and indicate how you are planning on managing disinfection and 6 feet distancing

- Do not congregate in the 4<sup>th</sup> floor Chem-Club boardroom (limited occupancy) or any of the eating areas/group rooms unless this is done in staggered schedules ensuring distancing and strict disinfection protocols are followed
- **Wearing a mask will be required to enter ANALEST, X-Ray, CSICOMP NMR and the shops (see technical services page below)**
- F&S will post occupancy limits in common areas such as elevators and washrooms as well as it will prepare the building to facilitate proper distancing