

## University of Michigan Guidelines for Safe Lab Work

As of May 10, 2020

The information contained herein is subject to change with emerging guidance from the State of Michigan and public health experts. To stay abreast of any updates, please check the UMOR

[Research Re-engagement FAQs](#) frequently.

### Safe research re-engagement amid COVID-19

The University of Michigan, with guidance from public health experts, is working to solidify plans to safely re-engage limited research activity across its three campuses when permissible, consistent with any applicable State of Michigan directives, orders, or guidelines. However, only those activities that require the lab/studio facilities or equipment will occur in the lab. Office and dry lab research, including all lab meetings and supervisor meetings, will continue to occur remotely and will be in violation of the below guidelines if they occur in labs. The framework and guidance contained in this document applies to all buildings with allowable re-engaged research activities, and all employees and staff of the university entering and exiting those buildings, regardless of whether they are involved with such re-engaged research activities, will be subject to the framework and guidance herein.

The COVID-19 pandemic has impacted nearly every facet of the U-M research enterprise, and so the university plans to implement a phased approach to ramp up research activity. This approach aims to protect the health and safety of the U-M community and the broader public, while following all applicable State and other guidelines.

Accordingly, please refer to the important re-engagement guidelines below to prepare U-M to be in compliance with applicable state and other guidelines to reopen. The planning you do now will support the long-term success of the U-M research enterprise.

The below also do not supersede any more stringent or heightened lab or other safety requirements – including any related to use of specific personal protective equipment (PPE) – applicable to a given research project, which must continue to be followed at all times.

### Phase 1 Guiding Principles for Ramping up Laboratory and Studio Research

- The safety of the workforce and everyone associated with its return, including members of surrounding communities, is the leading priority.
- Planning recognizes the diversity of types of research across campus is a strength and critical to our research enterprise and mission.

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- Planning recognizes that for safety and feasibility, all laboratory and studio research will not reopen at the same time and we will need a stepped approach to reopening.
- A required component of planning will be reversibility, in case a recurrence of COVID-19 forces another contraction of research activity.
- Laboratories, including shared facilities, must carefully prepare equipment and materials for occupancy after a long period of dormancy, which may require additional time or planning.
- Planning will be as transparent as possible, to permit individual faculty to make plans that conserve their time and effort.
- Graduate students may not be compelled to conduct research activities on campus as a condition of assistantship or postdoctoral research associate support, while public health orders governing individual activity remain in effect.
- UMOR administrative review of school staging plans in concurrence with school approvals of PI safety plans will occur to ensure coordination, effectiveness, and compliance in health and safety.

#### **A. Guidelines for entrance into any U-M laboratory building with research operations**

1. For all non-emergency situations, all buildings will have a wheelchair-accessible single point for entrance and exit, which everyone will be required to use.
2. Prior to entering
  - a. Your name and U-M ID will be verified against a list of approved labs and names of allowed personnel; and
3. You will be required to indicate which room you are working in and participate in a screening that asks:
  - a. Do you have symptoms of: fever (>100.4 °F), chills, cough, loss of sense of smell and/or taste, shortness of breath, sore throat, diarrhea?
  - b. Have you had household contact in the last 14 days with someone diagnosed with COVID-19?
  - c. Have you been maintaining the State of Michigan's social distancing guidelines outside of work?
4. If your answers to the screening disallow you from being present at work (pursuant to an applicable Executive Order, University policy, or otherwise) or you are not listed among the approved personnel, you will not be allowed access into the building.
5. Any employee who has a positive intake screen will be referred for follow-up with the Occupational Health Services Hotline. (734-764-8021).

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- a. Occupational Health Services (OHS) will conduct the initial triage for employees with a positive screen
- b. OHS employees are trained to determine the need for a COVID-19 test, etc.
- c. There is a process in place for employee testing, either with off-site testing or at University Health Service.
- d. Employees will not be allowed to work until cleared by OHS.

## **B. Guidelines for individuals returning to work**

1. Approval is required from School/College/Unit to re-engage in laboratory work.
2. Before approved individuals may return to work, they must complete an online training module that outlines practices for safely returning to lab work.
3. Employees who are not feeling well are required to stay home. Please refer to the following video from the U-M Chief Health Officer.
4. According to the U-M Chief Health Officer, individuals who are at high risk for complications of COVID-19 are not required to return to work. If an employee has a concern that they may be at high risk, they should contact their own doctor or Occupational Health Services. Some examples of high risk factors are:
  - a. Age greater than 70,
  - b. Persons with primary or acquired immunodeficiency,
  - c. Persons on anti-rejection therapy following solid organ transplant or bone marrow transplant,
  - d. Persons on biologic therapeutic agents, such as tumor necrosis factor inhibitors,
  - e. Persons with malignancy and ongoing or recent chemotherapy, or
  - f. Persons receiving system immunosuppressive therapy, including corticosteroids equivalent to 20 mg/day or prednisone for >2 weeks.
5. No undergraduate students, visitors, or visiting researchers are permitted in laboratories.
6. **Graduate Student lab engagement** should follow [Rackham Guidance](#). Specifically the manner in which graduate students return to research in the laboratory or field should be mutually agreed upon by faculty mentor/PI and the graduate student. This agreement should be part of the work plans that faculty develop with their graduate students as part of the ramp up. Faculty should create pathways for graduate students to return to research that address both the priorities of the student and the priorities of the PIs research projects. If not fully aligned, the following factors can potentially provide flexibility: (1) Engage the research group as a team to complete high-priority lab tasks in ways that accommodate the individual situations of lab members; (2) Incorporate variable levels of on-campus (e.g. lab work) and remote (e.g. data analysis, experimental

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design) research activities into the work plans of graduate students during the initial ramp up in ways that accommodate their individual situations; (3) as needed, the student's department or program can work with the faculty and student to develop alternative methods for academic and research progress.

- a. In addition, the Graduate student's department or academic program should review faculty/student work plans to ensure safety and equity. In the event that the manner in which a graduate student returns to laboratory or field research cannot be mutually agreed upon by the faculty member and student, the department or academic program should assist in developing such an agreement. The graduate student, faculty member, and department can also call upon available campus resources, including those in the student's school or college, the Rackham Resolution Office, or the Dean of Students Office of Conflict Resolution.
- b. Confidentiality of a graduate student's individual circumstances should be maintained by the faculty mentor.

### **C. Guidelines for preparing the workspace and operating a safe laboratory/studio**

1. Each laboratory/studio must provide all of the following items before reopening: safe laboratory schedule/plan, individual duty list, and occupancy list that, at all times, maximizes employee spacing and complies with social distancing and all relevant PPE. The plan must be approved by your school/college/unit. All of the described procedures must be followed and adhered to:
  - a. This safe laboratory plan/schedule should minimize the number of people in each laboratory room and all associated spaces (for example, break rooms) at any one time. This [example form](#) will be used by several schools to guide obtaining and approvals for this information. Approvals of safety plans will be given by each school's research leadership, with concurrence from OVPR. Please follow guidance from your school or unit on the form and process for obtaining approval to return to the lab.
  - b. Distribute a list of duties to be performed by personnel, indicating the location and designated time of day for such duties to be completed.
  - c. Develop a means of signifying who is present in the lab/studio space at any given time, preferably through an online sign-in tool to minimize touching items such as a physical sign-in sheet, or other mechanism of controlling the number of people in the lab at the same time.
  - d. Stagger break times to minimize contact between people in rooms. Conference rooms and cafeterias will be closed off and cannot not be used. Ensure eating and drinking is not occurring in labs.

- e. Post a map inside the lab/studio entryway with maximum room/bay occupancy to maintain social distancing.
- f. Each lab/studio room can only accommodate a maximum of 1 person per 144 square feet. If you cannot maintain at least 6 feet of social distance, or the person per square feet requirement, then the schedule will need to be revised and/or reconfigured to achieve these.
- g. Small, narrow laboratories/facilities smaller than 288 square feet can only accommodate one person at a time.
- h. Lab Benches are not 6 feet across, thus plan for work to occur only on one side of the lab bench in most instances.
- i. Note that, depending on the research area/experiment, safety guidelines for the specific research project may require more than one person to be present in the room at any one time. Even in this case, the individuals present must maintain a 6-foot separation at all times. If the appropriate physical separation cannot be maintained, this work cannot be started.
- j. Move equipment to create at least 6 feet between users.
- k. Tape will be used to mark out 6-foot spaces for high traffic areas or bottlenecks.
- l. PI safety plans should include attestation that buildings must not be used for social gatherings or group meetings, that conference rooms and other group spaces will be off limits,

## 2. Masks

- a. Employees authorized to return to lab work must be provided a cloth face covering and instructions on cleaning and maintenance. Refer to EHS [Face Covering Usage for COVID-19](#)
- b. A new mask will not be provided daily, so you must retain this mask and bring it with you daily, after complying with all relevant and applicable cleaning and care requirements. Refer to EHS [Face Covering Usage for COVID-19](#).

## 3. Create a safe space and maintain at least 6 feet between researchers at all times.

- a. Always wear the cloth face covering provided to you unless your research procedures dictate heightened PPE requirements. When not wearing the safety PPE required for your laboratory work, reapply your provided face covering. Proper hand hygiene before and after using any face covering is critical.
- b. Wash your hands with soap upon entering and before leaving the lab/studio, and wash them after touching shared accessory devices like phones (use speaker phone if possible).

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- c. Wear eye protection when there is a potential for splash or splatter to the face, or when surface contact is a possibility, e.g. microscopy work.
  - d. Minimize shared items (pens, notebooks, frequently used reagent bottles, etc.). As much as possible, each person should have their own.
  - e. All principal investigators must formally assign a daily in-lab sanitation role which includes daily decontamination of lab-space procedures including the cleaning of all work benches, door handles & lock keypads, keyboards/mice/desks for shared equipment computers, telephones, printer, cameras, microscopes, control panels, etc.
  - f. If it can be done safely, use paper towels or Kimwipes when handling common laboratory items, laboratory equipment and cabinet handles.
  - g. Wipe or spray door handles with 70% ethanol (or other EPA-registered disinfectant) after use. See [EHS guidelines](#).
  - h. Lab coats, gowns or aprons are recommended to protect personal clothing. Follow [EHS guidelines](#) for cleaning and disinfecting hard, non-porous surfaces.
  - i. Remove lab coats and gloves when leaving the lab.
  - j. Consider footwear and clothing as a possible transmission source. You should have a pair of shoes that you use for external use (including working in a laboratory/facility) that you do not wear into your place of residence. Such shoes could be left just inside the door of your place of residence.
  - k. Be sure to disinfect surfaces, such as tables and chairs, before and after using such facilities.
    - i. Cups, mugs, plates, and silverware must be washed with soap before and after use.
    - ii. Wash your hands after using a break room.
    - iii. Food and drink are not allowed in labs. ([link coming here](#))
- 4. Create a plan for shared equipment. All shared equipment must be disinfected before and after each use.**
- a. Wear disposable gloves when cleaning and disinfecting equipment. Discard (where supplies allow) or disinfect gloves after each use with 70% ethanol or sanitizer.
  - b. Special care should be taken to disinfect equipment that makes direct physical contact with skin, including eyepieces for microscopes, touch pads, etc.
  - c. Use disposable tissues, Kimwipes, etc. to touch surfaces that cannot be disinfected, and/or when gloves are not available.
- 5. Create a plan for interacting with individuals outside the lab**
- a. Contact with other labs should be made via phone or electronic means, except in cases of extreme emergency.

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- b. Those also working in the patient care setting should change clothes prior to lab entry.
- c. Transfer of items should be arranged by leaving them in the hallway or other designated area for a no-contact approach, as opposed to handing them over in person. The timing of these transfers should be closely coordinated to ensure the safety of all involved, as well as to eliminate the potential for lost or otherwise unattended items in these settings.
- d. Research studies must be carefully and thoughtfully planned given the likelihood that support services, such as animal facilities/ULAM, central stores, core laboratories, etc. will be operating at reduced levels.
- e. Use of shared facilities and other labs' equipment must be pre-arranged in order to avoid accidental contact. Be sure that all users understand lab sign-in procedures.
- f. Use precautions when entering a restroom, shared use facility, or other common areas. Call out to assess occupancy or create an "occupied" door sign. Use a disposable towel or Kimwipe to touch door handles and faucets, and wash your hands upon entering and leaving.
- g. Develop a safety protocol plan for deliveries.

#### **6. Working safely with animals in the vivarium**

- a. The Unit for Laboratory Animal Medicine (ULAM) will maintain mechanisms for providing continued daily care to all animals housed on campus in the event of a natural disaster or other events that may interrupt normal business, including the COVID-19 situation. This includes continued veterinary medical care; assessment of animal health and well-being; provision of food, water, and clean cages; and maintenance of appropriate environmental conditions. Our top priority is to continue the provision of critical life support services that ensure animal welfare.
- b. IACUC approval processes remain intact and any changes to research protocols must be submitted to IACUC for review and approval prior to implementation, pursuant to normal processes.
- c. ULAM will remain in "split-shift" mode, effectively reducing available staff. This augments the need to limit studies to those that could be relatively easily ramped-back-down should the need arise. Full ULAM staffing is not possible during this phase of re-engagement of laboratory work and thus support for a full volume of animal-related work cannot be expected.
  - i. Studies may only be performed on animals already in-house; new animal orders will only be accepted for COVID-19-specific studies. Exceptions must be approved by the pertinent Research Associate Dean.

- ii. Breeding colonies must remain on maintenance-mode only; no new studies may be initiated on animals produced by breeding colonies.
  - iii. Additional limits may be required based on ULAM staffing levels and/or as needed to maintain social distancing.
- d. Subject to the restrictions and exceptions outlined above, researchers must generally consider animals already housed in the vivaria when planning for potential re-engagement in animal-related experiments. ULAM can assist in verifying the number and locations of animals assigned to a researcher's protocol(s).
- e. The ULAM Business Office will continue placing orders for the critical supplies needed to ensure animal health and well-being (e.g., feed, bedding, critical care veterinary supplies), but procurement of all non-critical supplies will be temporarily placed on hold. If your animal-related experiments require the use of anesthetics, analgesics or any other pharmaceuticals, ensure you have adequate supplies that are not expired prior to initiating those experiments.
- f. Space within ULAM and animal-use rooms must be carefully coordinated to ensure mandated social distancing and space density directives. Animal holding and procedures rooms will be identified with the maximum allowable occupants at a given time. ULAM will post times needed for daily animal husbandry and any veterinary clinical care activities; initially, this will consist of morning vs. afternoon routines. Research interaction with animals must be scheduled to ensure mandated social distancing and space density directives. This may require interlaboratory coordination in rooms housing/used by more than one PI. Sign-up sheets for scheduling shared procedure rooms will be provided to allow for scheduling in advance. The sanitation procedures needed between users will also be provided.
- g. All in-person training classes and workshops offered through the ULAM Training Core have been canceled until further notice. Animal-based research may only be performed by staff that have already completed all in-person training, including laboratory-specific training.

**D. Create a culture and opportunity for continuous improvement of lab and health safety.**

1. Frequent communication from OVPR and EHS regarding lab safety, research re-engagement and important public health updates.
2. EHS will perform walkthroughs to help maintain public health standards so that labs can remain open.

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3. Report lab safety issues, including personnel who are ill or not following safety protocols, via the [U-M compliance hotline website](#). You can also report concerns by calling 866-990-0111 or contacting EHS at 734-647-1143 or emailing [EHS](#).
4. OVPR and Occupational Health Services will track aggregate data on COVID-19 illness in labs with weekly reports.

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