

University of Louisville
Research Laboratories Reopen Plan
May 20, 2020

Guiding Principles for Phased Laboratory Research Reopening:

- Laboratories that were approved by UofL Research Deans as essential research activities (what we are now calling Phase 1) and have continued operations since mid-March are expected to meet the requirements outlined in this plan.
- Phase 2 of the research reopening plan will permit an increase in on-site laboratory-based research activities while promoting the safety of all of our faculty, staff and trainees (e.g. postdocs, residents, fellows and graduate, medical and undergraduate students). In person community-based research is not permitted during Phase 2 of this reopening plan.
- This Plan uses a phased approach with incremental changes over time as permitted by state, local and institutional policy or regulations. See Appendix A: Phases of Lab Research Reopening. This document describes the actions needed to move to Phase 2 of the UofL Research Laboratories Reopen Plan which is targeted to begin May 20, 2020.
- The timeline for when Phase 3 and Phase 4 can begin at UofL is not known at this time, but we will need to achieve the triggers described in Appendix A: Phases of Research Lab Reopening and meet the Governor's Healthy at Work requirements.
- Consistent with the Governor's [Healthy at Work Phase 1 Reopening Plan](#), the approach outlined in this Plan is based on establishing physical distancing requirements for our various research spaces and establishing work protocols.
- **Under no circumstances should safety be sacrificed due to the lack of adequate supplies, such as the type and quantity of PPE or disinfectants.** Plan in advance for PPE supply chain issues when reopening research laboratories.
- It is recommended that computer-based work such as analysis of data, manuscript and grant-writing continues to be done remotely in order to minimize the number of staff in the research buildings at any time.
- Outside visitors/collaborators/contractors/vendors should continue to be limited to essential activity and these individuals must follow the on-site work requirements listed below (including self-screening of all on-site employees for symptoms in alignment with the requirements in Appendix D, universal masking, and physical distancing). The host is responsible for ensuring that on-site work requirements are followed.
- Travel restrictions remain in place, including no international or domestic business travel. Personal travel may come with requirements to self-isolate when returning from certain locations, so be aware of the potential consequences of personal travel when making your plans.
- For the most up to date information, check the [UofL COVID-19 web site](#).

Failure to follow these guidelines will result in revocation of on-site privileges.

On-Site Work Requirements:

- Re-initiation of on-site laboratory based research activities requires approval by your school's Dean or designee of the Research Lab Reopen Plan that you as a Principal Investigator must complete and submit to your Department Chair, Dean/designee and EVPRI for approval. See Appendix B: Research Lab Reopen Plan & Approval Form. Each Dean must submit a list of approved research by building and room for their unit to the EVPRI.
- Re-initiation of on-site laboratory animal based research will follow the RRF [Reopen Research](#).

[Laboratories Vivaria Plan](#) and will require approval of the [RRF Application for Animal Based Research](#).

- Re-initiation of clinical research must follow the [Return-To-Clinical Research Guidelines](#).
- All faculty, trainees, and staff must complete the training on “Guidance to Reduce COVID-19 Exposure in Research Labs” in BioRAFT prior to returning to approved on-site work available at <https://louisville.bioraft.com>.
- When returning to work on campus for the first time after May 20, 2020, or as soon as practical thereafter, all faculty, trainees, and staff are required to complete and submit the employee self-assessment requirement and attestation form found in Appendix D to their supervisor.
- Faculty, trainees, and staff must wear a cloth face covering or surgical ear loop mask in all areas where two or more people may be present.
- At least one “COVID-19 Ambassador” must be identified for every floor in each building that has research activity approved by the school’s Dean/Research Dean and affected Department Chair. The “COVID-19 Ambassador” will be responsible for monitoring the floor’s compliance with this guidance on the required building behaviors to reduce COVID-19 transmission risk. An escalation process will be in place to make sure that approved research activities are compliant with the required building behaviors.
- Faculty, trainees, and staff must follow good public health hygiene, physical distancing and other practices outlined in Appendix C: COVID-19 Transmission Risk Reduction Strategies.
- No children, family members, or pets are permitted in any research building.
- If a faculty, trainee, or staff member tests positive for COVID-19, the respective supervisor must immediately report these results to Campus Health Services (CHS) at 852-6446 and Department of Environmental Health and Safety (DEHS) at 852-6670. CHS and DEHS will work with the supervisor to collect information on potential COVID-19 exposures in the workplace, assess the hazard, perform contact investigations, and determine other actions warranted.
- To the extent practicable, the University will make special accommodations for employees at higher risk for severe illness from COVID-19, based on guidance from the [Centers for Disease Control and Prevention](#). Such requests for COVID-19 accommodations should be made to your immediate supervisor who, if you are faculty, will coordinate with your department chair, dean and Provost Office of Faculty Affairs (eells@louisville.edu), or if you are staff, will coordinate with your department head and Human Resources via the employee relations team at emrelate@louisville.edu.

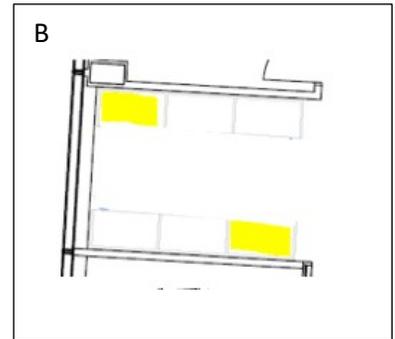
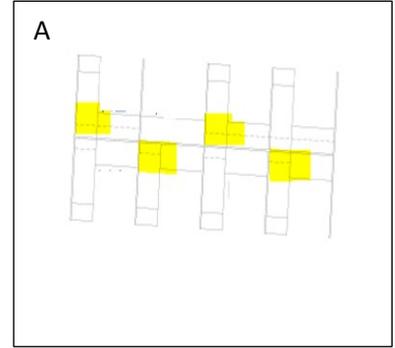
Failure to follow these on-site work requirements will result in revocation of on-site privileges.

On-boarding of new staff/students during this time:

- High school and undergraduate students will not be permitted on-site during the Phase 2 return to work period.
- Graduate students are permitted to work remotely or on-site in accordance with any limitations imposed by their primary academic department, and in compliance with the On-site Work Requirements detailed above.
- Onboarding of newly hired staff who need training that requires close oversight should be deferred if possible to July, but will be permitted if the staff is essential and fully supported by grant funds.

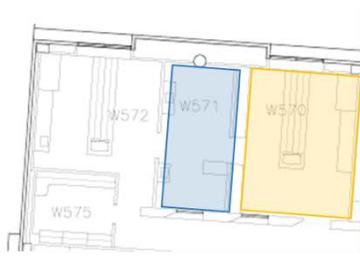
Office/Dry Laboratory Spaces:

- Each PI must complete the DEHS ramp-up checklist in [BioRAFT](#).
- Within office/dry lab areas (shared offices, tech spaces, cubicles, touch down spaces, etc.): 6 ft. of physical distancing must be maintained.
- To assist with physical distancing, the PI will post room occupancy limit signs on the outside of each room (Appendix E: Door Occupancy Signage); the COVID-19 Ambassador for each floor is responsible for posting occupancy signage in common areas. DEHS will provide training, consultation and assistance and is available at 852-6670.
- In most cubicle spaces, staff will only be able to occupy every other cubicle (see Figure A) in order to maintain effective distancing. Be sure to account for physical distancing in all directions (front/back/side) when planning occupancy.
- In clusters of technician touch down spaces, only two individuals will be able to sit in these areas at a time (see Figure B).
- Faculty, trainees, and staff should remain in their assigned work space as much as possible and limit interactions with other research groups unless required for their on-site work.
- All frequently touched objects and surfaces such as workstations, keyboards, telephones, and doorknobs should be disinfected at the end of each shift/work day. Appropriate cleaning supplies will be provided by the PI. Paper towels can be used to open and close doors (e.g. bathrooms, offices, etc.)

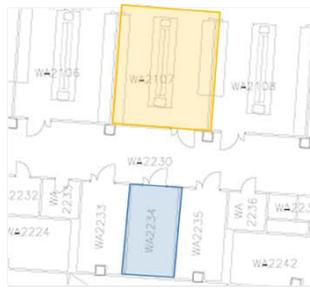


Wet Laboratory Spaces:

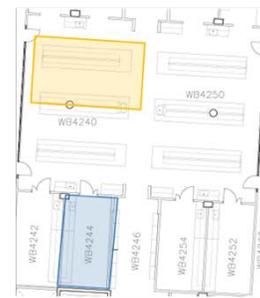
- Each PI must complete the DEHS ramp-up checklist in [BioRAFT](#).
- Within wet laboratory spaces: 6 ft. of physical distancing must be maintained.
- To assist with physical distancing, the PI will post room occupancy limit signs on the outside of each room (Appendix E: Door Occupancy Signage); the COVID-19 Ambassador is responsible for posting occupancy signage in common areas. DEHS will provide training, consultation and assistance and is available at 852-6670.
- There should only be one individual in an equipment alcove, procedure room or tissue culture room at a time. See examples of these spaces in blue below. Consider the need to schedule specific times for staff to be in shared research spaces to avoid multiple people in the room at once.
- There should be no more than two individuals within a laboratory module at a time. See examples of what defines a laboratory module in the diagrams in yellow below.



Wexner



RB2



RB3

Example of a lab module – 2 person max

Example of tissue culture/procedure room – 1 person max

- Use a day/evening shift or alternate day schedule in order to minimize the number of faculty, trainees, and staff on-site at one time while allowing maximum research activity.
- Faculty, trainees, and staff should remain in their assigned lab space as much as possible and limit interactions with other research groups unless required for their on-site work.
- Laboratory benches and work areas (including biosafety cabinets) should continue to be disinfected with an appropriate EPA approved disinfectant for the agent/s in use. Additionally, all frequently touched objects and surfaces such as common equipment, benchtops, workstations, keyboards, telephones, and doorknobs should be disinfected at the end of each shift/work day. Appropriate cleaning supplies will be provided by the PI.

Common Areas (Break Rooms, Conference Rooms, Hallways, Lobbies, Cafeteria, etc.)

- Beginning June 1, small meetings and events of 10 or fewer people may be scheduled. Continue to use teleconference technologies for all meetings to the extent possible.
- Within common areas: 6 ft. of physical distancing must be maintained.
- Maximum capacity limits will be posted on break rooms and conference rooms by the COVID-19 Ambassador for each floor.
- Center Directors/Pis must assign groups to different lunch break times to assist with physical distancing/maximum capacity compliance.
- Custodial Services will clean high-touch surfaces in common areas on a daily basis.
- Faculty, trainees, and staff using these areas should bolster the efforts of the custodial team by cleaning surfaces and frequently touched objects (refrigerator door handles, microwaves, coffee makers, etc.) in these areas after each use.

Some strategies and examples to implement these guidelines outlined above are listed in Appendix C.

Attributions: This Plan was developed based on plans from National University of Singapore, St. Louis University, and University of California San Diego and further expanded by the University of Louisville.

Appendix A: Phases of Research Lab Reopening

	Phase 1 Remote Research Environment – On-site Approved Research ONLY	Phase 2 Research at low density	Phase 3 Medium-density research with PPE and distancing	Phase 4 Return to full research operations
PPE, physical distancing, sanitation	Required	Required	Required	Not required
Remote operation of research that can be conducted remotely	Required	Recommended	Recommended	Not required
DENSITY restriction on on-site research (with PPE, distancing, sanitation)	Only approved research allowed	1 person per 250 sq. ft. 1 person in rooms <250 sq. ft.	1 person per 150 sq. ft. 1 person in rooms <150 sq. ft.	None
Chair/Director/Dean/EVPRI approval for on-site research	Required	Required	Required	Not needed
PI actions needed	Lab plans submitted to Research Dean	Research Lab Reopening plan submitted to Dean/designee and EVPRI	Research Lab Reopening plan submitted to Dean/designee and EVPRI	None
Researcher (not PI) actions needed	Contact and other info submitted to PI; Required training completed	Contact and other info submitted to PI; Required training/attestation completed	Contact and other info submitted to PI; Required training/attestation completed	None
TRIGGER UofL administration (not PI, Chair or Director) will determine when to enter a new phase	Current Phase: “Healthy at Home” order instituted by Governor or by County	To enter from Phase 1: Reopening of businesses; move to “Healthy at Work” Availability of adequate supply of face covering and sanitation products.	To enter from Phase 2: Availability of adequate PPE and sanitation supplies for all labs/Pis. Phase 2 research activities successfully carried out. Physical plant personnel in place to permit broader opening.	To enter from Phase 3: Risk of community transmission of SARS-CoV-2 is low. Campus activities no longer require physical distancing and face coverings.

Appendix B: Research Lab Reopen Plan and Approval Form

Fillable PDF available at - <https://louisville.edu/research/covid-19resources/appendix-b-research-lab-reopen-plan-and-approval-form>

Researchers at UofL may request approval to return to research activities that were closed down in response to COVID-19 when that research can be done safely and with appropriate protection against the spread of the SARS-CoV-2 virus. Investigators will need to submit this plan for resuming research for approval by their school's Dean or Dean's designee and the EVPRI. The Research Laboratories Reopen Plan provides information about protocols, distancing, and protective equipment for the reopening of research laboratories and should serve as the basis of your application.

If your research relies on shared core facilities (e.g., animal, imaging, 'omics, etc.) you will need to have approval of the head of the core facility in order to resume. Additionally, each core facility should submit a plan for approval of resumption of research activities per Appendix B.

Request to Resume Research Activities

Name: _____ Date: _____

Department, College or Center/Institute: _____

Building name and room(s): _____

Names and UofL ID of faculty, trainees, and staff working in the laboratory. PIs need to include themselves:

Describe physical work arrangements for labs, e.g., one person per bay, alternating benches. Identify work shifts such as alternating days or different hours (see Appendix C: COVID-19 Transmission Risk Reduction Strategies for guidance):

Define detailed plans to disinfect laboratories and any work spaces (include frequency and type of disinfectant) (see Appendix C: COVID-19 Transmission Risk Reduction Strategies for guidance):

Responsibilities for on-campus researchers when they are outside the lab space:

List any core facilities (animal facility, imaging, 'omics etc.) you will utilize and attach core director approval(s):

Detail what work must occur in university spaces that is outside your lab (for example core facilities, and animal facilities):

Detail the appropriate PPE required in addition to what would normally be used. Confirm adequate

PPE supply:

Describe your plan to accommodate employees involved in your research who are at higher risk for severe COVID-19 illness. Individuals in these high-risk categories have been identified by the [Centers for Disease Control and Prevention](#).

Approvals:

Principal Investigator _____

Department Chair _____

Dean _____

EVPRI _____

Once approved by your Dean, this plan must be submitted to the EVPRI office. EVPRI@louisville.edu

This plan and guidance was prepared by the **UofL Research Laboratories Reopen Task Force:**

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*With input from Drs. Kevin Gardner and Kevyn Merten

Appendix C: COVID-19 Transmission Risk Reduction Strategies

1. **Maximize Spatial Distancing in Research Labs:** Achieve minimum 6 ft. separation between researchers. Options on how to achieve:

- a. **Establish 6 foot distancing zones in research laboratories.**

Examples:

- i. **Create alternating workspaces:** Where benches within a bay have researchers in close proximity with chair backs facing each other, close down alternate workspace on each bench to create a staggered workspace across the lab.
- ii. **Place markers (colored tape*) on the floor** to identify 6 ft. separation; particularly in common areas where multiple individuals may need to access shared equipment.

*Use only “no-residue” duct tape (<https://www.amazon.com/Residue-Duct-2425-HD-Inches-Yards/dp/B0013AZ4W0>)

- b. **For labs with more than one entrance:** Consider designating one entrance for ingress and one entrance for egress, and establish traffic flow patterns to minimize close proximity to others during entry and exit from the laboratory.

2. **Minimize Time Together in Research Labs:** Stagger or split staffing to reduce overlap presence in labs.

Examples:

- a. **Implement start time staggering** for different teams to start and end work so as to minimize contact time and avoid peak hours of arrival/departure.
- b. **Implement split team arrangements** for laboratory usage, e.g. Team A and Team B to work on alternate days or half day shifts.

3. **Exposure Reduction in Research Labs:** Diligently take appropriate steps to minimize transmission of COVID-19 (person-to-person, person-to-surface and surface-to-person) when working in the laboratory.

- a. **Do not come to campus if you are unwell.**

- i. *Seek medical attention immediately.*

- ii. **Contact your supervisor to arrange for backup coverage of essential laboratory tasks.**

- b. **Use of Masks:** If not working alone, wear an appropriate mask to minimize risk of potential COVID-19 aerosol spread, especially if 6 ft. distancing is not always an option (possible asymptomatic carrier is assumed).

- ii. *Cloth masks should be worn if there are no known airborne hazards involved in the research.*

- iii. N-95, PAPR or other appropriate respirator for work with specific biological

materials requiring this PPE.

- iv. **Half-face or full face respirator** if specific chemical hazards requiring this PPE are involved.

c. Wash Hands Regularly:

- i. **Wash hands with soap and water** before and after laboratory work, and between procedures after potentially contaminated gloves are removed.
- ii. **If soap and water are not readily available:** Use hand sanitizer placed at strategic locations if available. If alcohol based gel hand sanitizer is not available, 70% ethanol (commonly used in labs) may be used with care.
- iii. **Take care to avoid breaking down skin/irritation:** Good hand hygiene requires a careful approach during these challenging times. Using good sense to balance hand hygiene techniques can help to reduce skin irritation and excessive dryness.
 - 1. Avoid overuse of hand sanitizers when soap and water are available.
 - 2. Use barrier protection such as disposable gloves and/or paper towels (if available in ample supply) to handle common touch points that may be sources of contamination to avoid the need to wash hands, particularly when soap and water are not available.
 - 3. Use of an effective skin conditioner when away from the lab may offer some protection against dry skin and irritation.

- d. **Surface Disinfection:** Ensure regular disinfection of all touch points where gloves are not used, such as door handles, faucet handles at lab sinks, light switches, workstations, keyboards and other common equipment.

- e. **Assigned Workspaces:** Assign work areas such as a desk or bench to specific individual staff. Each researcher should use only their assigned work area.

- f. **Assigned Work Tasks:** Change work processes, assigning specific tasks to the same person to restrict people movement across laboratories and to minimize the number of users (and contamination spread potential) of specific equipment, such as confocal microscopy, cell culture, etc.

g. Controlled Access to Common/Core Rooms and Equipment:

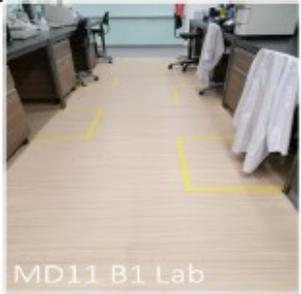
- i. **Determine the maximum occupancy** allowed at a particular time.
- ii. **Implement a booking system** with specific blocked periods for use and include downtime (e.g. 10 min) between blocked periods before the next person can use the equipment to prevent physical encounter of the two persons. This also applies for activities or equipment that are unable to be physically separated for operational reasons.

- h. **Restrict visitors** to essential service providers.

4. Exposure Reduction Outside of Research Labs: Be self-aware and take appropriate steps

to minimize exposures to COVID-19.

- a. Follow current stay at home orders** (local, state, CDC, etc.) **when necessary to travel to and from the laboratory to conduct essential research laboratory functions:**
 - i. Follow the 6 ft. distancing rule.*
 - ii. Wear a cloth mask – consistent with current CDC guidance; especially where 6 ft. distancing from others cannot be assured.**
- b. Use good handwashing techniques** (minimum 20 seconds consistent with CDC guidelines), especially after touching public touch points (elevator buttons, door handles, etc.)
- c. If available, use hand sanitizers placed at strategic locations**, especially after touching items in high traffic common use areas such as elevator and copier buttons, light switches and phones, door handles.
- d. Research Offices:** The size/area of most offices in research buildings do not readily accommodate 6 ft. distancing, and should be reserved for only one person.

Workstation labels and Floor Markings	
 <p>Labels for out-of-bound bench area and chair</p>	 <p>Floor labels where users should work</p>
 <p>MD11 B1 Lab</p> <p>Floor labels for chairs / standing work</p>	 <p>MD11 B1 Lab Chemical Storage</p> <p>Floor labels for waiting when another user is at the shelf</p>
 <p>Floor label indicating that others should not enter if someone is inside</p>	 <p>Floor labels to indicate separate work areas</p>
 <p>Floor label to indicate working positions</p>	 <p>Floor labels to indicate waiting area</p>

*Use only “no-residue” duct tape (<https://www.amazon.com/Residue-Duct-2425-HD-Inches-Yards/dp/B0013AZ4W0>)

Appendix D: Returning to Campus: Employee Self-Assessment Requirements and Attestation

The University is committed to reopening our campuses in a way that promotes the health and safety of our employees and students. This includes, in part, the enforcement of physical distancing, wearing of masks, access to hand sanitizer and encouraging hand washing. The University cannot be successful, however, without the commitment of its employees to do their part to similarly promote the health and safety of our Cardinal family. We all have a personal responsibility in fulfilling this commitment.

When returning to work on campus for the first time, or as soon as practical thereafter, it is my responsibility to complete this Attestation of Self-Assessment Requirements and submit this confirmation to my immediate supervisor.

I understand and affirm that PRIOR to reporting to work each day, I will conduct a daily health assessment, which consists of asking myself 2 simple questions:

Question 1: Have I had any of the following symptoms since my last day at work?

Fever of 100.4 or higher

Cough

Shortness of Breath

Sore Throat

Muscle Aches

Chills

Gastrointestinal symptoms (i.e. nausea, diarrhea, vomiting, etc., unrelated to an underlying medical condition or pregnancy)

Question 2: Have I been in close contact with anyone who has been diagnosed with COVID-19?

If I answer yes to EITHER of these two questions, I will:

- 1) Stay at home
- 2) Immediately notify my supervisor I will not be reporting to work because I answered yes to questions 1, 2 or both. (Please do not share specific symptom information with your supervisor)
- 3) Call Campus Health Services at 852-6446 and notify them I am a UofL employee who has answered yes to questions 1, 2 or both so I can be scheduled for an appointment.
- 4) When I am released to return to work, I will provide my supervisor with a return to work notice from my medical healthcare provider. (This document should not include a diagnosis or confidential health information.) I am not permitted to return to work without an appropriate return to work notice.

Campus Health Services will provide COVID-19 testing, if deemed necessary by a Campus Health Services medical professional, at no cost to the employee.

By returning to campus for work, I acknowledge that I understand my requirements to perform a daily self-assessment and that I will, in good faith, complete this health assessment prior to coming to work each day.

The University retains the right to conduct temperature screenings of employees at any time or send home employees who exhibit symptoms affiliated with COVID-19.

I have read and understand the above information. I am committed to doing my part in promoting the health and safety of my Cardinal family.

Signature¹

Printed Name

Date

¹ If you are completing the form electronically, you may sign by using “/typed name/”

Post a copy of this document outside the appropriate room

Appendix E: Examples of Door Occupancy Signage

Editable Word document available at -

<https://louisville.edu/research/covid19resources/template-room-occupancy-signage>

<u>Building Specific Areas/Restrictions</u>	<u>XXX Lab</u>
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Room Number: XXX

Common Name: Lab

Responsible Individual: XXX

Contact Number: XXX-XXX-XXXX

Occupancy Limit

③

Maximum Number of Occupants: Three – no more than two persons at fume hoods.

Proposed Use: Synthesis and characterization of metal complexes.

Room specific restrictions:

Graduate students may only work at pre-authorized times.

Requests for work times can be made using the Shifts app on Teams.

Students need to use the Shifts app in Teams on their mobile device to sign in and sign out.

A mask is required if anyone else is in the room.

Occupants should enter and exit through the doors identified as “entrance” and “exit” only.

Individuals should not work alone. There should be at least one other person on the hallway.

Work only in designated areas. Keep your area clean and your samples clearly labeled.

Before beginning work, disinfect your workstation. Disinfect again after use.

Disinfect common equipment (balances, rotovap, microscopes, electronics, solvent system, etc.) before and after use.

Disinfect door handles and light switches at end of day. Lock the door when leaving.

Approvals:

Department Chair _____

Post a copy of this document outside the appropriate room

Building Specific Areas/Restrictions XXX Postdoc Offices

Room Number: XXX

Common Name: Postdoc Offices

Responsible Individual: XXX

Contact Number: XXX-XXX-XXXX

Occupancy Limit

①

Maximum Number of Occupants: One

Proposed Use: Analysis of data, breakroom, computations, office work

Room specific restrictions:

Graduate students may only work at pre-authorized times.

Requests for work times can be made using the Shifts app on Teams.

Students need to use the Shifts app in Teams on their mobile device to sign in and sign out.

A mask is required when entering and leaving the room.

Occupants should enter and exit through hallway door only; not through the lab.

Work only in your designated areas. Keep your area clean.

Before beginning work, disinfect your workstation. Disinfect again after use.

Disinfect door handles and light switches at end of day. Lock the door when leaving.

Approvals:

Department Chair _____

Post a copy of this document outside the appropriate room

Building Specific Areas/Restrictions

Main Lobby

Room Number: N/A

Common Name: Main Lobby

Responsible Individual: XXX

Contact Number: XXX-XXX-XXXX

Occupancy Limit

④

Maximum Number of Occupants: Four, maintain at least 6 ft. distancing

Proposed Use: Break area and lunch room. Individuals should use only specially marked tables/seating areas. Disinfect space using Lysol or other disinfectant spray before beginning work and after completion of work.

If microwave oven is used, wipe down interior and exterior with Lysol or other disinfectant spray before and after use.

Plans to disinfect work spaces: Disinfect table/chairs using Lysol or other disinfectant spray before beginning work and after completion of work.

Approvals:

Department Chair _____