



Cornell University

Meinig School of Biomedical Engineering

BME Research Reactivation

General Principles

- Any work that does not require campus facilities should continue to be performed remotely.
- For work that does need to be performed on campus, the goal is to stay safe by taking precautions and limiting the number of people on campus.
- No one will be required to return to campus if it is unsafe for them to do so. Any coercion of students or staff should be reported to the DGS, Director, or through University reporting channels, such as the [Ethics Point Hotline](#).
- Anyone who does not feel well should not come to campus.
 - Everyone must follow EHS Employee Health Protection Procedure: <https://ehs.cornell.edu/campus-health-safety/occupational-health/covid-19/employee-health-protection-procedure>
- Face masks must be worn in campus buildings and may only be removed if working in a room alone but should be kept close in case someone else enters the space.
 - The mask must cover your nose and mouth
 - Cloth masks are appropriate
 - N95 masks with valves are not allowed
 - N95 masks are considered critical healthcare supplies and should only be used if required as PPE for your research activity and users must enroll in Cornell's respiratory protection program: <https://ehs.cornell.edu/campus-health-safety/occupational-health/respiratory-protection>
 - <https://ehs.cornell.edu/campus-health-safety/occupational-health/covid-19/employee-and-supervisor-guidance-face-coverings>
- Parking enforcement is suspended through June 30, 2020, except for reserved spaces and accessible spaces.

Building Considerations

- Unnecessary traffic in the Weill Hall basement and loading dock area must be minimized.
 - To access Weill Hall floors 1-4 you must enter through the first floor, not the basement.
- No eating, only drinking, is allowed in the buildings. If you need to eat, please do so outside or in your personal vehicle.
- You must follow the signage in the building related to movement and occupancy.
 - Up and down stairwells will be indicated where practical
 - Elevator occupancy is limited to 1 person
 - Restrooms will be treated as single occupancy
 - Break rooms are not to be used as lingering in the building is not permitted
- In general office use should be avoided.
 - Working in offices is not allowed, except for brief (<10 min.) periods of downtime during lab work.
 - If needed, coats and bags can be stored in offices.

Research Conditions

- All BME research fits into the NYS Health and Disease category approved for Phase I restart.
- The goal is to cultivate a culture of safety in all research groups.
- Your campus-based effort, in all facilities that your group uses, must be at 33% of the pre-shutdown effort or $n = 2$, whichever is larger. For a group with 7 total (graduate students, postdocs and/or technicians), $n = 2$ individuals can be on campus at any given time. If one individual is in the animal facility, then only a single person can be in the lab.
 - Any member of your laboratory who has been outside the Ithaca area (approximately 50-mile radius), a zone of relatively low viral incidence, must stay off campus and self-quarantine for 14 days. This rule also applies if a roommate or other co-located individual with whom extended contact occurs has been outside the local area.
 - All personnel must complete the EHS 2019 *Return to Work Health and Safety Training for COVID-19*. Register [here](#).
 - Prior to working on campus, all group members who intend to work in campus facilities must complete certifications attesting to their understanding of and abiding by the School, College and Cornell regulations.
- Each PI must demonstrate that a safe plan exists for their laboratory to function.
 - PIs are responsible for ensuring compliance and must certify that everyone in their group will abide by the School, College and Cornell regulations.
 - Spaces smaller than 500 sq. ft. can have only a single individual
 - Larger spaces must have a plan for separate workspaces to maintain 6' physical separation while working and to facilitate surface disinfection.
 - In wet labs, no more than a single individual can be working in a bench bay.
 - Laboratory workflow signage should be used to identify and separate workspaces and label areas for particular activities (see EHS guidance).
 - In the event of non-compliance, the entire lab will be closed down and cannot reopen until the non-compliance issue is addressed and revised plans have been approved.
- Protocols and equipment for safety must exist and be available to all lab members.
 - PIs must provide PPE for their lab members.
 - Gloves, surgical masks, etc., are available on e-SHOP through the Cornell Central Inventory Order Form for Critical Supplies.
 - Clean in and clean out: disinfection should occur upon arrival and departure from the lab
 - Disinfectant, paper towels, etc., are available on e-SHOP
 - Follow EHS Guidelines for laboratory use
 - Attached “BME Guidelines for Key Research Personnel” provides example best practices
 - Buddy systems must be in place for safety
 - For low/medium risk virtual buddies are recommended; any communication app is acceptable including Twitch, Slack, FaceTime, Rave Guardian, Zoom, etc.
 - For high risk activities, physical buddies must be present within the lab space
 - For off-hours work, high risk activities should be minimized; if unavoidable, plans must address the need for increased safety
- Lab calendars should be coordinated among co-located labs.
 - Arrival and departure procedures should be coordinated between neighboring facilities to avoid increased density in common areas (hallway, atria, stairwells)

- PIs must keep a daily log of all laboratory member activity using campus facilities, including time and location.
 - Lab members must “check in” upon arrival on campus and “check out” upon departure.
 - In the case of infection, all individuals with whom prolonged contact occurred must be easily identifiable.
- Use of shared facilities must be coordinated with facility managers.
 - Lab members in CARE or BRC facilities count towards the overall 1/3 activity maximum.
- All lab members must review and agree to the reactivation plans prior to submission

Example Best Practices: BME Guidelines for Key Research Personnel

These ground rules are for your protection and safety, and that of other key research personnel during this time of reduced occupancy of campus facilities. Your safety includes not only yourself but also other essential personnel in Cornell facilities, all other personnel implicated by your activities on campus, and members of our community, including your family and housemates. Because building services provided by Building Care and EH&S are at a minimum level, we must assume that surfaces and spaces within our buildings could be contaminated. These guidelines are to protect you from potential infection, and to protect others from potential infection by you as an asymptomatic carrier.

1. Under no circumstance are you to come to campus if you do not feel well or are experiencing any signs of illness, either identified COVID-19 or other symptoms of illness.
2. To minimize interactions and maintain appropriate physical separation while on campus, calendars have been created for building locations of key BME research activity (zones). You must be listed on a zone-specific calendar for the dates and times you will be on campus. Keep in mind that working alone will take more time and involve significant extra cleaning. Please schedule extra time and leave a buffer to avoid crossing paths with other researchers coming or leaving research facilities.
3. Personal safety is a concern on an empty campus. You can use the [Rave Guardian app](#) to monitor your presence on campus and as a virtual escort to and from your transportation. More information on Guardian app function is available on the [Cornell Police](#) website.
4. Please minimize your time and locations on campus. You should perform only the essential research activities that require your presence on campus. Non-essential tasks must not be performed, nor should activities that can be performed remotely.
5. Working in the lab alone is not ideal and unsafe for certain procedures (see EHS guidance). For tasks that can be performed alone, notify others in your group when you arrive and leave campus by text or other means. For activities that require working with another person, you must both wear PPE as indicated, particularly if 6' minimum distance cannot be maintained.
6. All key research personnel engaged in research activities are required to practice BSL2-level cleaning practices upon arrival and departure and while working:
 - a. Come to lab, wash your hands, put on gloves, mask and other PPE as appropriate.
 - b. Think about where you will go in the space, entering and leaving and doing your experiment. Using 70%+ ethanol and lots of paper towels, go through all those spaces and clean all touch surfaces. Spray ethanol, wipe to thoroughly cover the surface without drying it, then leave the surface for several minutes and wipe off. Surfaces may include door handles, lab benches where you do your work, keyboards or buttons or knobs on instruments, and the lab bench spaces adjacent to where you will work. Be overly cautious and clean more than you think is reasonable.
 - c. Dispose of all PPE. Wash hands again. Don fresh PPE. Do experimental work.
 - d. Go back and clean everything you cleaned the first time around again, and be just as thorough.
 - e. Dispose of PPE. Wash hands again. Use a fresh glove to open lab doors, etc. until you are in the lobby. Remove and dispose of gloves before leaving building. Wash hands when you arrive home.
7. If you are uncomfortable at any time, you are under no pressure to continue. If you have concerns about the tasks you are asked to perform, please contact Jan Lammerding (DGS, jan.lammerding@cornell.edu), Dawn Esposito (administrative manager, dme9@cornell.edu), or Marjolein van der Meulen (Director, mcv3@cornell.edu).



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COE Research Reactivation Form: BME Guidelines

The BME department will review faculty research reactivation proposals using the web-based form the College of Engineering has provided, but with the specific instructions below for our faculty. This document provides a guide to the content and questions on the College form and provides additional guidance on the information that is needed.

The College form is [here](#).

Page One: The first page of the form asks the PI to attest to a series of statements. Many of these attestations are about compliance among members of your research group, so please share these statements with your lab.

The statements are restated, verbatim, in a list at the end of this document. You must attest to all these statements before moving to the next page.

Page Two: The second page of the form has a series of questions with response fields. Please refer to the guidance below when filling out the form.

1. Indicate department. Self-explanatory.
2. List projects. All research in BME meets the New York State criteria for reactivation because it is health or disease related. For this question, you should briefly describe the scholarly work that will be conducted on campus and explain what on-campus resources are needed for this work. Identify sources of funding.
3. List room numbers and buildings. Self-explanatory. The BME department is requesting significant additional information on the arrangement of workspaces (part of question 12, below).
4. List labs and facilities outside your control that will be needed. Self-explanatory. Additional information regarding the coordination with these other labs and facilities should be provided in the answer to question 10, below.
5. Personnel. List all personnel who would come to campus. Additional questions below this list address:
 - a. Readiness of first-year MS or PhD students working alone.
 - b. The inclusion of MEng and/or undergraduate personnel in reactivation (this is discouraged, but exceptions will be considered).
 - c. Whether any personnel with authorization to use your spaces are not part of your research group.

A specific calculation of the number of allowed personnel on campus at a time, and any additional details about personnel (for example about forming teams for difficult or dangerous work) should be included as part of question 12, below.
6. Scheduling. Describe how workspaces will be scheduled to keep maximum facility occupancy below the required level, and how scheduling will be coordinated among faculty using shared or adjacent on-campus facilities (e.g., same wing or floor of a building).
7. Personnel safety. Describe the personal protective equipment researchers will wear and verify availability of sufficient PPE. Also describe the buddy system that will be used to reduce the risks associated with working alone.
8. Disinfection protocols. Describe the disinfection protocol researchers will use when entering their workspace before beginning work, after completing work, and when exiting the workspace.

9. Physical deliveries. The Weill Hall loading dock remains operational, so it is fine to state you anticipate deliveries to Weill Hall.
10. Special facilities. Identify any on-campus resources outside the identified workspaces that are required for the work (e.g., use of core facilities or collaborator's laboratories). Use of such resources must be coordinated with the directors of those facilities and must adhere to the reactivation procedures for each facility.
11. Shut down plan. Describe plans to shut down laboratory operations again, if there were an increase in cases and such a shutdown was required.
12. Variances. Many specific BME-required items should be entered here, as follows:
 - a. Workspace layout. Identify the specific campus facilities where the work will be done, describing how workspaces will be physically separated to maintain physical distancing requirements. This description should be room-by-room. Rooms under 500 ft² cannot have more than one occupant. Separate workspaces must be identified in multi-occupant rooms.
 - b. Personnel. Provide a calculation of the number of research reactivation "slots" based on 33% of pre-COVID-19 research group size or $n = 2$, do not include undergraduates or MEng students. Provide any additional information on personnel arrangements, such as identifying individuals who will work together as a team.
 - c. Additional. Any additional steps your lab is taking to reduce risk for spreading the virus.

Please upload any floorplans or other documents that will facilitate review of your plan to ensure that only identified individuals working in designated workspaces at specified times for approved tasks come to campus.

Attestations PIs must make on *Page One* of the College of Engineering research reactivation form.

I certify that I have read and agree to the policy listed below.

1. You have studied thoroughly the [university report on Research Re-activation](#) together with your group personnel who are involved in Phase I of Research Re-activation.
2. All work that can be done remotely should continue to be done remotely. This includes analysis of data taken in a reopened lab and computational work.
3. The maximum occupancy at any time in all your labs combined is 2 or 1/3 of your group size (rounded down), the higher of the two.
4. Only those faculty, staff and students who are already in Ithaca and Geneva (or in the direct vicinity of their field research) will be able to return to their labs upon approval. Researchers who have not been residing in the local community, or have been residing in the local community but have met a visitor from outside the local community, or visited a place with confirmed/suspected COVID-19 patients, must quarantine off campus for 14 days in the local area prior to coming to campus.
5. You are responsible for ensuring personnel have PPE and practice the necessary disinfection protocols to reduce the risk of spreading the virus.
6. All personnel under your supervision returning to campus must complete [EHS Return To Work Health and Safety Training for COVID-19](#) before they arrive, and must adhere to the [University's Employee Health Protection Procedures](#), including but not limited to monitoring their temperature and any symptoms daily. All personnel will check daily the [Tompkins County Health COVID-19 website](#) for updated COVID-19 cases.
7. Arrangements have been made for labs and facilities outside of your control with the lab directors for access by you and personnel under your supervision.
8. All occupants under your supervision of the building follow the posted guidelines for common spaces such as atria, kitchens, bathrooms, etc. All student spaces (student offices, bullpens, lounges) remain unoccupied during phase one except for special use such as printing or drop-off of personal belongings.
9. All personnel will eat outside buildings on campus, e.g. in a car or outdoors, if not allowed inside.
10. All occupants of labs and facilities will practice social distancing, disinfection protocols and wear face coverings at all times.
11. A buddy system, virtual or physical, is implemented for all personnel under your supervision, whenever conducting research on campus.
12. You are responsible to maintain a daily log of research personnel, locations, schedules and the practiced buddy system.
13. You are aware that anyone may report non-compliance on campus to the [Ethics Point Hotline](#) anonymously.
14. You are aware that any personnel may report concerns when feeling coerced conducting research on campus to the [Ethics Point Hotline](#) anonymously.
15. Department chairs and facility directors, as well as the deans and VPR, will have the authority to rescind approvals to reactivate individual faculty programs if the on-campus activity associated with that program does not adhere to the limits and procedures in the approved reactivation protocol or if

any individuals are found to have been coerced into returning to campus when it is not safe for them to do so.