



WPI

WORCESTER POLYTECHNIC INSTITUTE
RESEARCH LAB REOPENING GUIDANCE
July 2020

Last Updated: July 29, 2020

Executive Summary

Worcester Polytechnic Institute (WPI) is resuming on-campus research. This process will be phased, deliberate, and guided by local, state, and federal guidance and orders. You can expect the resumption of on-campus research to be considerably slower than the process we took to ramp down research in March.

WPI's Research Lab Reopening Guidance lays out critical information on WPI's evolving approach to resuming on-campus research, the responsibilities of all members of our research community, and the principles guiding our efforts as we resume the important research that is a hallmark of WPI.

Our overarching goal is to protect and support our community, both by mitigating the risk and extent of viral infections and by finding safe and creative ways to restart research on campus. We are asking for your help and your patience in this reopening effort.

Because the resumption of on-campus research will require careful orchestration of people, buildings and labs to allow for social distancing, all principal investigators (PIs) and center directors are being asked to develop detailed written plans for their labs, as outlined in this guidance. This information will allow the university to manage the resumption of on-campus labs in phases.

When we return to labs on campus, our models for research and collaboration will look very different from how they looked in the past. The Research Lab Reopening Guidance lays out standards and factors based on the very real possibility that we may need to ramp down or shut down research again at any point due to COVID-19 concerns.

Thank you for your thoughtful attention and coordination as we begin this reopening process. We are committed to supporting you through this unprecedented challenge. Please do not hesitate to contact the Office of the Vice Provost for Research if you have any questions or concerns.

Established Timelines

The university continues to manage the resumption of on-campus labs in phases, based on access priorities and estimated timelines presented below:

1. Critical research – May 26 (completed)
 - Research where a delay would have significant financial impacts.
 - Research where a delay would catastrophically disrupt the project or protocol.
2. Time-sensitive existing research – June 8 (completed)
 - Research where further pause or deferral would lead to significant delay or loss of research results.
 - Research where further deferral would lead to inability of students to graduate.
3. Critical new on-campus research – June 22 (completed)

- New research where a delay would have critical impact on the commitments to sponsors, on the faculty's research program, and on the ability of students to graduate.
4. Expansion of on-campus research – August (estimated)
- All research that must be done in-person is permitted on-campus.

Remote Activity

Research and lab activities that can be conducted remotely at this time should continue to be conducted remotely. Research meetings must continue to be held virtually.

Because the resumption of on-campus research requires the careful orchestration of people, all principal investigators (PIs) and center directors are being asked to develop detailed written plans for their labs. Please see the information below.

Human Subjects Research Update

Human subjects research that requires in-person interaction will be allowed pursuant to the process detailed below under "Additional Guidelines for Human Subjects Research."

External Research Partner Update

External research partners, including collaborating researchers and corporate partners, will be allowed pursuant to the process detailed under "Additional Guidelines for Research Partner Access to Campus Laboratories and Research Facilities."

Visitor Update

Visitor access to core facilities at WPI is limited at this time, except for human subjects (see above). Should you need request access for a visitor at WPI, please discuss this with the Vice Provost for Research.

A. Procedure for Requesting On-Campus Lab Access

All principal investigators (PIs) and center directors who manage on-campus labs, facilities, and centers must take the following steps to request access to their labs on-campus:

1. Carefully review this Research Lab Reopening Guidance, the [Return to Campus Guidance](#), and information on the [We Are WPI](#) website.
2. Draft a Laboratory Reopening and Social Distancing Plan that complies with the [Laboratories Checklist](#) issued by Massachusetts. Use the template available [here](#) (WPI login required). Laboratory Reopening and Social Distancing Plans are required even for labs that have continued on-campus operations since March 2020.

3. Draft a Research Personnel List. Use the template available [here](#) (WPI login required)
4. Submit your plan and personnel list for approval by uploading via the Research Lab Reopening Webform and completing the additional questions therein. The Research Lab Reopening Webform is available [here](#) (WPI login required).
5. Complete COVID-19 training with EHS prior to returning to campus and sign the acknowledgement. This training must be completed by all PIs, center directors, and the researchers in their labs. The training consists of two modules: [Module 1](#) and [Module 2](#) (WPI login and VPN required).

B. Drafting Laboratory Reopening and Social Distancing Plans & Research Personnel Lists

Please review this Research Lab Reopening Guidance, the [Return to Campus Guidance](#), and the [Laboratories Checklist](#) issued by Massachusetts when you draft your Laboratory Reopening and Social Distancing Plan and your Research Personnel List.

We recognize that our researchers operate in a wide variety of contexts and that PIs and center directors will need to use their judgment to customize their Laboratory Reopening and Social Distancing Plans and Research Personnel Lists. For example, some researchers may already work in isolation, while others may operate in tight lab spaces that will require strict social distancing practices and alternating work schedules. Please customize your plan to the best of your ability, discuss it with your team, and draw upon your professional network by consulting colleagues in your department, your mentors, or those who do similar research for input on your plan.

If you need to update your Laboratory Reopening and Social Distancing Plan or your Research Personnel List at any point after it has been approved, you will need to resubmit these documents for approval.

We acknowledge that some questions remain unanswered. WPI's Research Lab Reopening Guidance, [Return to Campus Guidance](#), and [We Are WPI](#) website will be evaluated and updated regularly to ensure compliance with all federal, state, and local guidelines and best practices.

C. Approval Process

The Office of the Vice Provost for Research (VPR) will share each Laboratory Reopening and Social Distancing Plan and Research Personnel List with the relevant department head (and center director, if applicable), the Director of EHS, and the Research Approval Committee.

The Research Approval Committee is comprised of the VPR, the Associate Dean of Graduate Studies, the Associate Dean of Undergraduate Studies, and the Chair of the Committee on Graduate Studies & Research (CGSR).

The Research Approval Committee will evaluate each plan and will consider: the input from the relevant department head (and center director, if applicable) and the Director of EHS; the requirements WPI's Research Lab Reopening Guidance and the Return to Campus Guidance; and the access priorities listed above. The Research Approval Committee will make a recommendation to approve or deny the plan and submit this recommendation to the leadership of WPI's Coronavirus Emergency Response Team (CERT). The CERT leadership will officially approve or deny plans on a rolling basis.

If a plan is approved, the VPR will communicate this outcome to the PI or center director. PIs and center directors will be responsible for sharing their approved plans with their researchers prior to returning to labs on-campus. If a plan is denied, the VPR will communicate next steps to the PI or center director, which may include revising and resubmitting the plan or delaying the return to the lab on-campus until a future date.

Please remember that lack of compliance with the guidelines on [We Are WPI](#), WPI's [Return to Campus Guidance](#), Research Lab Reopening Guidance, and the lab's specific Laboratory Reopening and Social Distancing Plan will result in the revocation of lab access privileges.

Overview

We need your help in WPI's research lab reopening effort. Currently, much of WPI research is being conducted remotely. We are now asking PIs and center directors to develop a Laboratory Reopening and Social Distancing Plan to facilitate a phased return to their labs. During the phased return to on-campus research, we expect that there will be minimal research conducted in on-campus labs. Access to campus will continue to be limited and coordinated based on the access priorities and estimated timeline listed above.

Everyone has a role to play. Our PIs and center directors are in the best position to craft a lab-specific Laboratory Reopening and Social Distancing Plans and Research Personnel Lists for research resumption. Please use your judgment to customize these documents to the specific situation in your lab. Department heads and the Office of Environmental Health & Safety are in the best position to assess these proposed plans and to iterate with PIs and center directors on implementation upon their return to on-campus labs. Approval by the CERT leadership upon the recommendation of the Research Approval Committee will ensure the common implementation across the WPI research enterprise and facilitate coordination between multiple departments using the same building.

This Research Lab Reopening Guidance is evolving. Due to the need to have a complete understanding of all the research taking place on campus at this time, all PIs and center directors are required to request on-campus lab access to continue

working in the labs on campus (if previously approved to do so) or to reopen their labs on campus in accordance with the access priorities above. We expect that this guidance will evolve over time and will be updated as more information becomes available about COVID-19 and best practices for labs and business. Updates will be posted on the Guidance for Research [webpage](#).

I. Guiding Principles

1. WPI supports and protects our faculty and students' research enterprises.
2. WPI prioritizes the health and safety of our researchers.
3. WPI works to ensure that social distancing and practices to reduce transmission of infection are implemented in labs and shared spaces.
4. WPI works to ensure that there is open communication and that WPI responds to any concerns appropriately, such as compliance with this guidance and in response to positive COVID-19 cases.
5. WPI must be nimble and prepared to ramp down or shut down on-campus research on short notice.

III. Research Lab Reopening Plan Guidance

A. Reduce Density of People in Lab and Shared Facilities

1. Prioritize on-campus research based on the access priorities below and phase-in the return to labs across campus.
2. Limit laboratory access to essential research personnel and activities. Visitors are not permitted (except for human subjects – see below). Only approved, [critical vendors](#) will be allowed on campus and in the labs. Deliveries should be completed in designated areas. PIs and center directors must keep a daily log (name, contact information) of all persons who have accessed the lab, including vendors.
3. Reduce the density of researchers in the lab.
 - For example, create sub-teams with distinct schedules (e.g., Sub-team A works M-W-F, or mornings) to reduce density in the lab and limit cross-team contact. Some possible options for scheduling sub-teams are available [here](#) (WPI login required).
4. Ensure separation of 6 feet or more between researchers in the lab unless this distance is unsafe due to the nature of the work or the configuration of the space.
 - Close or reconfigure common and high density areas to allow social distancing.
 - Designate assigned working areas. Redesign work stations to ensure physical distancing (e.g., separate tables, use distance markers to assure spacing).
 - Use physical partitions to separate workstations that cannot be spaced out. Physical partitions must be at least 6 feet in height.
 - All research and activities that can be done remotely should continue to be done remotely, such as office work, data analysis, drafting papers and

presentations, notebook recordings, and meetings.

5. Work with the research team to determine research priorities and adjust expectations and research plans in light of reduced laboratory time.
6. Consider having teams share responsibilities, so each person can easily cover and share other teammates' responsibilities as needed.
7. Continue to conduct virtual meetings for any group discussions, even if you are in the same building.
8. Use visual reminders (such as tape on the floor and signage) of proper social distancing around shared equipment, fume hoods, biosafety cabinets, etc., as well as hallways and pathways.
9. Develop schedules for access to shared core instrumentation facilities and shared spaces.
10. Remember that shared common spaces, such as kitchenettes, breakrooms, and conference rooms, have been closed or reconfigured to allow for 6 feet of physical distancing.

B. Implement Best Practices to Reduce Transmission of Infection

As we reopen labs on the campus, we must strive to mitigate the spread of any infection by implementing the following best practices:

1. **All WPI employees, including researchers, must follow the Return to Campus Guidance and other guidance on [We Are WPI](#) at all times**, including training, daily self-check of symptoms, staying home when sick, wearing cloth face coverings, etc.
2. **Follow all building and lab-specific signage**, including elevator limits, one-way hallways and stair wells, restroom limits, etc.
3. **Avoid any direct contact between researchers in the laboratory and others on campus, if possible.** Researchers must remain in their assigned lab or floor, when possible, to limit movement throughout the building and to minimize contact with others on campus. Researchers should also operate as if lab-mates are potentially infectious.
4. **Always wear a cloth face covering (or the appropriate PPE required by the research) when in the lab.**
 - Cloth face coverings are not PPE and may not be used to substitute for masks or respirators when PPE is required by the research.
 - Each lab is encouraged to purchase masks and other PPE sufficient to carry out their research-related activities in the short term. Please contact your department head or EHS regarding the purchase of PPE, as it is in limited supply.
 - Cloth face coverings are not required when wearing them would introduce a

safety hazard or where an individual is unable to wear a cloth face covering due to a medical condition or disability. In such cases, individuals must practice social distancing to the greatest degree possible.

5. **Wash your hands frequently.** Researchers are strongly encouraged to perform an extended and thorough soap-and-water hand washing (or use of alcohol-based hand sanitizers with at least 60% alcohol) upon entry into and prior to exiting from the lab, and on a regular basis during lab occupancy.
6. **Clean and disinfect your own labs at least daily and more frequently if feasible.** Review EHS guidance on cleaning and disinfecting laboratories [here](#).
 - WPI has provided cleaning supplies for each lab in centralized locations, however labs will be required to provide and source their own cleaning supplies and 70% alcohol solutions for cleaning and disinfecting sensitive equipment, as appropriate. Please contact your department head or EHS regarding the purchase of cleaning supplies, as they are in limited supply.
 - Each lab must maintain a cleaning log that includes the date, time, and scope of cleaning.
 - Facilities will continue to clean and disinfect the common areas of the building, including restrooms, at least daily and more frequently as needed, in accordance with the Return to Campus Guidance.
 - If there is a positive COVID-19 case in a lab, WPI will shut down the lab and other areas of campus (as needed) and engage the EHS HAZMAT team to properly deep clean and disinfect areas of suspected infection with COVID-19 in accordance with current [CDC guidance](#).
7. **Establish a schedule and clean and disinfect shared surfaces, shared instruments, heavy transit areas, and high-touch surfaces at least daily and more frequently if feasible.**
 - Implement wipe-downs of all shared surfaces, shared instruments, and high-touch surfaces after each use, and again at the end of a team shift.
 - These include instruments, workstations, benchtops, doors and equipment handles, tables, screens, keyboards, cabinet handles, hoods, etc., to reduce the likelihood of person-surface-person transmission.
 - For shared spaces, identify who is responsible for cleaning the space.
 - For shared equipment, identify how it can be cleaned and who is responsible.
 - Maintain a cleaning log that includes the date, time, and scope of cleaning.
8. **Clean safety glasses and non-disposable gloves daily with warm soapy water.**
 - Do not share safety glasses or gloves.
 - Wearing gloves does not reduce the surface-hand-face transmission mechanism. When wearing gloves to protect from hazardous materials (radioactivity, BSL2 materials such as human cells or genetic materials, chemicals), dispose or set aside these gloves before contacting general use surfaces such as doors, freezers, or general laboratory equipment.
9. **Do not eat in the lab.** No food or drink is permitted in the labs at any time.
10. **Improve ventilation for enclosed spaces where possible** by using

mechanical ventilation and hoods in labs.

C. Prioritize Communication & Safety

1. Once approved, PIs and center directors will distribute their Laboratory Reopening and Social Distancing Plan and proposed work schedule to the research team.
2. Researchers should consider this Research Lab Reopening Guidance, the [Return to Campus Guidance](#), and all other WPI guidance to be an extension of the plans and supervisors should ensure that all lab members understand what is expected.
3. WPI encourages researchers who are particularly vulnerable to COVID-19 to work remotely or arrange for an alternate work assignment. If you have questions about accommodations, please contact [Talent & Inclusion](#).
4. All researchers must complete COVID-19 training for researchers with EHS prior to returning to campus and sign the acknowledgement. This training for researchers covers COVID-19 hygiene and other safety measures specific to working in labs. The training consists of two modules: [Module 1](#) and [Module 2](#) (WPI login and VPN required). The text of the acknowledgment is available [here](#).
5. WPI, PIs, and center directors will post visible signage throughout the building to remind researchers of health information and safety measures and protocols.
6. ***Lack of compliance with this guidance and the lab-specific plan will result in revocation of laboratory access privileges.***

D. Be Prepared for Illness

Anticipate the possibility of illness among researchers. PIs and center directors must ensure that all researchers who return to labs on campus are aware of their reporting obligations in the event they test positive for COVID-19 or come into close contact with someone who has tested positive. Please follow the guidelines in the [Return to Campus Guidance](#). PIs and center directors should track the illness and absence rate for their staff and identify any trends for the VPR.

E. Be Prepared to Shut Down or Ramp Down

Be prepared to shut down or rapidly ramp down research in on-campus labs on short notice. Given the possibility that research will have to be scaled back again with little notice, we encourage you to ramp up research that can be ramped down quickly and with relatively little cost and complexity.

F. Additional Guidelines for Human Subjects Research

Any human subjects research that can be done remotely should continue to be performed remotely. In order to be allowed to re-start or commence in-person human subjects research, the study director needs to complete the Research Lab Reopening process (if not previously completed) and the "Research Plan Update: Conducting In-Person Human Subjects Research During COVID-19" that outlines appropriate safety precautions. A request to re-start or commence in-person human subjects research needs to be approved following the approval process described above for developing and submitting a Laboratory Reopening and Social Distancing Plan.

In-person human subjects research presents unique issues. In addition to the Guidance above, all researchers conducting human subjects research on campus are required to comply with the following guidelines:

1. Researchers should not include study participants who are particularly vulnerable to COVID-19 according to the [CDC](#).
2. **Prior to Study Participants Coming to Campus**
 - Study participants must sign an Acknowledgment Form for Human Subjects Participants, that includes contact information for contact tracing purposes.
 - Researchers must contact the study participant by phone the day before the in-person visit to confirm:
 - The details of the visit, including that the study participant must wear a cloth face covering, maintain physical distance (if feasible), and wash their hands frequently or use alcohol-based hand sanitizer.
 - How the researcher has set up the in-person visit to minimize direct contact between the researcher and the study participant.
 - The study participant is not experience any COVID-19-like symptoms (fever (100.0 and above) or chills, cough, shortness of breath, sore throat, fatigue, headache, muscle/body aches, runny nose/congestion, new loss of taste or smell, or nausea, vomiting or diarrhea).
 - The study participant has not had "close contact" with an individual diagnosed with COVID-19. "Close contact" means living in the same household as a person who has tested positive for COVID-19, caring for a person who has tested positive for COVID-19, being within 6 feet of a person who has tested positive for COVID-19 for 15 minutes or more, or coming in direct contact with secretions (e.g., sharing utensils, being coughed on) from a person who has tested positive for COVID-19, while that person was symptomatic.
 - The study participant has not been asked to self-isolate or quarantine by their doctor or a local public health official, or as required by [Massachusetts' travel order](#).
 - Designate a minimum number of researchers needed to conduct the in-person visit, with time limitations and minimal personnel density.

3. **On the Day of the In-Person Visit**

- Researchers must conduct their daily self-check prior to arriving on campus and stay home if they are sick.
- Researchers must meet the study participant outside the building and escort the study participant throughout the building following physical distancing guidelines. Student participants must be escorted at all times.
- Researchers must confirm with the study participant upon their arrival that the study participant is not experiencing any COVID-19-like symptoms, has not had “close contact” with an individual diagnosed with COVID-19, and has not been asked to self-isolate or quarantine.

4. **Avoid any direct contact** between researchers and study participants, if feasible.

- Follow physical distancing guidelines (6 feet), except as necessary to complete required research procedures.
- If physical distancing is not possible due to the nature of the research, interactions with study participants must be brief (up to 15 minutes). Interactions at less than six-foot distance require a surgical face mask for study participants, and surgical mask, goggles, face shield, and gloves for researchers. If the researcher and study participant will have direct physical contact, the researcher should don a gown.

5. **Always wear a cloth face covering** (or the appropriate PPE required by the research) when in the building or lab. All researchers and study participants must wear the appropriate face covering at all times. WPI will provide a face covering for study participants if they do not have one when they arrive.

6. **Wash hands frequently.** Researchers and study participants must perform an extended and thorough soap-and-water hand washing (or use of alcohol-based hand sanitizers with at least 60% alcohol) upon entry into and prior to exiting from the lab, on a regular basis during lab occupancy, and before, during, and after any interactions.

7. **Clean and disinfect the lab, shared surfaces, shared instruments, heavy transit areas, and high-touch surfaces** pursuant to EHS guidance on cleaning and disinfecting laboratories [here](#) before use, in between each encounter, and at the end of the day.

G. Additional Guidelines for Research Partner Access to Campus Laboratories and Research Facilities

These guidelines apply to external research partners – collaborating researchers and corporate partners. They do not apply to visitors touring a WPI laboratory or research facility.

Research partners may only have access to WPI labs and research facilities if such access is essential. Any research that can be done remotely should continue to be performed remotely.

All principal investigators (PIs) and center directors who manage on-campus labs, facilities, and centers must take the following steps to request research partner access to their labs or facilities on-campus:

1. Carefully review the [Research Lab Reopening Guidance](#), the [Return to Campus Guidance](#), and information on the [We Are WPI](#) website.
2. Ensure that your lab previously submitted and had their Laboratory Reopening and Social Distancing Plan approved, as required by WPI's Research Lab Reopening Guidance.
3. Submit an update to your Laboratory Reopening and Social Distancing Plan by submitting the "[Research Plan Update for Adding External Partners.](#)"
4. A request to update your plan to allow research partner access to WPI labs and research facilities needs to be approved following the process described in the Return to Campus Guidance for research lab reopening.

All research partners approved to come to campus are required to sign a [Visitor Acknowledgment Form](#) and follow all of the same health and safety guidelines that currently apply to WPI faculty, staff and students when they are on campus. In addition, a research partner approved to come to campus must complete EHS health safety training for COVID-19. Since they won't have access to the WPI training system, the applicable PI or center director will need to provide them a paper or electronic copy of the training and ensure that they have completed the training and signed the Visitor Acknowledgment Form.

Adapted from: Boston University's Research Recovery Toolkit

Appendix A

Laboratory Reopening and Social Distancing Plan

PIs and center directors are required to develop a Laboratory Reopening and Social Distancing Plan that complies with the [Massachusetts Laboratories Checklist](#) issued by Massachusetts, WPI's Research Lab Reopening Plan Guidance, and WPI's Return to Campus Guidance.

Please use the template below to lay out your plans to manage lab operations while considering the social distancing, hygiene, staffing and operations, and cleaning and disinfecting practices required by Massachusetts and WPI.

Plans must be submitted to the Office of the Vice Provost for Research via the Research Lab Reopening Webform and will be reviewed on a rolling basis. Once approved, plans must be reviewed with all researchers in a lab prior to resuming on-campus research in that lab.

After reviewing the FAQs on the [Guidance for Research website](#), submit any remaining questions to vpr@wpi.edu.

Please respond to all the questions in this form.

Name

Email Address

Laboratory/Research Group Name

Building/Room Number

Department head, center director, or other supervisor overseeing this lab for compliance

Research Project(s): Describe the research project(s) that you propose to restart at this time.

Rationale for Return to On-Campus Research: Considering WPI’s Research Lab Reopening Guidance and access priorities, explain why your lab’s on-campus research project(s) should be prioritized.

Social Distancing: Describe how your lab will ensure social distancing (> 6 feet between individuals).

Consider and describe how your lab will:

- Ensure separation of 6 feet or more between individuals unless this distance is unsafe due to the particular nature of the work or the configuration of the workspace.
 - Close or reconfigure worker common and high density areas where workers are likely to congregate (e.g., break rooms, eating areas) to allow social distancing; redesign work stations to ensure physical distancing (e.g., separate tables, use distance markers to assure spacing).
 - Physical partitions must separate workstations that cannot be spaced out (partitions must be at least 6 feet in height).
 - Install visual social distancing markers to encourage workers to remain 6 feet apart (e.g., lines in the cafeteria)
 - Cafeterias must practice physical distancing and appropriate hygiene measures and may allow indoor and / or outdoor seating according to Restaurant guidance
 - Mark rooms and hallways to indicate 6 feet separation
- Stagger lunch and break times, regulating max number of people in one place and ensuring 6 feet of physical distancing
- Require use of face coverings for all workers, except where unsafe due to a medical condition or disability.
- Establish directional pathways to manage worker flow for foot traffic, to minimize contact (e.g., one-way entrance and exit to rooms, one-way pathways). Post clearly visible signage regarding these policies.

- Designate assigned working areas (e.g., floor, building, zone) to individuals where possible to limit movement throughout the facility and limit contact between researchers and other people on WPI's campus. Minimize the use of confined spaces (e.g., elevators, control rooms, vehicles) by more than one individual at a time; all workers in such space at the same time are required to wear face coverings.

Please note whether any physical modifications to the lab/bench spaces are necessary (floor markers, plexiglass shields, etc.) Provide lab drawings and layouts whenever possible.

Hygiene Protocols: Describe how your lab will apply robust hygiene protocols.

Consider and describe how your lab will:

- Ensure access to handwashing facilities on site, including soap and running water, and allow sufficient break time for workers to wash hands frequently; alcohol-based hand sanitizers with at least 60% alcohol may be used as an alternative.
- Supply researchers in the lab with adequate cleaning products (e.g., sanitizer, disinfecting wipes). Please contact EHS if you need assistance in procuring such supplies.
- Post visible signage throughout the site to remind researchers of the hygiene and safety protocols. Please contact EHS or Marketing & Communications for updated posters.
- Alcohol-based hand sanitizers with at least 60% alcohol should be made available at entrances and throughout floor areas for workers.
- Require frequent cleaning and sanitation of all high-touch areas such as desks, door handles, and restrooms in the lab.
- Avoid sharing use of laboratory materials / equipment (e.g., goggles) or disinfect equipment between use.

Staffing and Operations: Consider and describe how your lab will:

- Ensure that all researchers have completed EHS training on up-to-date safety information and precautions including hygiene and other safety measures aimed at

reducing disease transmission, including social distancing, hand-washing, proper use of face coverings; self-screening at home, including temperature and symptom checks; importance of not coming to work if ill; when to seek medical attention if symptoms become severe; which underlying health conditions may make individuals more susceptible to contracting and suffering from a severe case of the virus.

- Ensure that each worker is screened for the following prior to coming to the lab for a shift:
 - Worker is not experiencing any symptoms such as fever (100.0 and above) or chills, cough, shortness of breath, sore throat, fatigue, headache, muscle/body aches, runny nose/congestion, new loss of taste or smell, or nausea, vomiting or diarrhea.
 - Worker has not had "close contact" with an individual diagnosed with COVID-19. "Close contact" means living in the same household as a person who has tested positive for COVID-19, caring for a person who has tested positive for COVID-19, being within 6 feet of a person who has tested positive for COVID-19 for 15 minutes or more, or coming in direct contact with secretions (e.g., sharing utensils, being coughed on) from a person who has tested positive for COVID-19, while that person was symptomatic.
 - Worker has not been asked to self-isolate or quarantine by their doctor or a local public health official.
 - Workers who fail to meet the above criteria must be sent home.
- Adjust workplace hours and shifts (if working in-person, leverage working teams with different schedules or staggered arrival /departure) to minimize contact across workers and reduce congestion at entry points.
- Maintain a log of workers and visitors to support contact tracing (name, date, time, contact information) if needed.
- For guidance on business-sponsored travel, refer to the Commonwealth's current out-of-state travel order: [mass.gov/MATraveler](https://www.mass.gov/MATraveler). Employers are strongly discouraged from requiring or allowing business-related travel to destinations other than those appearing on the Department of Public Health's list of COVID-19 lower risk States. Employers that permit employer-paid or -reimbursed travel to those States should take measures to ensure employees comply with this order. Employers are also urged to strongly discourage their employees from taking leisure travel to destinations not included on the list of COVID-19 lower-risk States
- Workers must stay home if feeling ill.
- Workers who are particularly vulnerable to COVID-19 according to the Centers for Disease Control (e.g., due to age or underlying conditions) to stay home.
- Encourage workers to self-identify symptoms or any close contact to a known or suspected COVID-19 case to WPI.
- Encourage workers who test positive for COVID-19 to disclose to WPI on this [form](#) for purposes of cleaning / disinfecting and contact tracing. If WPI is notified of a positive case at the workplace, WPI shall notify the local Board of Health (LBOH) in the city or town where the workplace is located and assist the LBOH as reasonably requested to advise likely contacts to isolate and self-quarantine. Testing of other workers may be recommended consistent with guidance and / or at the request of the LBOH.
- Post notice to researchers of important health information and relevant safety measures as outlined in government guidelines. Please contact EHS or Marketing & Communications for updated posters.
- Laboratories should maintain operating hours that allow for on-going off-hour sanitation and cleaning.

- Limit service providers on site; shipping and deliveries completed in designated areas, outside the facility if possible.
- Restrict access of office workers to lab or production facilities; segment office / support personnel to specific areas of the facility.
- Ensure researchers continue to telework if feasible (e.g., office work, data analysis, notebook recording); external meetings should be remote to reduce density in the laboratory.

Allow water fountains to be used as refill stations only, provided that social distancing can be maintained. Workers should bring their own water bottles.

Cleaning and Disinfecting: Describe how your lab will incorporate robust cleaning and disinfecting protocols in the labs and shared spaces and equipment.

Consider and describe how your lab will:

- Facilities has developed protocols to commonly touched surfaces in restrooms (e.g., toilet seats, doorknobs, stall handles, sinks, paper towel dispensers, soap dispensers) frequently. Please contact Facilities with any questions.
- Conduct daily cleaning and disinfection of the lab (at least daily, and more frequently if feasible).
- Keep cleaning logs that include date, time and scope of cleaning.
- Conduct frequent disinfecting of heavy transit areas and high-touch surfaces in the lab (e.g., doorknobs, handrails, elevators, bathrooms).
- In event of a positive case, notify researchers that WPI has shut down the site for a deep cleaning and disinfecting by the EHS HAZMAT team.
- Clean shared spaces (e.g., conference rooms, shared equipment) between use and supply cleaning products (e.g., sanitizer, disinfecting wipes). Please contact EHS if you need assistance in procuring such supplies.
- Open windows and doors to increase airflow where possible.

Human Subjects Research (if applicable): Will your research be using human subjects? (Yes/No)

If yes, please complete the "Research Plan Update: Conducting In-Person Human Subjects Research During COVID-19" form.

External Research Partners (if applicable): Does your research involve external research partners – collaborating researchers and corporate partners – who need access to a WPI laboratory or research facility? (Yes/No)

If yes, please complete the “Research Plan Update: Adding External Partners” form.

Other: What other plans have you put in place to reduce chance of COVID-19 transmission? How will you supervise and enforce your plans?

Ramp-down Plan: If required to ramp down or shut down your on-campus research activities, what steps will you take to restrict research activities as soon as possible?

Appendix B

Research Personnel List

First Name	Last Name	WPI Email	ID Number	Personnel Type (Faculty, Academic Researcher, Staff, Postdoc, Doctoral Student, etc.)	Funding Support (if sponsored specify grant or contract)	Able to Perform Research Remotely (Y/N)	Able to Safely Return to Lab (Y/N)	Reside On/Off Campus	Appointment Year (Postdocs Only)	Anticipated Graduation Year and Year of Study (Doctoral Students Only)
John	Doe	example@wpi.edu	xxxxxxx	Doctoral Student		Y	Y	On-campus		2022 / Year 3

Appendix C

Research Lab Reopening Webform

Instructions for Submitting:

1. Save the completed Laboratory Reopening and Social Distancing Plan (Plan) to your computer with lab, center, or PI name in the file name, e.g., "LabName_Laboratory_Reopening Plan."
2. Save the completed Research Personnel List (Personnel List) to your computer with lab, center, or PI name in the file name, e.g., "LabName_Research Personnel List."
3. Prior to completing the Research Lab Reopening Webform, review your Plan with your research team to ensure measures are achievable and, if necessary, review with your Department Head.
4. Fill out the Research Lab Reopening Webform in full, upload your Plan and Personnel List, and submit it to the Office of the Vice Provost for Research.
5. The Office of the Vice Provost for Research will inform PIs and center directors in writing once their plans have been approved.

Please fill out the form below in its entirety.

Name of PI

PI Email

Date

Center: Based on physical location, is your lab within a Research Center?

Center Director Name

 First **Last**

Center Director Email Address

Department Head, Center Director, or other supervisor overseeing this lab for compliance

Personnel

Personnel List: Please upload a completed copy of your Research Personnel List. Email contact information is being collected in a different format to facilitate rapid mass-communication to personnel resuming research in case of urgent situations.

Personnel Justification: For any personnel who are ready to return to on-campus work, please explain why their in-person presence is considered a priority.

Personnel Travel: Do you have lab members who have recently traveled to other states or outside the U.S. during the past 4 weeks?

Lab Safety Training: Are you and all members of your laboratory up to date on laboratory safety training?

*Note, you and all lab members are also required to complete the separate COVID-19 training with EHS prior to returning to campus.

WPI ID Cards: Do you and all members of your laboratory have their WPI ID Cards?

If "No," please use the space below to write the name of any lab members who will need a WPI ID Card reprinted prior to returning to campus.

Space and Equipment

Building in which the lab is located.

Room and Floor: Please provide the floor/s and list all room numbers for the lab.

Use of Shared Space: Do you use any shared spaces with other labs?

Shared Space Function: What shared space do you use? How often and for what purpose(s)?

Equipment Checks: Have you or emergency responder staff been able to check on the status of lab equipment (i.e., freezers, refrigerators, incubators, centrifuge, fume hoods, biological safety cabinets, and autoclaves) since you ramped down your on-campus lab in March?

Equipment Status: Is all lab equipment in working order?

Supply Level: Do you have sufficient Laboratory Supplies/Reagents?

Supply Resupply: When will laboratory supplies and reagents need to be replenished? Give time frame relative to the date of completion of this form.

PPE: Do you have sufficient PPE?

PPE Resupply: When will PPE need to be replenished? Give time frame relative to the date of completion of this form.

Cleaning Supply Level: Do you have sufficient cleaning and disinfecting supplies?

Cleaning Supply Resupply: When will cleaning and disinfecting supplies need to be replenished? Give time frame relative to the date of completion of this form.

Core Facilities Use: Will you need access to core facilities to resume research?

Core Facilities: Which core facilities do you need access to? Do you require assistance to operate the instruments?

Animal Research

Animal Use: Do you use animals in your work?

Animal Timeline: Please describe the timeline for animal colony regeneration and what needs you will have for services from the vivarium staff, including routine and specialty services.

Animal Order: When will you need to order animals again? Give time frame relative to the date of completion of this form.

Animal Housing Access: When do you anticipate entering the vivarium? Give an estimated time frame based on the date of resumption of research activity.

Grant Support

Grants (if applicable): If the research is grant funded what are the timelines associated with each grant? *Example: NIH Award R01xxxxx; project period through mm/dd/yy: Brief notes on grant status if applicable*

Lab Reopening and Social Distancing Plan

Please upload a completed copy of your Laboratory Reopening and Social Distancing Plan.

Appendix D

Scheduling Examples for Rotating Sub-teams

These options are provided as examples of possible scheduling models. Please consult with your team to customize to your specific needs.

Option 1: Half-day shifts or two 8-hour shifts per day

- The day is divided into two shifts. Every lab member is assigned to an AM or PM shift. Individuals can only come in during their shift. Two 4-hour shifts may not be realistic for many labs. Wet-lab research groups could establish two shifts (e.g., "Team A," and "Team B"), with time windows that allow closer to ~8 hours per shift (6 AM – 1:30 PM; 2 PM – 9:30 PM).
- Advantages are that this is intuitive and allows work continuity.
- The main disadvantage here is that shifts are not well isolated. Fomites and aerosols are an issue for this option. Without (i) a 3-hour (or longer) break between shifts for aerosols to clear and (ii) a disinfection of surfaces between shifts, there is renewed daily exposure to shared air and shared surfaces from the previous shift. Thus, one positive COVID-19 case in the lab would trigger shutting down the entire lab, not just a shift. Also, temporal continuity means that an asymptomatic transmitter could spread COVID-19 to a lot of people before secondary cases become symptomatic.

Option 2: Work schedule for 3 sub-teams: 4 days on, 10 days off

Day	Sub-team 1	Sub-team 2	Sub-team 3
1	Working		
2	Working		
3	Working		
4	Working		
5	Working		
6		Working	
7		Working	
8		Working	
9		Working	
10		Working	
11			Working
12			Working
13			Working
14			Working

- A two-week period is divided into three blocks. Lab personnel (or physically proximate groups) are divided into sub-teams. People must stay with their sub-teams, and not associate (both directly or indirectly) with members in other

sub-teams. Note that non-lab persons who associate with members of two or more sub-teams break this isolation.

- Sub-team A works the first 5 days and then takes 10 days off. Sub-team B works the next set of 5 days and then takes 10 days off. Sub-team C works for the next 4 days and then takes 10 days off. That ends a 14-day period.
- This strategy is designed to more strictly isolate work units and to limit asymptomatic transmission chains between groups. The lab is in use every day, so fomites are an issue for each group.
- If a sub-team has an asymptomatic transmitter who transmits to people within the sub-team, those individuals should become symptomatic during the 10-day off period, triggering screening of the entire sub-team before the sub-team returns for their next on block.
- Using this strategy, a whole lab would not go out of commission at the same time. Disadvantages are that the schedule is not intuitive, people could be asked to work long days on their "on" blocks and that lab members would presumably need to share tasks to perform studies that extend beyond the four-day window.

Option 3. Work schedule for 2 sub-teams: 4 days on, 10 days off

Day	Sub-team 1	Sub-team 2	No use
1	Yellow		
2	Yellow		
3	Yellow		
4	Yellow		
5			Green
6			Green
7			Green
8		Blue	
9		Blue	
10		Blue	
11		Blue	
12			Green
13			Green
14			Green

- Time is measured in 14-day groupings. Each sub-team is in the lab 4 days of a 14-day period. There is a 72-hour period between sub-teams, allowing most surfaces to be safer for the subsequent sub-team.
- Every lab member is assigned to Sub-team 1 or Sub-team 2. Individuals can only come into the lab with their sub-team.
- This option uses the lab for fewer days (8 out of 14), but gives aerosols and fomites 72 hours to become less infectious between groups.

- If a member of Sub-team 1 associates with a non-lab person and then that person associates with a member of Sub-Team 2, then the isolation is broken.

Adapted from: Harvard University's Research Laboratory Re-entry Plan and Boston University's Options for Scheduling Sub-Teams.