

The left side of the page features a vertical teal band with a dark, textured background. Overlaid on this are several stylized, light teal virus-like particles with spherical bodies and multiple protruding spikes of varying lengths.

PLAN FOR PHASED RESUMPTION OF ON-CAMPUS RESEARCH

May 28, 2020

INTRODUCTION

In response to the COVID-19 pandemic, Princeton University halted all non-essential on-campus research activities on March 21, 2020. We took this difficult decision in order to protect the health and safety of the campus community, and in full awareness of the sacrifice made by faculty, graduate students, postdoctoral researchers and members of the research staff in delaying experiments or terminating those in progress.

It is now time to be ready to resume research safely, in an orderly fashion, and as promptly as circumstances permit. To this end, we have formulated this Plan for the Phased Resumption of On-Campus Research.

The plan describes four levels of on-campus research activities:

Level 1: Normal Operations

Level 2: Phased Resumption

Level 3: Essential Operations (current level)

Level 4: Operations Suspended

The proper time for implementing the phased resumption of on-campus research (Level 2) will be determined by the University's leadership, taking into account the relevant local, state, and national public health directives regarding stay-at-home and social distancing. The transition from Level 3 to Level 2 will then commence.

Our goal is to enable the smooth restart of Princeton's extraordinary on-campus research enterprise, with the health and safety of the campus community as our paramount concern.

Principal Investigators (PIs) will be asked to formulate and submit a laboratory plan, indicating how compliance with safety, hygiene and social distancing requirements will be implemented and adhered to, so as to establish a system of local responsibility in compliance with University-wide policies and public health guidance. Department chairs will be asked to formulate and submit a building-level plan for the resumption of research activities. All plans must be approved by the Dean for Research.

A key tenet of this document is that work that can be done remotely should continue to be done remotely until further guidance is issued. We must also be prepared for the possibility of suspending research operations in response to a widespread resurgence in infection.

We thank the many colleagues who have provided invaluable input into the formulation of this plan, which will be continuously updated as new information and guidance on COVID-19 and its treatment and prevention become available. It is our hope that this resource can help guide Princeton's research community on the path to eventual resumption of normal research

operations, in alignment with University policy and guidance, and relevant local, state, and national public health directives.

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1. GUIDING PRINCIPLES

1.1 Introduction

Purpose. The principles outlined below are intended to guide the planning and implementation of the phased resumption of on-campus research.

Timing. The proper time for implementing the phased resumption of on-campus research will be determined by the University's leadership, taking into account the relevant local, state, and national public health directives regarding stay-at-home and social distancing.

Uncoupling. The phased resumption of on-campus research is not coupled to the resumption of on-campus undergraduate teaching and senior thesis work.

1.2 Principles

Health and Safety. Protect the health and safety of the campus community.

Safe Working Conditions. Provide researchers with appropriately safe working conditions, including lab space, in accordance with University policies and prevailing public health guidance and directives issued by national, state and local government authorities.

Hygiene. Implement, adhere to, and enforce best practices for social distancing, cleaning, use of personal protection equipment (PPE) and case reporting as essential to the safe and successful phased resumption of on-campus research.

No Coercion. Treat with utmost seriousness any supervisor's or Principal Investigator's failure to implement the health and safety measures required by the University, or coercion of an employee or graduate student to work under conditions inconsistent with those measures.

Transparency. Put in place transparent policies and processes that allow a phased resumption of on-campus research, and communicate with the research community prior to and during implementation.

Flexibility and Agility. Design plans that can be easily adapted to multiple scenarios, including different end-points for phased resumption, and the possibility of a widespread resurgence in infection requiring shutdown.

Complexity. Acknowledge the complexity of the research enterprise by consulting broadly in the formulation of resumption policies and procedures.

2. OPERATING PRINCIPLES

2.1 Staged Approach

The plan envisions four levels of on-campus research (see Section 3 for details).

Level 4: Operations Suspended. All experiments are stopped, except for COVID-19 research specifically approved by the Office of the Dean for Research. Only designated critical staff are granted access to buildings.

Level 3: Essential Operations (Current Level). Only a limited number of essential research and COVID-19 projects is allowed. Authorized researchers can also access laboratories for maintenance operations. Access to laboratories requires authorization by the Office of the Dean for Research following submission of a Research Lab Operations Plan by the Principal Investigator (PI).

Level 2: Phased Resumption. Department chairs must submit a department-level Research Infrastructure Plan, which must be approved by the Office of the Dean for Research. PIs must submit a Research Lab Operations Plan detailing how each lab will enact strict social distancing and comply with Environmental Health and Safety (EHS)-prescribed density and hygiene metrics and practices. Use of PPE and cleaning protocols are strictly enforced. All work that can be done remotely continues to be done remotely. Changes in University-wide requirements (e.g., area per researcher) can result in adjustments to department-level or laboratory-level plans.

Level 1: Normal Operations. Normal research operations resume within prescribed hygiene, health and safety protocols.

2.2 Departmental Responsibilities

Department chairs and institute directors, working closely with academic managers and, where applicable, building managers (e.g., Engineering Quadrangle) must submit to the Office of the Dean for Research a plan for resumption of research activities (Research Infrastructure Plan). The plan must include identification of critical dependencies (e.g., utilities, loading docks, procurement), a plan for re-opening core facilities, a plan for enforcing social distancing, and best practices for cleaning common areas, PPE use, and circulation patterns in common areas. Research Infrastructure Plans must be approved by the Office of the Dean for Research.

2.3 PI-driven Approach, with Supervision

The University will issue campus-wide metrics that must be strictly adhered to (e.g., minimum area per researcher), initiating the transition from Level 3 to Level 2. PIs and facility directors must submit a Research Lab Operations Plan indicating how compliance with these metrics will be implemented, social distancing will be strictly enacted, and hygiene practices (PPE, cleaning) will be followed and enforced. Department chairs and institute directors review and must approve PI plans prior to submitting to the Office of the Dean for Research for final review and approval.

3. LEVELS OF ON-CAMPUS RESEARCH

Level 4: Operations Suspended

- Research Lab Operations Plans, including critical monitoring and maintenance, are reviewed and approved by the Office of the Dean for Research.

- All experiments are stopped, except for COVID-19 research specifically approved by the Office of the Dean for Research.
- Key resource maintenance is allowed only for irreplaceable animals (e.g., transgenic mice, zebrafish, *Drosophila*), cell lines that cannot be cryopreserved, and equipment that cannot be shut down. Activities must be approved by the Office of the Dean for Research.
- Vertebrate animal management is allowed only by Laboratory Animal Resources (LAR), with access to animal facilities by research personnel as required and with the express approval of LAR.
- At most, one person per lab is allowed on campus at any given time for critical maintenance functions only, and these functions must not include activities that fall under “hazardous operations.”
- All personnel must adhere to hygiene, health and safety protocols as prescribed by EHS.
- Undergraduate students are not allowed in the lab.
- Only designated critical staff are granted building access.
- Remote work is required for all activities not specifically listed above.

Level 3: Essential Operations (Current Level)

- PIs must submit Research Lab Operations Plans detailing shutdown plans and/or requesting maintenance and/or essential research activities. Plans must be reviewed by the department chair or institute director and approved by the Office of the Dean for Research.
- Essential and COVID-19-related research must be approved by the Office of the Dean for Research.
- Maintenance of key resources — such as animals, cell lines, liquid N₂, sensitive equipment, etc. — must be approved by the Office of the Dean for Research.
- In labs approved for critical maintenance, essential research, or COVID-19 work, one to three lab members (including the PI) must be identified in the plan and approved for building access. Any additional personnel needed for hazardous operations or critical maintenance requires approval by the Office of the Dean for Research.
- Approved on-campus research commences only with acknowledgment from relevant department(s) confirming any required services/facilities are in operation or can be brought online.
- All personnel must adhere to hygiene, health and safety protocols as prescribed by EHS.
- Undergraduate students are not allowed in the lab.
- All research buildings are set to card access “weekend” schedule.
- Remote work is required for non-laboratory activities.

Level 2: Phased Resumption

- Department chairs and institute directors, working closely with academic managers and, where applicable, building managers (e.g., Engineering Quadrangle) must submit a Research Infrastructure Plan for resumption of research activities. This plan must include identification of critical dependencies (e.g., utilities, loading docks, procurement), a plan for re-opening core facilities, a plan for enforcing social distancing, and best practices for

cleaning common areas, PPE use, and circulation patterns in common areas. Research Infrastructure Plans must be approved by the Office of the Dean for Research.

- PIs must submit Research Lab Operations Plans detailing how labs will comply with EHS-prescribed campus metrics, enact social distancing, and enforce hygiene practices (PPE, cleaning). Plan must be reviewed by the department chair or institute director and approved by the Office of the Dean for Research.
- Experimental work resumes within the parameters reviewed and approved by the chair and the Office of the Dean for Research.
- Research that utilizes core facilities or services commences after consultation with the facility director (e.g., LAR for animal research, Clean Room).
- All personnel must adhere to hygiene, health and safety protocols, including protective equipment, established by EHS to ensure safety of all personnel.
- Undergraduate students are not allowed in laboratories until further notification by the University.
- All research buildings are set to card access “weekend” schedule.
- Remote work is required for non-laboratory activities.

Level 1: Normal Operations

- Normal research operations.
- All personnel adhere to hygiene and health and safety protocols as prescribed by EHS.
- Undergraduates are allowed in laboratories.

4. SAFE WORKING CONDITIONS AND NO COERCION

4.1 Working Remotely

A key tenet of the phased resumption of research plan is that members of our campus community will not be required to return to campus (and in some cases will not be permitted to return to campus) if the PI and/or senior University officials determine that such research can and should be accomplished remotely.

4.2 Faculty or Staff Performing Research in Labs

Upon providing appropriately safe working conditions in accordance with University policies and prevailing guidance issued by public health authorities, the University will expect all faculty and staff approved to perform research in our labs to report to campus. Individuals who have a medical condition or other risk factor that they believe would make their return to campus unsafe are encouraged request an accommodation (see Section 5.12).

4.3 Graduate Students Performing Research in Labs

It is anticipated that the vast majority of graduate students will be eager to resume “hands on” research. Graduate students with a medical condition or other risk factor that they believe would

make their return to campus unsafe are encouraged to request an accommodation (see Section 5.12).

In addition, any graduate student who has particular problems related to the return to on-campus research should submit the information to the relevant Director of Graduate Studies. The University will seek to honor students' requests to the extent they are reasonable and appropriate, though such decisions will need to take into account relevant collateral implications, including impact on progress toward degree and funding.

Issues with non-compliance with social distancing, hygiene, or safety practices also can be reported confidentially via the [EthicsPoint](#) hotline.

5. GUIDELINES FOR SAFE RESEARCH DURING COVID-19 PANDEMIC

5.1 General Guidelines

- Every researcher (faculty, graduate student, postdoctoral researcher) must self-evaluate and report symptoms every day prior to coming to campus using the self-screening app in TigerSafe. See [TigerSafe](#) for information on how to download and use the app.
- Entering any University building with a TigerCard, represents an attestation that the individual is symptom-free.
- DO NOT come to campus if you are sick or experiencing any of the [symptoms associated with COVID-19](#).
- Viral and serological tests for SARS-CoV-2 may become available at a scale consistent with universal and frequent screening for asymptomatic infection. As testing availability and reliability evolve, the University may implement new policies and procedures.
- If you have been tested, confirmed to have COVID-19, or have been quarantined as a close contact of someone who is confirmed ill with COVID-19, you must email University Health Services at communityhealth@princeton.edu.
- If you begin experiencing [symptoms associated with COVID-19](#) while at work, distance yourself from co-workers, notify your supervisor, and go home as soon as possible.
- Carry your TigerCard at all times. Exterior doors to the science and engineering buildings are configured to allow card access 24 hours a day.
- Frequently clean hands with soap and water. If you do not have immediate access to soap and water, use alcohol-based hand sanitizer with at least 60% alcohol. All laboratories are required to have handwashing supplies available, including soap and disposable paper towels.
- Avoid touching your eyes, nose, mouth or any part of your face.
- Practice good cough and sneeze etiquette. Cover your cough or sneeze with a tissue or your elbow.
- Routinely disinfect high touch points, facilities, work areas, personal electronics, and shared equipment and spaces using a disinfecting solution or wipes. Refer to the Environmental Protection Agency's [Disinfectants for Use Against SARS-CoV-2](#).

5.1.1 Personal Responsibilities for Preparing to Resume Research

- Check in with your PI, lab manager, or supervisor to determine whether you are permitted to conduct research in the laboratory, which experiments or activities you may conduct, when to report to the lab, and what your responsibilities are.
- Review the Research Lab Operations Plan for your laboratory.
- Before going to the lab, you must complete a risk assessment to determine how soon you are permitted to resume on-campus, in-person activities. Complete [this form](#), which will be reviewed by University Health Services, and await response.
 - University Health Services will determine whether you are at low or high risk for carrying COVID-19, based on your travel history and potential exposure to a person with a confirmed or suspected case of COVID-19.
 - Individuals classified as low risk will be allowed to come to campus immediately.
 - Individuals classified as high risk will need to either:
 - Self-quarantine for up to seven days, OR
 - Test negative for COVID-19. Contact your healthcare provider or University Health Services for testing alternatives.
- Download the [TigerSafe](#) app and learn how to use the self-screening function.
- You must complete the [Safe Practices for the Resumption of Research](#) training in the Employee Learning Center.
- Obtain a face covering.

5.2 COVID-19 Case Management

If someone is sick and being tested for COVID-19 or has tested positive for COVID-19, the following actions will take place:

- Individuals who are awaiting test results or have positive test results must email University Health Services at communityhealth@princeton.edu.
- A healthcare professional from University Health Services will contact the individual to identify all members of the University community who were in close contact during the time that the individual would have been contagious.
 - Close contact means physical contact or being within six feet of a person for more than 10 minutes.
- Individuals who test positive will be required to self-isolate until they meet the [clearance criteria](#) established by the U.S. Center for Disease Control and Prevention (CDC).
- University Health Services staff will reach out to all close contacts and notify them that they are required to self-quarantine. Quarantine ends when:
 - 14 days have passed since they were last in contact with the individual who tested positive, or
 - The individual who initially tested positive receives a negative test result.
- **People who are not identified as close contacts do not need to self-quarantine.**
 - Due to privacy laws, the University is not permitted to disclose the name of the person reporting that they were tested.

- Public health officials do not consider being in the same room (more than six feet away) or briefly passing or working near an individual who may be contagious to be a high enough risk to require self-quarantine.
- University Health Services and EHS will work together to determine whether the space that a person testing positive has occupied requires specialized cleaning and will arrange for that cleaning.

5.3 Social Distancing

5.3.1 Planning

- Department chairs and institute directors, working closely with academic managers and, where applicable, building managers (e.g., Engineering Quadrangle) must submit to the Office of the Dean for Research a plan for resumption of research activities (Research Infrastructure Plan). This plan must include identification of critical dependencies (e.g., utilities, loading docks, procurement), a plan for re-opening core facilities, a plan for enforcing social distancing, and best practices for cleaning common areas, PPE use, and circulation patterns in common areas. Research Infrastructure Plans must be approved by the Office of the Dean for Research.
- Principal Investigators and facility directors must develop a Research Lab Operations Plan that adheres to the guidance provided in this Phased Resumption Plan. Plans must address how the lab group will conduct research activities in a manner that allows social distancing within laboratories, and strictly maintains 160 square-feet per researcher at all times.
- Office use is not allowed except for waiting between experiments, and strict social distancing and density requirements must be adhered to at all times.
- Plans are reviewed and approved by department chairs or institute directors, and then submitted to the Office of the Dean for Research for final approval. Research shall not begin until approval has been granted.
- Coordinate with all personnel accessing the lab to minimize time on campus and time spent physically working with others.
- Stagger or alternate research shifts to manage the number of researchers in a space.
- Coordinate use of core facilities.
- EHS can assist with developing your research plans.

5.3.2 Laboratory and Work Configuration

- For labs with more than one entrance: Consider designating one entrance for ingress and one entrance for egress and establishing traffic flow patterns to minimize close proximity to others during entry and exit from the laboratory.
- Maintain a distance of at least six feet from others. Plan lab occupancy levels to satisfy the requirement of at least 160 square-feet per researcher at all times.
- DO NOT install curtains or physical barriers. If you believe such measures are needed for social distancing, consult EHS. Installing curtains and barriers might impair ventilation flow or create a fire hazard.

- Remove chairs or label them to prevent use and to ensure separation between researchers when they are at the workbench (see below).



- If researchers work on back-to-back benches (backs facing each other), their physical distancing can be less than the required six feet. In such cases, closing down alternate workspace on each bench to create a staggered workspace across all the lab benches in an alternating pattern may be necessary.
- Post at the entrances to research areas the maximum number of researchers permitted in the area based on the social distancing and density assessment. Appendix 1 includes templates for this purpose.
- See Appendix 1 for examples of how to configure your laboratory in a manner that promotes social distancing.

5.3.3 Work that cannot be conducted while social distancing

In general, maintaining social distancing at all times is required for all allowed work. If specific research activities cannot be conducted while maintaining a distance of six feet from others, consult with EHS at ehs@princeton.edu. In some cases, EHS may be able to develop alternate plans or determine the appropriate personal protective equipment necessary for the operation.

5.4 Face Coverings

5.4.1 General Guidance

The University requires all students, faculty and staff to wear face coverings at all times when on campus, except when alone in a room or vehicle.

Wearing a face covering does not replace the need for social distancing or other measures to prevent the spread of the virus that causes COVID-19. Reusable and disposable face coverings are intended to decrease the potential for the wearer to spread the virus that causes COVID-19. Face coverings do not necessarily provide protection to the wearer.

Face coverings may not be used in place of face shields or other face protection needed for protection from chemical or physical hazards.

5.4.2 Choosing the Right Face Coverings

- N95 respirators must be reserved for healthcare workers, first responders and those performing higher risk tasks that require close contact. See [Guidance on the Use of Face Coverings](#) for a complete explanation of face coverings and N95 respirators.
- Students, faculty and staff should wear disposable face coverings when working with hazardous chemicals, biohazards or radioactive materials. Disposable face coverings that have been used in the lab should be discarded – they should not be worn in public areas on campus or at home.
- Students, faculty and staff may not wear reusable (e.g., cloth) face coverings when working with hazardous chemicals, biohazards or reactive materials.
- Reusable coverings made or provided by staff and students may be worn when on campus and outside of the laboratory. They should be machine-washed with warm or hot water and laundry detergent by the user on a daily basis. The coverings can be washed with other laundry items.
- Laboratories that have specific operations where disposable face coverings may be inappropriate (such as work with high risk of fire or contamination) are encouraged to contact EHS to identify viable alternatives to disposable face coverings and develop appropriate management strategies.
- In instances where viable alternatives cannot be found or procured, laboratories will need to develop strategies for enhanced distancing to allow workers to conduct limited, specific operations without using a face covering.

5.4.3 Face Coverings in all Research Laboratories (including Biological Safety Level 1)

- Wear your reusable face covering until you enter the laboratory. Upon entering the laboratory, remove your reusable face covering and don a disposable face covering.
- Prior to conducting work in laboratory areas where hazardous materials are handled, remove your reusable face covering and put on the required minimum laboratory PPE attire: lab coat, gloves and eye protection (safety glasses, goggles, or a face shield) as well as a disposable face covering.
- Upon returning to work areas where hazardous materials are not handled or exiting the laboratory, remove the required laboratory attire, and once again put on the cloth or personal face covering.

5.4.4 Face Coverings in Laboratories at Biological Safety Level 2 or BSL 2 with enhancements

- Follow the above guidelines for working in all research laboratories.
- Prior to conducting work at BSL 2 and above, change into a dedicated mask for patient specimen processing, if recommended by the conditions of your IBC approval.

- Wear required minimum laboratory PPE: lab coat, gloves and eye protection.

5.4.5 Entering a Vivarium

- Keep your face covering on when traveling to the vivarium. Change into an LAR-provided disposable mask. Store your face covering as described in the Care of Masks section (5.4.6).
- Wear required vivarium attire, which must include a disposable face covering.

5.4.6 Care of Masks

Disposable Face Coverings

- Use disposable coverings until they become damaged, contaminated or wet. Disposable coverings used in a lab setting should be disposed of in the regular trash receptacle at the end of each day.

Reusable Face Coverings

- Reusable coverings worn in public areas of campus can be worn until they become damaged, soiled, or wet.
- Reusable face coverings should be taken home and laundered each night.
- Reusable coverings should be machine-washed with warm or hot water and laundry detergent by the user. The coverings can be washed with other laundry items.

Putting on (Donning) and Taking off (Doffing) your Face Covering

- Always clean hands with soap and water prior to putting on, adjusting, or removing your face covering. Alcohol-based hand sanitizer with at least 60% alcohol may be used as a substitute where handwashing facilities are not readily accessible.
- When removing the face-covering, follow the doffing procedure specific to your face covering. This will include using the ear loops, straps, or equivalent to take off face covering beginning from the back of your head and moving toward and away from your face. Do not touch the front of the covering.

5.5 Laboratory Coats

- If working with human specimens or biological materials that require BSL 2 containment, wear the covering specified in your IBC approval, which may include using disposable lab coats or isolation gowns.
- Do not share lab coats.
- Cloth laboratory coats must be regularly laundered to minimize the risk of an exposure from contamination on the coat and to help mitigate the risk of the coat becoming a viral reservoir.
 - o Due to the risk of the coat being contaminated with hazardous materials, the laboratory coat must be cleaned by a professional or dedicated laundering service at least weekly.
 - o Laboratory coats may not be taken home for laundering or cleaned with a public laundering service or facility.
 - o Contact your departmental administrator for additional information regarding the process for laundering laboratory coats.

- If cloth lab coats are worn by a researcher who is suspected or confirmed to have COVID-19, the coat should be turned inside out, placed inside a sealed bag, and held for 7 days prior to laundering. The bag containing the potentially contaminated laboratory coat should be labeled “COVID-19 quarantined laboratory coat” and the date when the coat can be removed for laundering.

5.6 Cleaning, Decontamination and Disinfection

All lab surfaces and equipment must be disinfected at least daily. This includes all surfaces within the biosafety cabinet, chemical fume hood, equipment, bench tops and other work surfaces, transport and transfer containers.

Building Services custodians will continue to clean bathrooms, hallways, common areas, etc. They will not clean your laboratory unless there is a specific need and under controlled conditions. Contact EHS for more details.

5.6.1 Maintaining Laboratory Hygiene

Laboratory members are responsible for developing plans to promote good laboratory hygiene by regularly disinfecting common laboratory areas and touch points (e.g., doorknobs, sink handles, freezer doors, telephones) within the laboratory space.

SARS-CoV-2 can be inactivated with most common household disinfectants registered with the Environmental Protection Agency (EPA), including solutions that contain:

- 62%-90% ethanol or isopropanol (70% recommended)
- 1%-5% bleach in water solutions (made fresh daily)
- >0.5% hydrogen peroxide

If you wish to use other disinfectants, please select from the EPA’s [Disinfectants for Use Against SARS-CoV-2](#) list.

Care must be taken to follow the manufacturer’s disinfection directions, which may include pathogen-specific inactivation instructions.

Never use solutions containing formaldehyde or glutaraldehyde to disinfect laboratory surfaces. Both of these chemicals can cause severe acute and chronic health effects.

5.6.2 Best Practices for Disinfection

- Ensure that the area is cleaned prior to initiating the disinfection process where applicable. Excess gross contamination significantly decreases the activity of the disinfectant.
- The concentration of the disinfectant is critical to the efficacy of the disinfectant for inactivating the pathogen. Follow the manufacturer’s recommendations for dilution if purchasing a commercial disinfectant.
- No disinfectant works immediately. Disinfectants must be left on the surfaces or items to be decontaminated for a specified contact time, which may vary depending on the pathogen to be inactivated. Contact times of 1, 3, 5 or 10 minutes or even longer may be needed to ensure that any pathogen present has been inactivated. Apply disinfectant until surfaces are glistening wet and allow surface to air dry. If your disinfectant has a

higher evaporation rate (e.g., alcohols), and a longer contact time is needed, you may need more than one application; however, the surface being disinfected should remain wet for the duration of the required contact time.

- Ensure that all surfaces are completely covered with the disinfectant. Merely spraying the disinfectant on a surface, especially if only applied quickly or lightly, can leave spaces in between the disinfectant drops.

5.6.3 Additional Chemical-specific Considerations for Using Disinfectants

- Most (if not all) chemical disinfectants designed for surface decontamination contain components that can be harmful if ingested, inhaled, or if skin/eye exposures occur.
- Appropriate personal protective equipment, including eye and hand protection, must be used when applying chemical disinfectants.

Note: Be aware of any dermal or respiratory irritation that occurs after using disinfectants or after working on surfaces that have been disinfected. If dermal or respiratory irritation is encountered:

- Exit the area, get to fresh air.
- Try to flush the irritated area (for dermal irritation).
- Seek additional medical assistance as needed.
- Suspend the use of the suspected disinfectant and contact EHS for additional assistance.

5.7 Handling Laboratory Hazardous Waste

5.7.1 Regulated Medical Waste Disposal

- Follow the University's regulated medical waste procedures, found [here](#).
- Building Services custodians will remove properly packed and labeled boxes of regulated medical waste on a weekly basis.

5.7.2 Chemical Waste Disposal

- Follow the University's guidelines on collecting and labeling laboratory chemical waste, [found here](#).
- Laboratory chemical wastes will be collected directly from the laboratory based upon information provided on the [Waste Pickup Request](#).
- During the suspension of regular laboratory operations, the frequency of waste pickups has been reduced from a weekly to bi-weekly schedule. After submitting the request, you will be notified of the anticipated pickup date and time.

5.8 Required Training

Before being allowed back in the laboratory, all researchers (PIs, graduate students, postdoctoral researchers) must complete the online module, [Safe Practices for Resumption of Research](#) available in the Employee Learning Center. Principal Investigators or their designees should also ensure that all researchers are up to date on their safety training requirements, including Laboratory Safety Training, Biosafety Training, Laser Safety Training, Radiation Safety Training,

etc. Contact ehs@princeton.edu if you have questions about training or to schedule virtual training sessions.

5.9 Preparing the Laboratory

Before restarting work, check the physical condition and supply levels.

- Ensure that equipment, such as biosafety cabinets, autoclaves, etc. are up to date on inspections and maintenance. Make arrangements for services as needed.
 - See [Information for University Contractors and Vendors](#) before making arrangements for contractors or vendors to come onto campus.
- Inspect equipment and facilities for damage, leaks, etc.
- Check expiration dates on chemicals and supplies.
- Confirm availability of support services, such as gas delivery, dry ice, etc.

5.9.1 Obtaining Supplies

For the most current information, please go to the EHS page on [Ordering Personal Protective Equipment and Supplies](#).

Until September, EHS will provide the following COVID-19 related supplies:

- Disposable face coverings
- Alcohol-based hand sanitizer
- N95 respirators (as approved by EHS)
- Disposable surgical or isolation gowns (as approved by EHS)

The laboratory and associated department are responsible for providing the supplies listed below. If you experience problems ordering or sourcing these materials, email ehs@princeton.edu.

- Hand-washing soap
- Disposable paper towels
- Laboratory coats
- Gloves
- Disinfectant for all lab surfaces
- All other personal protective equipment needed to safely perform your research

Plan carefully when ordering supplies. Supply chains for a number of vendors have been strained during COVID-19 outbreaks. Certain research materials may have significant delays due to high demand or shuttered production facilities.

During the suspension of normal laboratory operations, a number of buildings and their loading docks have shifted to limited schedules.

- Contact your departmental administrators for additional information regarding any restrictions or limited hours staff may be available to receive incoming shipments.
- Inbound research materials may not be shipped to private/personal addresses and then brought to campus. Contact EHS at ehs@princeton.edu if you need assistance.

Confirm with your home department the availability of other support functions both internal to your research department/institute (e.g., core imaging and analysis facilities, glass washing) as well as other campus support functions.

5.10 Managing Shared Facilities and Equipment

Many laboratory workers share laboratory equipment with others in their lab group and, in some cases, with individuals outside of their lab group.

- Carefully schedule use of shared facilities or equipment to maintain social distancing.
- Wear gloves when touching or manipulating equipment.
- When work is complete, wipe down high-touch surfaces with disinfectant wipes or solution if it will not damage the equipment or surfaces.
- Plan and communicate roles and responsibilities for cleaning/disinfecting.

5.11 General Work Rules

5.11.1 Meetings and Gatherings

Current New Jersey executive orders prohibit gatherings of more than 10 people.

- Continue conducting virtual meetings and phone calls rather than in-person meetings.
- If you must meet in person, limit to 10 people and position yourselves with at least six feet of separation. Keep the meeting short.

5.11.2 Meals and Breaks

- Eating and drinking in the laboratory is still prohibited.
- Determine how and when researchers will take breaks for meals, beverages, etc. Consider using common spaces, meeting rooms, and outdoor seating while maintaining social distancing.

5.11.3 Unsafe Behaviors or Conditions

If you find that people are not practicing social distancing, hygiene, or safety practices, or if you recognize unsafe conditions:

- In a congenial and caring manner, advise the individual(s) how they can improve the behavior or condition.
- If you are uncomfortable alerting the person or group, or if behaviors or conditions do not improve, speak with a Principal Investigator, advisor, department manager, director of graduate studies, or another person in authority.
- If neither of the above is successful, or if you wish to remain anonymous, you can report confidentially via the [EthicsPoint](#) hotline.

5.12 Requests for Reasonable Accommodations

If an individual requests an accommodation due to a disability, the individual should notify EHS upon completion of [Safe Practices for Resumption of Research](#) training in the Employee Learning Center. EHS will work with the appropriate University office to discuss the request with the individual and ascertain if there is a reasonable accommodation that can be provided to address the individual's needs. Given the current situation, the University will consider reasonable

accommodations for individuals whose disabilities put them at a greater risk from COVID-19 (or severe symptoms from COVID-19) and who request an accommodation to eliminate possible exposure to the virus. As always, reasonable accommodation decisions are fact-specific and vary based on the relevant circumstances.

5.13 Emergency Contacts

In case of emergency, dial 911. Department of Public Safety officers are available to respond.

Environmental Health and Safety (EHS) Support: EHS staff are available, on campus, during normal business hours Monday through Friday. Email requests for services to ehs@princeton.edu or call 609-258-5294.

5.14 Related Resources

Guidance on the Use of Face Coverings

<https://ehs.princeton.edu/health-safety-the-campus-community/covid-19-information-and-resources/guidance-the-use-of-face-coverings>

Biosafety Precautions for Working with Human Clinical Specimens that May Contain SARS-CoV-2 <https://ehs.princeton.edu/laboratory-research/biological-safety/working-human-source-material/biosafety-precautions-research-human>

OSHA Guidance on Preparing Workplaces for COVID-19
<https://www.osha.gov/Publications/OSHA3990.pdf> (PDF)

OSHA COVID-19 Website
<https://www.osha.gov/SLTC/covid-19/controlprevention.html>

CDC Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 (COVID-19)
<https://www.cdc.gov/coronavirus/2019-ncov/lab/index.html>

ABSA SARS-CoV-2/COVID-19 TOOLBOX
<https://absa.org/covid19toolbox/>

WHO Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19)
[https://www.who.int/publications-detail/laboratory-biosafety-guidance-related-to-coronavirus-disease-2019-\(covid-19\)](https://www.who.int/publications-detail/laboratory-biosafety-guidance-related-to-coronavirus-disease-2019-(covid-19))

CDC Guidance for Schools, Workplaces & Community Locations
<https://www.cdc.gov/coronavirus/2019-ncov/community/index.html>

Biosafety in Microbiological and Biomedical Laboratories (BMBL)

<https://www.cdc.gov/labs/pdf/CDC-BiosafetyMicrobiologicalBiomedicalLaboratories-2009-P.PDF> (PDF)

Back-to-work criteria for health care workers

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/return-to-work.html#practices-restrictions>

6. BUILDING GUIDANCE

6.1 Exterior Doors

All exterior doors will remain locked at all times. Be prepared to use your TigerCard or key every time you enter a building.

- Wear your TigerCard on a lanyard, either around your neck on a break-away lanyard or on a belt clip. Free lanyards are available through the [EHS Safety Store](#).
- Update your TigerCard access by using a keyless lock [hot spot](#). Place your card against the hot spot until the indicator light changes from blue to green.
- Your card will allow access to your office/lab buildings at all times, and to most academic buildings from 7:00 AM to midnight daily.
- If you are unsure which buildings your card will access or to request access permissions, contact your Building Access Coordinator (BAC) or your Department Access Facilitator (DAF).

6.2 Restrooms

To maintain physical distancing in restrooms, you may find that some fixtures (e.g., every other sink or urinal) may be taped or blocked off.

- Wash your hands for at least 20 seconds.
- Use paper towels to dry your hands and to shut off faucets.
- Avoid using hand dryers.
- Use a paper towel to manipulate the door, if necessary.
- If there is a line, keep it outside of the rest room, maintaining six feet separation.

6.3 Elevators

Limit elevator use and try to use the stairs as much as possible. If you must use the elevator, limit to one person per elevator car, if possible. If more than one person must use the elevator at the same time, stand in opposite corners and face away from each other.

- Avoid touching elevator buttons directly. Use a pen or other object or consider wearing gloves. If you do touch the buttons, wash your hands or use alcohol-based hand sanitizer.
- Maintain social distancing when waiting for the elevator.

6.4 Hallways and Stairwells

Keep in mind that momentarily passing by another person does not significantly increase your risk and is not considered “close contact.”

- Use hand rails. Wash your hands or use alcohol-based hand sanitizer.
- Do not linger in hallways and stairwells.
- If you notice that hallway or stairwell use is crowded, contact the Facilities Modification Team through [Facilities Customer Service](#) or 609-258-8000 for a review of the area to determine whether directional signage is needed.

6.5 Atrium/Common Spaces

Atriums and common spaces may not be used for congregating. Before moving or removing furniture or fixtures, contact the Facilities Modification Team (FMT) through [Facilities Customer Service](#) or 609-258-8000.

- Consider repurposing these spaces for lab workers to take breaks or meals or to expand desk areas.
- Maintain social distancing. No more than 10 people may meet in a space, regardless of its size.

6.6 Conference Rooms

Limit use for meetings. Consider using conference rooms to expand work/desk space.

- Maintain approximately 100 square feet per person. No more than 10 people in a space.
- Remove, tape off, or mark chairs that should not be used, in order to maintain six feet between people.

6.7 Hoteling/Open Work Stations

Take advantage of all unused space to spread out work stations. Employees must recognize that they may be asked to work at work stations other than their traditional workspace in order to spread out.

6.8 Break Rooms

Chairs and furniture should be thinned from break rooms to reduce the likelihood of congregation. Whenever possible, staff should be offered alternative locations (such as outdoors in nice weather) to take breaks and lunches.

- For example, remove three of four chairs around a small table.

6.9 Coffee Makers, Water Coolers, Refrigerators

Common shared equipment, such as coffee makers, water dispensing stations and refrigerators, should be disinfected frequently.

- Use disinfectant wipes between uses.
- Building Services custodians do not clean equipment or appliances.

- Do not use drinking fountains. DO use bottle-filling stations.
- Do not bring your own coffee makers, small refrigerators, or other appliances for personal use. Such use may present a fire hazard and may be in violation of fire code.

6.10 Meetings

Where feasible, meetings should be held remotely using collaboration tools such as Zoom, WebEx, Microsoft Teams, telephone, Jabber, Slack, etc.).

- In-person meetings may be limited by local, state and federal orders (currently limiting to 10 or fewer) and should only occur in person if occupants of the room can maintain six feet of separation.
- Departments should remove or rearrange chairs and tables or add visual cue marks in meeting rooms to support social distancing practices between attendees.
- Even while working on campus, you are encouraged to communicate with your colleagues and supervisors as needed by email, instant message, telephone or other available technology rather than face-to-face.

6.11 Vehicles

No more than one person should be riding in a University vehicle at any one time. Carry disinfectant wipes and a trash bag in each vehicle and disinfect frequently touched surfaces of the vehicle, such as the steering wheel, gearshift, signaling levers and door handles, at the start and end of each shift or before a new driver uses the vehicle.

6.12 TigerTransit and Public Transportation

Face coverings are required for riding on TigerTransit and public transportation. Avoid touching surfaces on public transportation and seat yourself at least six feet away from other passengers. For employees who need to take public transportation, departments should work with Human Resources to consider whether an alternate schedule may be accommodated to avoid high ridership time periods.

6.13 Parking

If you rely on TigerTransit to take you from your campus residence or parking lots to your building, you have a valid parking permit, AND if there are numbered parking lots closer (except lots 8, 9, and 18) with empty spaces please feel free to park temporarily in those locations. If you have any questions or concerns, please contact Transportation and Parking Services at ttps@princeton.edu.

6.14 Time Clocks

Departments should review time clock areas for traffic patterns and consider floor markings for guiding employees when standing in line. Departments should also consider staggered start times to reduce traffic flow at peak clock in and out times.

6.15 Meals

Departments should mandate staggered meal and break times to avoid congregation in break rooms.

- Restaurants and campus dining halls are limited to take-out. Thus, individuals will need to find a place to eat.
- Weather permitting, use outdoor spaces.

6.16 Mail and Packages

Mail and packages are being delivered to campus, although some changes in delivery methods may be employed.

- Check with Mail Services to learn how your mail and packages are being delivered:
 - Pick-up at Frist.
 - Delivery to your building on a limited schedule.
 - Delivery to your building daily.
- For departments with loading docks or centralized Receiving, check on the current schedule.
- No disinfection or quarantine of mail or packages is required.
- For frequent mail handling, wear gloves and wash hands with soap and water after handling mail and packages.

6.17 Quiet Rooms

Wipe down high-touch surfaces with disinfectant after each use of the quiet room.

7. DEPENDENCIES

Facilities provides critical services and support with direct impact on research. Building energy and utility levels will need to be adjusted for occupancy. Cleaning and sanitizing of all research buildings along with special attention to the availability of handwashing supplies will be necessary to minimize spread of SARS-CoV-2. Critical on-site and remote research support is provided by a number of Special Facilities personnel, notably to the Department of Physics and the School of Engineering and Applied Sciences. As the phased resumption of campus research takes place, Facilities will scale operations according to the scope, timing, spaces, occupancy schedules and buildings utilized for research. Advance notice of the resumption of research operations, as much as is reasonably possible, and communication between Facilities key contacts and science and engineering building managers will help to smooth the transition as research activity resumes.

Facilities contacts:

- Tom Nyquist, Executive Director for Engineering and Campus Energy
tnyquist@princeton.edu
- Joseph Morgan, Director for Facilities Operations josephm@princeton.edu

- Tom Corcoran, Associate Director of Mechanical, Electrical, and Plumbing tc3@princeton.edu
- James Spinelli, Assistant Manager, Building Maintenance jspinell@princeton.edu
- Handy Seldon, Supervisor, Special Facilities seldon@princeton.edu
- Robert Rickett, Lead Maintenance Technician, Special Facilities rrickett@princeton.edu
- Kevin Shennard, Supervisor, Special Facilities shennard@princeton.edu
- Twyla Seward, Director for Building Services tseward@princeton.edu
- Gary Immordino, Operations Manager, Building Services garyi@princeton.edu
- Richard Brown, Assistant Director, Building Services rb33@princeton.edu

Laboratory Animal Resources (LAR) provides animal care and research support for all research and teaching conducted with animals at Princeton University. This includes standard daily husbandry and regular veterinary care for all vertebrate animals housed on campus. As the phased resumption of campus research takes place, LAR will need to consult with PIs in the planning of their resumption of operations to ensure adequate support for research studies, procurement of animals and supplies, and scheduling of services. Frequent and thorough communication between LAR, PIs and research personnel about all issues, including plans for significant changes in census, need for services or training, or health concerns will be important as research activity increases.

LAR contacts:

- Laura Conour, Executive Director and Attending Veterinarian lconour@princeton.edu
- Susie Chow, Associate Director siuchow@princeton.edu
- Brian Ludwig, Facilities Manager bl@princeton.edu
- Jamus MacGuire, Assistant Director jamusm@princeton.edu
- Grace Barnett, Staff Veterinarian gbarnett@princeton.edu

Environmental Health and Safety (EHS) provides training, information, support and equipment to help researchers work safely in the laboratory, including with biological agents, chemicals, radiation and other hazards. EHS is responsible for providing researchers with written guidelines, protocols, and specifications for safe research during the COVID-19 pandemic. Prior to the resumption of research, EHS will launch online training necessary for all researchers returning to campus, and for onboarding new researchers. EHS will distribute PPE and face coverings to on-campus researchers during the initial return to campus. Activities that are not compatible with the standard hygiene and safety guidelines need to be discussed between EHS personnel and researchers to explore options for a customized management plan.

EHS contacts:

- Robin Izzo, Executive Director rmizzo@princeton.edu
- Steve Elwood, Associate Director for Laboratory and Research Safety selwood@princeton.edu
- Kelly States, Associate Director for Campus Safety and EHS Operations kstates@princeton.edu

- Jackie Wagner, Assistant Director for Biosafety and Environmental Health jw6@princeton.edu
- Shaundree Davis, Assistant Director for Occupational Health shaundree@princeton.edu
- Stanley Howell, Program Manager for Chemical Safety schowell@princeton.edu

Procurement provides systems, processes, and support related to sourcing, contracts, purchases, and payments in support of research. Centralized sourcing of restricted research items (e.g., personal protective equipment) is being supported for the resumption of research due to disruptions to the supply chain. Working closely with academic departments, procurement staff will provide support with items that become difficult to obtain due to shortages or demand surges. As departments begin ordering research supplies, they should notify procurement of any shortages so that they can assist with assessing lead times, investigating alternate suppliers, or initiating a centrally managed purchase process for those items.

Procurement contacts:

- Mohamed Ela, Director mohamed.ela@princeton.edu
- Joseph Woodward, Senior Associate Director jw23@princeton.edu
- Brian Osbourne, Senior Category Manager brian.osbourne@princeton.edu

Office of the Dean of the Faculty, **Human Resources**, and the **Graduate School** provide policies and procedures for supporting faculty, managers and research personnel. As research resumes with new workplace requirements for social distancing, hygiene, health and safety procedures, these three offices will be needed to support research personnel and their managers through the application of the relevant policies and procedures on work schedules, accommodations, reporting and compliance. In addition, academic departments may need support from staffing personnel to ensure that critical positions are filled.

Office of the Dean of the Faculty contacts:

- Toni Turano, Deputy Dean of the Faculty tturano@princeton.edu
- Karen Haskin, Associate Dean for Academic Affairs khaskin@princeton.edu
- Alice Seneres, Assistant Dean for Academic Affairs aseneres@princeton.edu

Graduate School contacts:

- Cole Crittenden, Deputy Dean of the Graduate School ccritt@princeton.edu
- Christine Murphy, Assistant Dean for Academic Affairs of the Graduate School cm15@princeton.edu

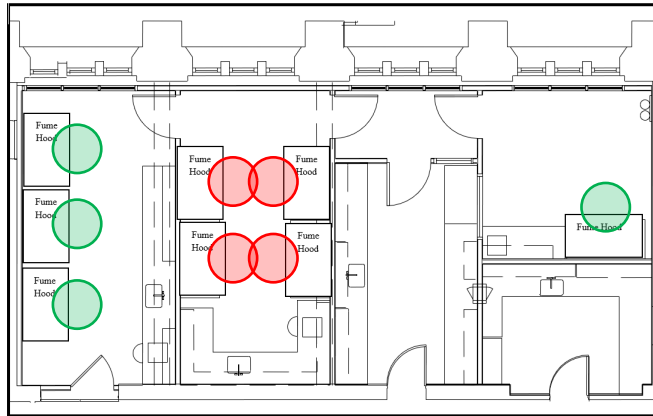
Human Resources contacts:

- Romy Riddick, Assistant Vice President rriddick@princeton.edu
- Mary Beth Larkin, Senior HR Manager mbel@princeton.edu

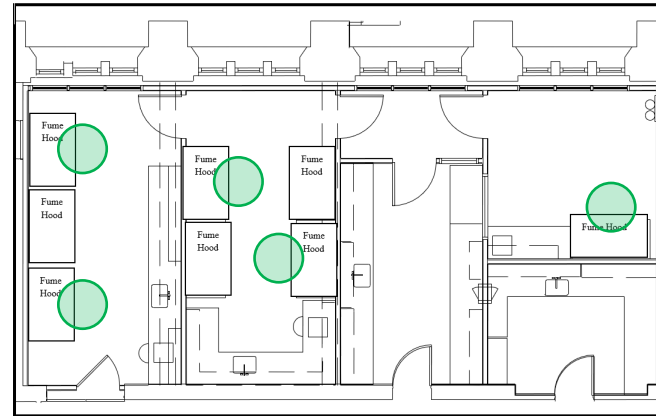
APPENDIX 1

Lab Configurations and Lab Occupancy Signage

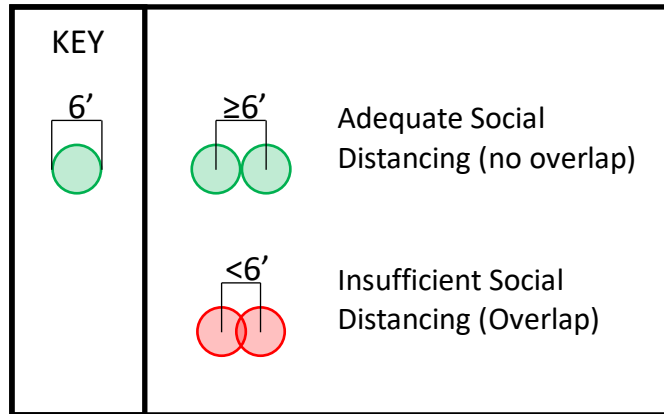
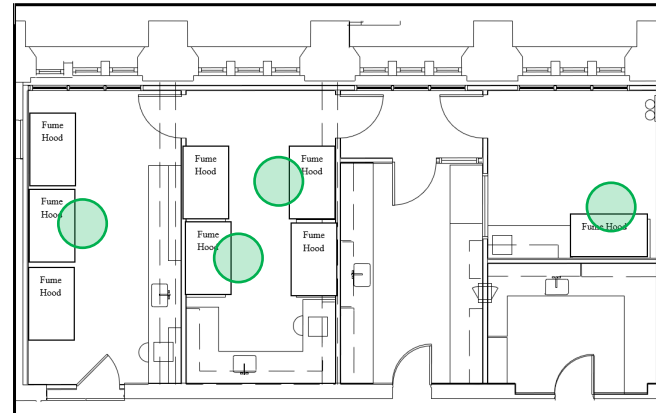
Fume Hood Use with Inadequate Social Distancing



Fume Hood Use with Improved Social Distancing: Shift 1

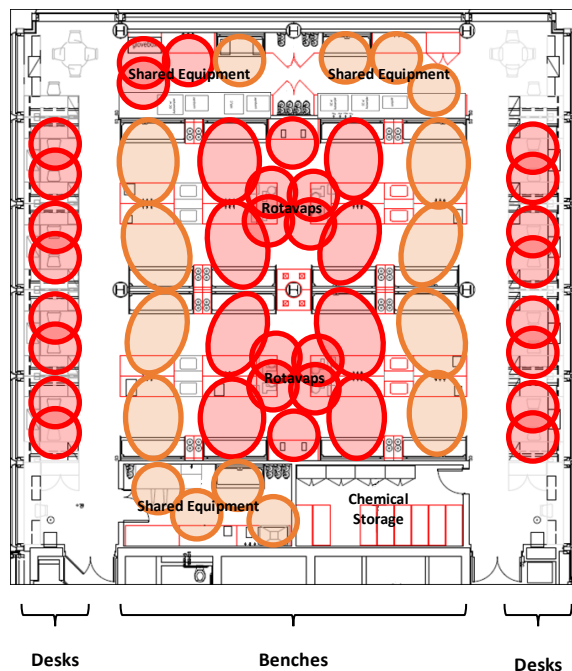


Fume Hood Use with Improved Social Distancing: Shift 2



Laboratory Layout from Guyot Hall

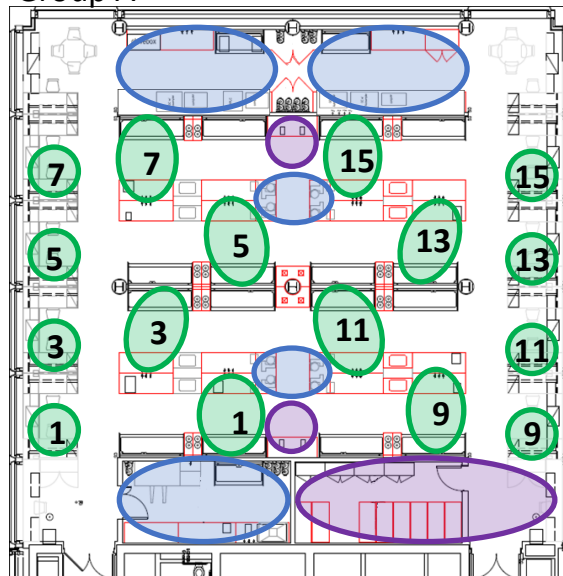
Laboratory Without Social Distancing



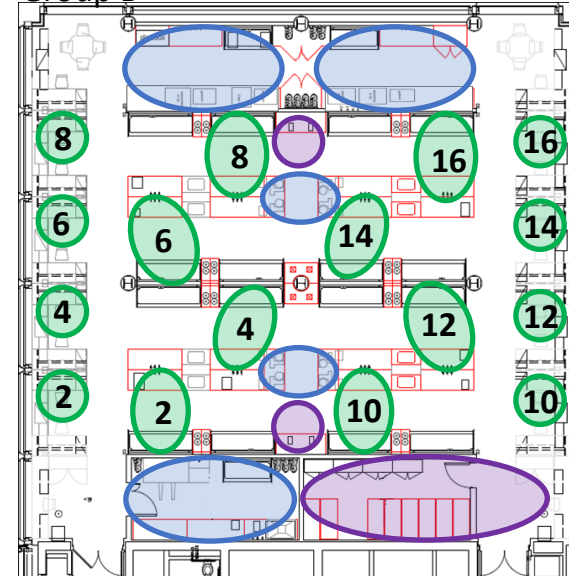
Laboratory Layout from
Frick Chemistry Laboratory

Laboratory With Social Distancing

Group A

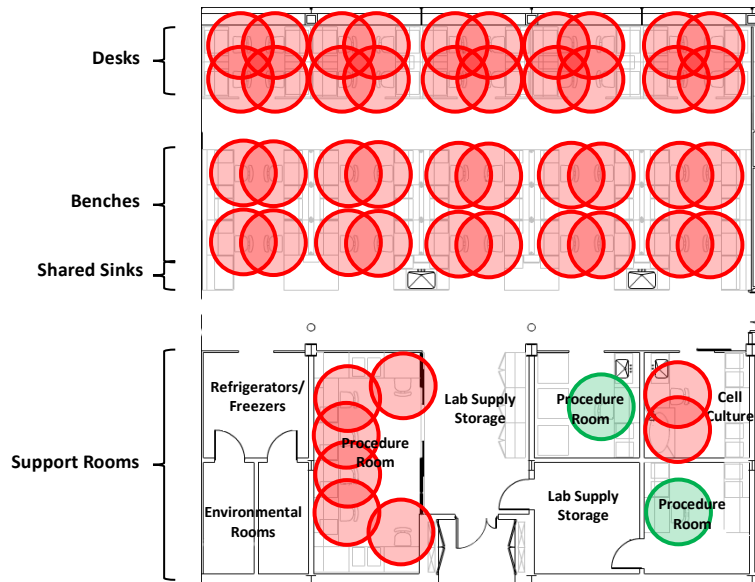


Group B



Individual Workstations	Shared Workstations (One User at a Time)	
<p>Green circle: Adequate Social Distancing</p> <p>Orange circle: Limited Social Distancing</p> <p>Red circle: Insufficient Social Distancing</p>	<p>Blue circle: Managed by Scheduling</p> <p>Purple circle: Managed with Waiting Areas (Short Duration)</p> <p>Common Examples:</p> <ul style="list-style-type: none"> Chromatography systems Centrifuges Rotavaps Shared fume hoods or BSCs Spectrometers 	<p>Common Examples:</p> <ul style="list-style-type: none"> Weigh stations pH meters Shared Refrigerator/Freezers Chemical Storage Areas

Laboratory Without Social Distancing



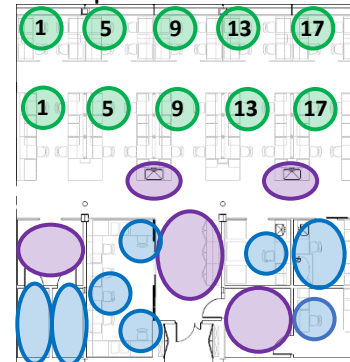
KEY

Individual Workstations	Shared Workstations (One User at a Time)
<p>● Adequate Social Distancing</p> <p>● Limited Social Distancing</p> <p>● Insufficient Social Distancing</p>	<p>● Managed by Scheduling</p> <p>● Managed with Waiting Areas (Short Duration)</p>

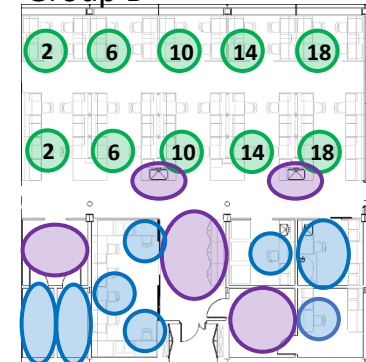
Laboratory Layout from Carl Icahn Laboratory

Laboratory With Social Distancing

Group A



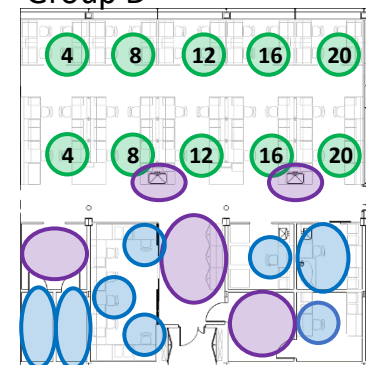
Group B



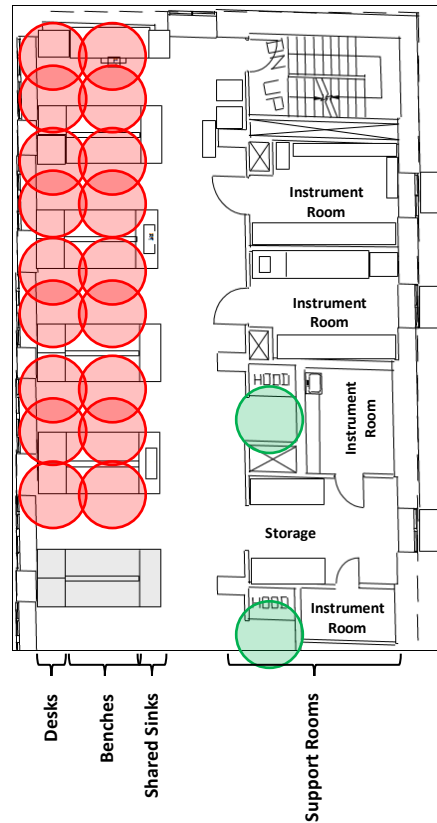
Group C



Group D



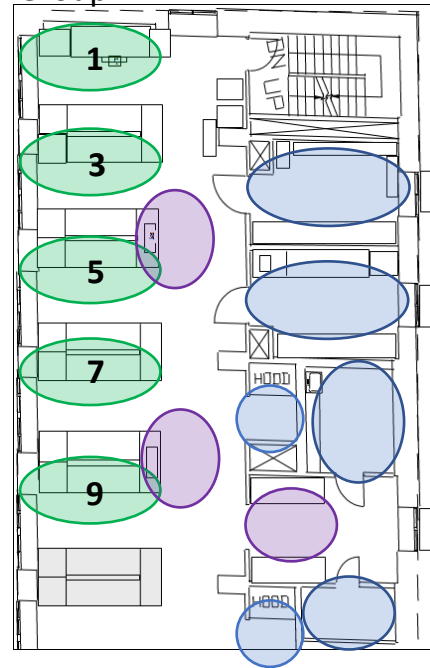
Laboratory Without Social Distancing



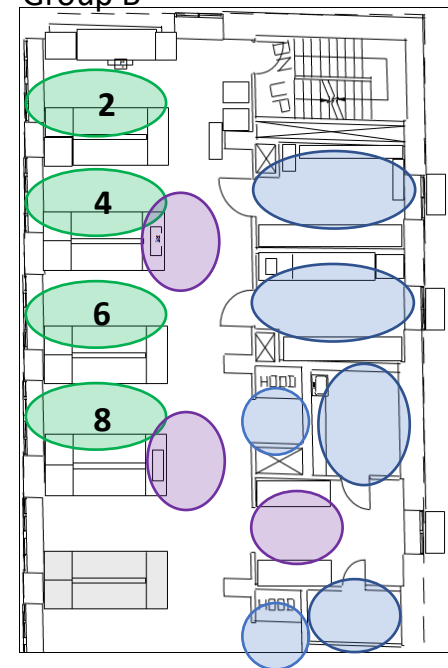
Laboratory Layout from
Lewis Thomas Laboratory

Laboratory With Social Distancing

Group A

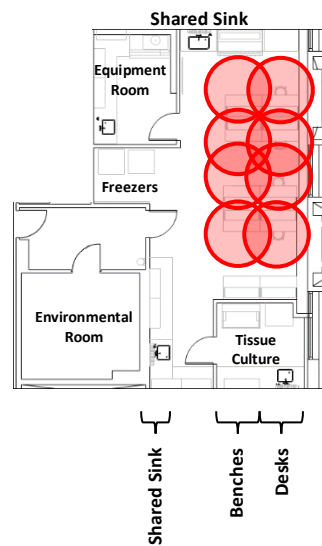


Group B



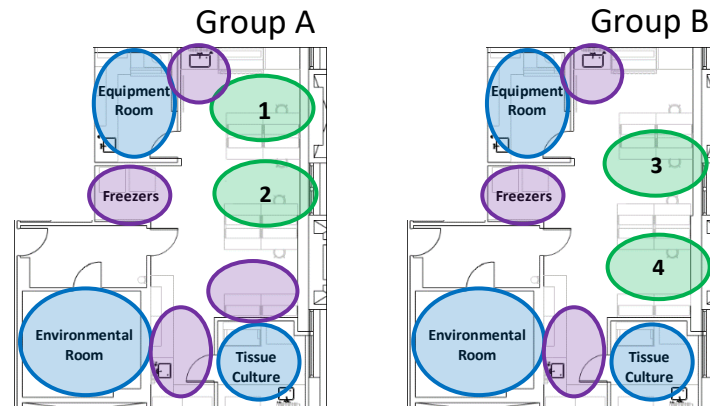
Individual Workstations	Shared Workstations (One User at a Time)
<p>● Adequate Social Distancing</p> <p>● Limited Social Distancing</p> <p>● Insufficient Social Distancing</p>	<p>● Managed by Scheduling</p> <p>● Managed with Waiting Areas (Short Duration)</p>

Laboratory Without Social Distancing



Laboratory Layout from
Moffett Laboratory

Laboratory With Social Distancing



Individual Workstations	Shared Workstations (One User at a Time)
<p>● Adequate Social Distancing</p> <p>● Limited Social Distancing</p> <p>● Insufficient Social Distancing</p>	<p>● Managed by Scheduling</p> <p>● Managed with Waiting Areas (Short Duration)</p>

Principal Investigator:
Responsible Individual:
Building:
Room Number:

Maximum Occupancy

1

Special Instructions:

- *Example: Schedule time in this room via...*
- *Example: Wipe down [equipment name] before leaving room*

You must wear a face covering when in the laboratory.

Lab occupants must disinfect all frequently touched surfaces on a daily basis.

Principal Investigator:
Responsible Individual:
Building:
Room Number:

Maximum Occupancy

3

Special Instructions:

- *Example: Schedule time in this room via...*
- *Example: Wipe down [equipment name] before leaving room*

You must wear a face covering when in the laboratory.

Lab occupants must disinfect all frequently touched surfaces on a daily basis.

APPENDIX 2
Guidance for Human Subjects Research

[To be released shortly]

APPENDIX 3

Phased Plan for Resumption of Services at Princeton University Library

As of March 20, 2020, Princeton University Library (PUL) moved to an online-only service and ceased all in-person operations on campus. Access to digitized collections, licensed databases, ejournals, e-books, research tools -- and to librarians through remote consultations -- has been maintained throughout the spring semester, and additional virtual assistance has been provided for ongoing research, teaching, and learning.

PUL has a phased plan for the resumption of on-site services consistent with the Executive Orders issued by the Governor of New Jersey. The plan was developed in close collaboration with the Office of Environmental Health and Safety and other campus partners to assure alignment with the University's requirements for a safe restart of campus operations.

This is a living document and may be subject to change as further information becomes available.

Reopening PUL will align with the University's commitment to safely reopen laboratories, libraries, and other facilities responsibly when state law permits. Our phased plan is as follows:

PHASE 1: (Current phase) Campus operations suspended, all Library facilities closed to Princeton University patrons and not physically staffed

1. The Library buildings are closed to the public, meaning no patrons may access Library spaces.
2. Online support, access to online collections, reference services, consultation, and workshops/tutorials continue, and Library staff provide online tutorials in response to queries from students and faculty.
3. Remote operations for working with data services through the Data and Statistical Services Lab and the Maps and Geospatial Information Center continue (consultation and workshops/training).
4. Some publishers and vendors have temporarily provided expanded access to online resources to facilitate online instruction and research, and these are listed on the PUL webpage: [PUL Support for Remote Research, Teaching and Learning](#).
5. Loan periods for print materials currently in circulation have been extended. Renewals can be made online.
6. Library fines suspended until further notice.
7. Interlibrary loan services for articles and other resources that can be delivered as a digital copy continue.
8. Faculty and graduate students are invited to send in requests for digitization that will begin in Phase 2, to support their own research and in anticipation of the possibility of an online-only or partially online fall term.
9. Focus groups are conducted with faculty and graduate students to gather input and feedback to support resumption of on-site services planning.

10. Training begins for staff returning to campus to provide Phase 2 services. This training includes usage of personal protective equipment such as masks and gloves as well as hand washing.
11. Physical spaces are prepared for the return of limited staff, including moving furniture and adding signage regarding protocols and traffic flow.

PHASE 2: Further support for research resumes, a small number of Library staff (10-25% density) return to campus to provide priority on-site services including book pick-up services and in-house digitization on request

1. The Library remains closed to the public, meaning no patrons may access the Library spaces. A small percentage of Library staff will need to report to campus to perform work that may only be conducted on-site, and they will be provided appropriately safe working conditions, in accordance with University policies and prevailing public health guidance and directives issued by national, state, and local government authorities.
2. Other Library staff will continue to telework where practicable.
3. Book pick-up and return services are implemented. The service begins at Firestone and subsequently extends to branch libraries. Patrons will pick up books reserved via the catalog from the Firestone Lobby, and at front entrances in the branches, and leave immediately. Patrons are expected to adhere to best practices for social distancing.
4. Isolation strategies for returned materials developed and enforced.
5. Electronic and physical delivery of materials from ReCAP resumes.
6. [HathiTrust Emergency Access Service](#) to digital versions of millions of volumes disabled due to the restoration of access to print collections.
7. Circulation of BorrowDirect materials resumes as soon as there are a sufficient number of BorrowDirect Libraries ready to circulate these materials.
8. Enhanced Digitization Service implemented. In light of the increased demand for digital access to books not available through the HathiTrust, as well as requests for materials held in the Library's special collections, a significant ramp-up of digitization efforts is required. Additional staff, scanners, and digitization equipment will be deployed. Patrons may request the digitization of any analog resource, subject to copyright restrictions.
9. Graduate students may schedule appointments to pick up materials from their carrels, if they have not already done so.
10. All other services remain remote.
11. Physical spaces prepared for limited return of patrons in Phase 3, with the addition of further signage regarding safety protocols and traffic flow.

PHASE 3: Partial reopening (on successful completion of Phase 2 objectives and state law permit) of some Library buildings to Princeton University patrons only

1. Book pick-up and return services remain in effect.
2. Pilots conducted to test limited patron access to the open stacks, browsing by appointment, and other methods. Access to the stacks may be restricted to staff or a limited number of patrons at one time.

3. Workflows for materials selected by patrons from the open stacks during appointments or special hours will be developed. Isolation strategies for materials will be developed and enforced.
4. Distancing and other safety protocols will continue to be enforced through signage and other means. Masks must be worn at all times. Gloves must be worn when handling books and equipment.
5. Installation of protective shields at all service points.
6. Library facilities will gradually reopen with some areas available for study and other uses, subject to the removal of seating, while others remain unavailable because physical distancing cannot be assured.
7. Limited opening hours are available.
8. All other services remain remote.

PHASE 4: Return to semi-normal Library operations and increased on-site services

1. Considerations for resuming semi-normal operations will include the following:
 - a. Consistent use of masks and gloves and adherence to social distance protocols by patrons during Phase 3, along with other risk mitigation measures, to support Library staff who engage in public services.
 - b. Successful installation of protective shields at all service points during Phase 3.
 - c. Successful removal of seating or limitations on access to some areas during Phase 3.
 - d. Continued 24-hour quarantine of circulated books that have been returned or used in-house.
2. Removal of most public computer stations to ensure social protocols.
3. Removal of commonly used items such as staplers, etc.
4. Special Collections Reading Rooms may have additional limitations in terms of access and use of materials.
5. Public exhibition areas including Cotsen Children's Library's public gallery and the Milberg Exhibition Gallery may open with limited hours and capacity.
6. Tiger Tea Room may not reopen for some time.
7. Remote services will continue in support of remote teaching and research.

PHASE 5: Return to new normal Library operations

1. Restrictions begin to lift as able.
2. Document published (red light, yellow light, green light) on how PUL will function while mitigating risk in response to virus outbreaks in the future.