

Resumption of Research Checklist

Pre-Occupancy Lab/Studio/Core Facility Checks:

Prior to ramp-up of research operations, once approved to resume research, it is advisable to conduct a pre-check of the laboratory/studio/core facility condition and supplies before starting research work. The following should be assessed as part of this check:

- Confirm fume hoods, biological safety cabinets, and other key safety equipment are operating normally, have current certification (if applicable), and alarms are not activated.
- Confirm correct start-up procedures are being used for critical pieces of equipment. If unsure, check manufacturers' websites.
- Confirm adequate waste collection supplies are available for near-term research needs. This also includes bleach and ethanol supplies for inactivating biological waste prior to disposal.
- Confirm adequate personal protective equipment (PPE) is available for near-term research needs.
- Confirm there is an adequate supply of soap and paper towels for hand washing and that disinfectant will be available for cleaning shared equipment and work areas.
- Ensure safety showers are not obstructed and eyewashes are functioning properly. Flush all eyewashes until the water runs clear.
- Check for leaks or unusual physical conditions in the research space that need to be addressed.
- Check expiration dates and integrity of chemical containers. Contact [Risk Management and Safety](#) to request pick up of expired chemicals or damaged containers.
- Assess what support services and deliveries (such as compressed gases, reagents, dry ice, etc.) may be required when research is restarted and determine whether those services are operational and if they will be available when needed.
- Anticipate delays in response and repairs and the possibility of limited PPE and other consumable supplies.
- Investigate how cores facilities will be managing their services and maintaining physical distancing requirements so you can prepare for any access requirements or delays.

Determine Lab Member Shifts/Rotations:

Physical distancing will need to be maintained in the research spaces. Therefore, it will not be possible for all research team members to be present in some research spaces at the same time. This may require coordination with other groups to be effective.

Consider splitting the research group into teams that will work during different shifts or on alternating days. Work should be planned prior to coming into the research space. If research team members do not have work that requires them to be physically present, they should not come to campus. This must be communicated to the research group often.

Take the following into account when dividing your group into shifts:

- Which lab benches/instruments/studios are adjacent? Can research team members be scheduled so that immediately adjacent workstations are not in use at the same time? If not, can workers be temporarily assigned to other benches or hoods or spaces to create enough separation? Open-design labs must coordinate shifts across principal investigators and neighborhoods to operate at reduced capacity.
- Determine which research team members will require close supervision and advisement while they are doing their work. Are there any tasks these individuals should be prohibited from performing while physical distancing measures are in effect?
- Ensure that research team members who are essential for the operation of specialized equipment or techniques make documentation available to other team members in case they are not present in the lab or are otherwise not available.
- Ensure that everyone has the necessary contact information for the other group members who will not be present during their shift in case there are questions or issues with materials or equipment in their workspace.
- Make sure the research team members take their assigned work schedule into account when planning research activities. They may not be at liberty to return to the lab, at will, to stop processes or monitor experiments, etc. Avoid running unattended processes if possible, and post information about experiments to communicate hazards to others who will be present in the lab when the initiator of the experiment is not present.

Consider Equipment Startup Hazards:

Anticipate the hazards associated with the startup of equipment such as distillation systems, chemical vapor deposition systems, flammable/toxic gas distribution cabinets, etc.

- Consider how safe restart of potentially hazardous systems can be ensured.
- Review operating manuals and standard operating procedures for safe startup procedures.
- Review equipment state and safely release or mitigate any stored energy sources.
- Review startup procedures for compressed gas cylinders, gas generators, gas distribution systems, or pressurized systems such as solvent drying apparatus.
- Plan to restart equipment when the process can be monitored for enough time to confirm safe continuous operation.
- Before restarting a process, consider what will be necessary to safely shut it down again if necessary.

Private/Lab Group-Owned Equipment:

- Label or place a sign near lab equipment with a reminder that the equipment must be disinfected **before and after** each use.
- Place a spray bottle with disinfectant and wipes near the equipment. (Do not forget to properly label the bottle.)

Shared Facilities and Equipment:

Resumption of shared facilities and equipment, including fume hoods and biosafety cabinets, procedure rooms, instruments, and instrument/resource facilities, will require coordination with other lab groups. To maintain physical distancing requirements in open-access facilities and when using shared equipment:

- Post an hourly schedule on the procedure rooms and equipment for shared equipment/instrumentation/spaces not in a core facility. For those in core facilities, consult the shared calendar prior to entering the facility.
- Disinfect equipment before and after each use. This includes all touchable surfaces. Place a spray bottle with disinfectant and wipes near the equipment.
- Make sure that contact information is available for equipment stewards or facility managers who may not be on site during all shifts.
- Consider that your access to certain facilities, including vivarium, may be affected by occupancy limitations. Check with the facility about scheduling and restrictions.

Cores and Core Services:

Do not assume that cores facility hours and services offered will be the same as before the hibernation. Check with the core facility prior to using core facility equipment or requesting services. Distancing guidelines may impact service levels.

Required Lab Attire:

Wear a face mask in all University of Notre Dame buildings. Masks must be worn while in research spaces and at all other spaces, except when eating.

In addition to masks, all standard lab attire and PPE, including long pants, enclosed shoes, lab coat, and safety glasses, must be worn in the lab.

Attire While in Non-Lab Areas of the Building:

- Gloves used in the laboratory shall not be worn outside the lab, in common areas, or in shared facilities except where normal lab protocol requires gloves to be worn.

- Use good hand hygiene and routinely disinfect high-touch surfaces such as cabinet handles in the lab.
- Post the maximum allowable occupancy for shared offices, rest rooms, etc. that still allow for adequate physical distancing.

Cleaning and Disinfection:

- Wash hands when entering the research space.
- Reduce clutter so that desk areas, lab benches, and other work areas can be properly disinfected at the end of the shift.
- Wear gloves when cleaning.
- Clean surfaces with soap and water if there is any surface dirt before disinfecting.
- Labs may also use alcohol to disinfect surfaces. Exercise caution as even 70% ethanol is flammable and can be ignited. The best practice is to saturate a wipe and apply to the surface rather than directly spraying if ignition sources are nearby.

Keep Flexibility in Mind:

Stay conscious of the fact that circumstances may change rapidly, and labs may need to suspend operations again on short notice. Be aware of what equipment may need to be taken offline and what materials would need to be secured in order to ramp down work.

Emergency Procedures:

Emergency procedures are unchanged.

- Risk Management and Safety is available at 574-631-8794.
- Call 911 from a University VOIP phone or 574-631-5555 from a mobile phone for assistance.