

Georgia Tech Research Continuity Guidance

There are many possible events that could disrupt research operations at Georgia Tech. These events could include travel restrictions imposed on both employees and visitors, a temporary closure of a campus building, or a temporary closure of campus. In addition, the ability to procure supplies and receive shipments in a timely manner could be impeded. This guidance applies to all researchers, including faculty, staff, graduate students, and undergraduate students. In any situation that disrupts our normal operations, there is likely to be rapidly changing circumstances. Therefore, guidance is likely to change in response. Please be patient in times of uncertainty.

Research continuity is defined as maintaining research activity, whether on-campus or remotely, to the extent possible while adhering to the principles below.

Objectives & Guiding Principles

The **objectives** of this plan are to:

- Provide guidance and structure to ensure the continuity of research at Georgia Tech to the fullest extent possible.
- Outline critical actions that researchers and research support staff should take and address in their unit-level continuity plans.
- Set direction and expectations for researchers regarding adjacent and critical dependent functions

The **guiding principles** of the plan are:

- The well-being and safety of our students, employees, and their families is of primary importance.
- Preserve the research function and activity to the extent possible within the current circumstances.
- A goal of the immediate situation is to increase social distancing, encouraging remote work arrangements when possible and engage in only the most critical on campus activities.
- We act as a community and assist each other and consider the collective impact of our actions.
- Offer alternative research functioning that aligns with compliance obligations to our sponsors and Institute policies.
- Utilize as many existing and familiar technological, human and process resources as possible; that is, minimize having to create or do something new and untested.
- Action plans should be verified and practiced.

Scope

This document is intended to provide broad guidance to the campus community on how to prepare for and deal with these potential impacts on the research mission of Georgia Tech. Every employee on campus is employed within a unit that has a designated continuity plan manager that has developed plans for your specific unit.

Critical Actions for Research Personnel and PIs

The absence of personnel, a disruption in supplies, or a closure of campus can adversely impact several critical research programs and resources. Some resources may require days of advanced planning to safely shut down or cease operations, others may require critical resources to remain safe and in operation (i.e. “online”), and some may require personnel to be designated emergency personnel to maintain critical infrastructure. It is possible that a campus building may not be accessible on short notice. Every research lab and unit should:

Identify what is Critical:

- All PIs should read the [research continuity plan](#), develop plans for their research group, and coordinate with their unit’s continuity plan manager, especially for designating essential personnel. Undergraduate researchers may have lab access if their role is deemed essential. When providing a list of essential personnel to your continuity plan manager, consider which of the following critical functions categorized by Georgia Tech that they fall into:
 - Critical 1:* Must continue (life, health, security)
 - Critical 2:* Must continue, perhaps in reduced mode
 - Critical 3:* Pause, if forced, but must resume within 30 days
 - Deferrable:* Resume when conditions permit
- PIs are encouraged to share their research group’s continuity plan with their colleagues for comments and suggestions.
- Make a list of critical infrastructure and critical procedures. Critical infrastructure is anything that cannot be simply powered down and walked away from, or whose continued operation is necessary to maintain another critical resource. Identify research procedures that can be curtailed or delayed and with how much advance notice.
- Ensure that critical equipment is appropriately monitored remotely or develop an alternative plan for equipment that is not remotely monitored (e.g. -80 freezers, cell culture incubators, nitrogen dewars).
- Shutdown non-critical operations. Environmental Health and Safety has developed guidance for laboratory shutdowns that is posted on their website at <http://ehs.gatech.edu>. Key elements are given below:
 - Close sashes on chemical fume hoods and Biosafety Cabinets

- Store, label, and secure hazardous materials (biological, radioactive, chemical) in the appropriate location(s) including associated wastes. Ensure all radioactive sources are appropriately shielded.
- Turn off all non-essential water and check the integrity of hoses and hose clamps.
- Ensure caps on all bottles of chemicals are secure and segregated appropriately, including hazardous waste.
- Turn off and unplug all non-essential electrical devices.
- Ensure all refrigerators and freezers are left on and that doors are secure. Check disconnects of large lasers, high-voltage equipment, etc. Ensure that essential equipment is plugged into power receptacles supplied by the emergency generator (usually orange or red).
- Turn off all gas cylinders at the tank valve. Note: If a low flow of an inert gas is being used to "blanket" a reactive compound or mixture, then the lab worker may want to leave the flow of gas on. This should be part of a pre-approved, written, posted standard operating procedure for this material or process. Any gas delivery system or process that is monitored via our Dangerous Gas Monitoring System should be terminated appropriately.
- Ensure all reactions and experimental procedures are appropriately terminated. Including vacuum work, distillations, glove boxes used for air or moisture sensitive reactions, and any other reaction in progress.
- Any reaction that cannot be suspended should be conducted in a fume hood (when possible) and labeled according to the GT procedure outlined here.
- Develop a plan for a complete shutdown of on-campus research activities in a safe manner in the event that we are instructed to do so.

Prepare Your Researchers and Staff:

- Obtain up-to-date contact information for all lab personnel.
- Cross-train research personnel to substitute for others by ensuring up-to-date laboratory procedures, document critical instructions for lab protocols, and encourage peer familiarity with each other's work.
- Be prepared for some of your laboratory personnel to fall ill and be absent.
- Develop and rehearse a plan for lab communication (email, Microsoft Teams, etc.) and remote access and meeting (e.g. BlueJeans, DropBox, OneDrive, Teams).
- Communicate your expectations clearly with GRAs and GTAs, but be mindful that this is a difficult time for everyone. We encourage faculty to listen carefully to students' concerns and look for nonverbal cues indicative of student stress or distress, erring on the side of student self-determination, e.g. regarding preferences for working remotely.

Meet Virtually When Possible:

- Use virtual meetings whenever possible, especially for larger group sizes. PhD thesis defenses can proceed as scheduled and facilitated via online participation by the broader audience. Thesis committee members and candidates can also attend remotely.

Prepare Your Lab Space, Equipment & Tools:

- Maintain a sufficient inventory of necessary supplies that consider a supply chain disruption, and a plan in case those supplies are not available or cannot be received.
- Maintain flexible work hours and scheduled rotations for graduate students who are usually seated in high density areas, to maximize social distance. Continue enforcing safe research practices including the two-person rule when required. The two person rule applies to any work environment where it violates safety standards for one person to work unattended or without another person in proximity.
- Save samples and results frequently. Whether computer or experimental data or resources, ensure that results are retained even more regularly than usual and that all data is available and appropriately backed up.
- Enact extra cleaning procedures for shared labs and core facilities in “high-touch” environments.

Plan Ahead:

- Prioritize research in anticipation of possible lack of access to facilities or resources. Consider experimental designs and schedules over the next few months and the impact of a disruption and develop a contingency plan suitable for your research group’s operations. Be prepared for core facilities to possibly be inaccessible due to campus closure, building closure, or lack of reagents or infrastructure.
- Verify the functionality and integrity of your data backup plans.
- Be prepared for delayed in repairs or servicing of research infrastructure.
- Utilize equipment loan agreements for not just laptops, but other equipment that could be safely operated and used remotely.
- While the university provides VPN access, work with your local IT staff to ensure that remote access to laboratory-specific workstations is feasible.
- Plan for the scenario of remote proposal submission and working with sponsored programs and research compliance.
- Check current travel advisories and restrictions by Georgia Tech and the University System of Georgia.

Resources Related to Adjacent and Dependent Functions

Working with Sponsored Programs, Industry Engagement, Grants/Contracts Accounting and Research Compliance. These organizations have developed plans for working remotely and support their ongoing operations (proposal submission, annual reporting invoicing sponsors, etc.). OSP will post guidance from funding sponsors. In times of modified operations, we expect delays in meeting deliverables and posting new awards. Please work with your Contracting Officer in OSP to manage your sponsor relationship. Federal agencies provide guidance for both current award recipients and those submitting proposals, including [NIH](#) and [NSF](#). Guidance is posted at <https://osp.gatech.edu/coronavirus>.

Procurement. Online tools and workflows for making purchases will remain available, and both local units as well as Procurement and Business Services have developed plans for working remotely if needed. Service Now will continue to be monitored by Procurement and Business Services for all questions related to procure to pay processes; normal response times should be maintained. Contract Officers may be working remotely but will provide any additional support that is needed. Goods will continue to be delivered by vendors and shipping carriers in the same manner as usual (barring any disruption from shipping carriers). Any changes to vendor delivery patterns will be communicated to campus. Units with loading docks should consider designating essential personnel to ensure receipt of deliveries.

Office of the Executive Vice-President for Research personnel will work remotely if necessary and maintain normal operations.

Library. The library is essential for the continuity of research. We expect library electronic resources to remain available. In the case of a limited closure, we encourage the Library to continue to provide virtual support services if it is not possible for in-person archival and library resource access.

Research Security. Some research activities (CUI, Classified, HIPPA protected) are confined to physical locations. Access to such systems may require that individuals are designated essential personnel.

Research Facilities Outside the Atlanta Campus. Off campus research facilities will follow local guidance and coordinate with Georgia Tech leadership. Facilities in metro Atlanta may require independent decisions and should consult with Georgia Tech leadership. All should follow their local continuity plan and refer to this document for guidance where appropriate.

Environmental Health and Safety services will be critical for the continuation of research and will respond to health and safety needs. A safe laboratory shutdown guide is also available. Guidance is posted at <https://ehs.gatech.edu>.

Conducting Animal Research and Working with Living Organisms. The Physiological Research Lab has a continuity plan for animal welfare and maintenance and will provide guidance to all personnel on IACUC protocols. Faculty and students may be deemed essential for access to local laboratory resources such as locally housed invertebrate animals and cell cultures and should work with their local continuity plan manger.

Conducting Human Subject Research. The Institutional Review Board staff will provide guidance to all personnel on approved IRB protocols. Visits of research subjects to campus may be curtailed.

IT Resources will be maintained. Off-campus access will be facilitated using existing campus VPN infrastructure. High-performance computing resources will remain online. IT support staff will be accessible remotely.