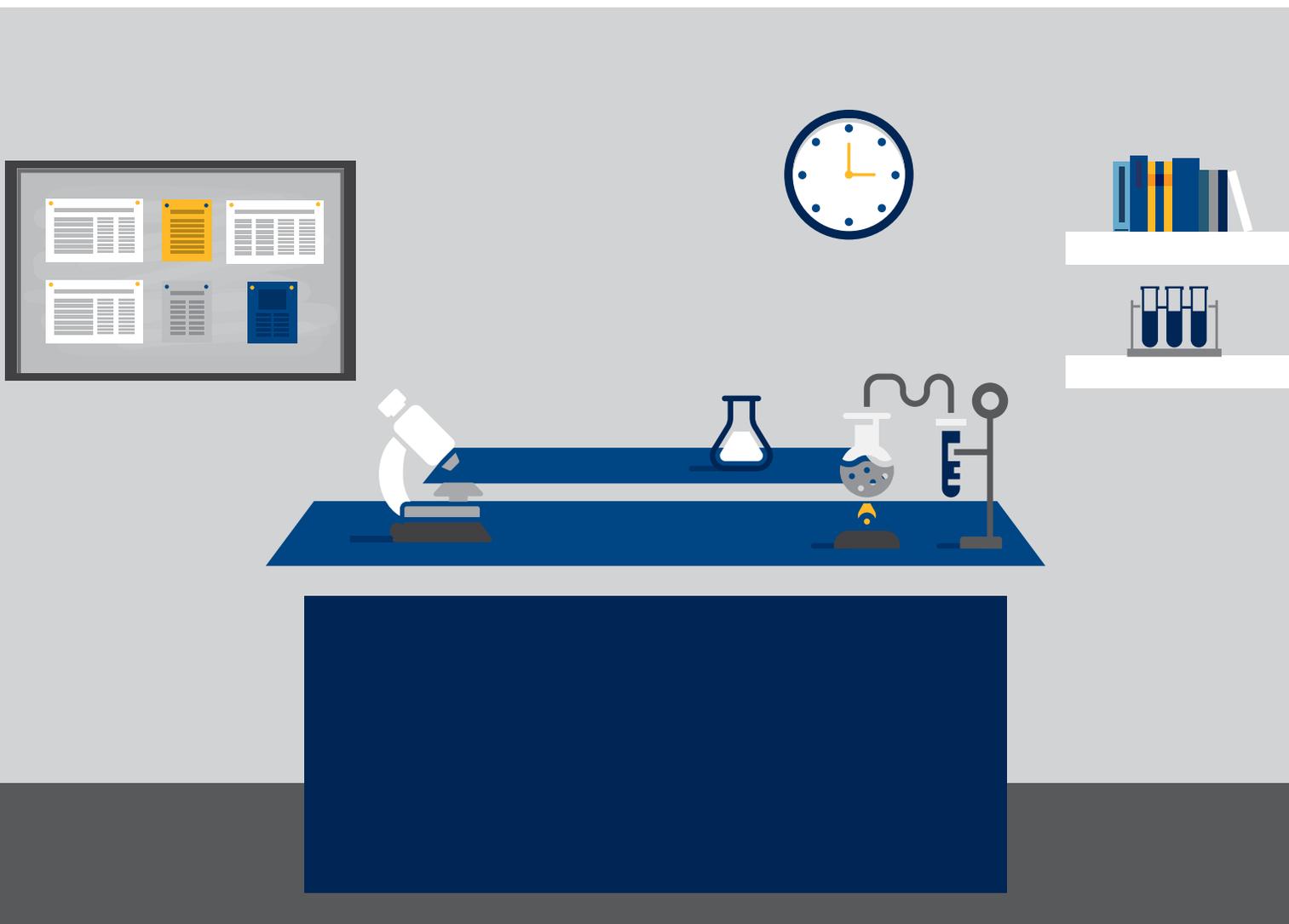


FALL 2020 RESEARCHERS' CONTINUITY OF RESEARCH SUPPORT DOCUMENT

Compiled by the Working Subgroup on Research



**NORTH CAROLINA
AGRICULTURAL AND TECHNICAL
STATE UNIVERSITY**

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RESUMING FULL RESEARCH OPERATIONS

Executive Summary

The Fall 2020 Planning / Working Subgroup on Research met weekly from May through July. This report represents the outcomes and recommendations from the subgroup's discussions and deliberations. Significant time was spent collecting, reviewing and discussing available data, information and best practices from national, state, local and university guidance relating to research operations during this unprecedented time of the COVID-19 pandemic.

It is important to note that research activity on the campus of North Carolina A&T State University did not cease during Gov. Roy Cooper's COVID-19 **"Stay At Home"** order and the university's subsequent move to online instruction and telework. Time-sensitive research activities continued, focusing on laboratory maintenance and limiting new data collection. The Working Subgroup on Research focused on developing a staged approach to returning research operations from this state to full capacity, assuming the continued presence of community transmission of COVID-19. As discussions occurred, four focus areas emerged: assignment of responsibilities; staging/access; hygiene; and training/monitoring/compliance.

A key finding centered on the need for a "one-stop shop" for faculty/students needing laboratory/research information and requesting laboratory access. A section of N.C. A&T's **spring 2020 COVID-19 webpage** houses a "Resources For Researchers" section that was underutilized during the move to telework. Thus the working group recommended that this webpage be kept current and include sections for research: training, signs, forms, plans and news/current events. Form types include but are not limited to the following: opening and closing laboratories; process for requesting access to laboratories; process for entering laboratories; process for leaving laboratories; and procedures for cleaning laboratories.

Key elements to facilitate continuity of research operations include:

- Staying compliant with various standing policies and procedures while being responsive to shifting COVID-19 related guidance;
- Social distancing in environments and work settings that were meant to be highly collaborative and cooperative, and not created to ensure social distancing;
- Providing timely and consistent guidance to researchers (see web site comment above);
- Maintaining a fair and equitable process for granting access to laboratories and other research space;
- Ensuring a rapid return to normal research activities as public health conditions permit, while maximizing the safety of employees and students;
- Prioritizing maintenance, functionality, and security of infrastructure with limited staffing during times of high COVID-19 community spread and "Stay At Home" orders;
- Protecting the careers of early-stage researchers;
- Ensuring that graduate students nearing completion of their degrees are able to complete their research activities; and
- Deployment and enforcement of data driven COVID-19 mitigation measures.

Charge to Working Group No. 1 (Academic Affairs and Research)

As N.C. A&T seeks to increase research activities from the current state, the Working Subgroup on Research was asked to consider how the university will continue its funded research, as well as its academic research, including students' research being conducted for their theses and dissertations. The charge to this group was to:

- i. Identify research maintenance activities that must continue when the university's operational status is under "Stay At Home" conditions.
- a. Develop a plan for moving to this maintenance stage in the event that the fall 2020 semester must be discontinued with short notice.
- ii. Develop a list of research data collection activities that when moved into a research maintenance activities stage, risk resulting in considerable loss of resources.
- iii. Develop a plan for continuing research data collection activities at the undergraduate/graduate/faculty levels while social distancing recommendations are in effect.
 - a. Include a list of activities that are/are not feasible.
 - b. Propose procedures for maintaining research safety, including sanitation requirements.
 - c. Provide assumptions required by this plan.

Guiding Principles



General

- Safety, security and well-being of the university community will be the leading driver of decision making.
- Long-term survivability of the research enterprise to include the maintenance, functionality and security of infrastructure should be a main concern.
- In prioritizing research activities, protecting the careers of early stage researchers and helping graduate students near graduation complete their degrees should be given consideration.
- Undergraduates are students first and researchers second.



Assignment of Responsibilities

- The guidelines in this document do not replace or supersede national, state, or local directives, nor **UNC System Office or N.C. A&T guidance**.
- Research related directives should flow through the Division of Research and Economic Development (DORED) to the College Deans and laboratories to ensure current information is consistently communicated to all research staff and faculty.
- All individuals working in laboratories will be responsible for ensuring they have received appropriate training and are up to date and compliant with all standing and pandemic related University operational guidance.
- For funded research, the Principal Investigator (PI) is responsible for ensuring funded projects have sponsor approval for revisions in project timeline, scope of work, budget, etc.



Staging/Access

- Access to laboratories and other research space should be fair and equitable.
- Staff will be provided access to laboratories and research during the academic seasons and temporary closures in three stages: maintenance activities only; time-sensitive data collection; and full data collection operations.
- Essential infrastructure such as power and information technology (IT) will be maintained continuously.

- Until the pandemic is over, increased spacing between laboratory researchers will follow social distancing guidelines in all laboratories (six-foot distancing per person per 200/250 square feet).
- Research will not be conducted alone after normal business hours.
- Research supplies are available to continue safe and proper protocols.
- All individuals returning to laboratories do so voluntarily.
- Building access and laboratory security follows standard and pandemic related operations and guidelines.
- Support services are available such as: compressed gasses (compressed air, houses gases, DI water); glass wash services; hazardous chemical or biological waste pickup; supply deliveries; regular custodial services; etc.
- Laboratory staff will minimize interactions in laboratories, researchers will identify key individuals to manage issues such as animal husbandry and key experiments in each laboratory.
- Field work should be done via day trips only. Field workers must be able to leave and return to their local homes every day in a vehicle and limit the number of researchers working together, to maximize social distancing when traveling and working together.
- Human-subjects data collection should focus on research that can comply with social distancing guidance that it is in effect at the current stage.

Hygiene



- Facilities will provide materials to clean laboratories. Laboratory managers, researchers and/or their designee, will be responsible for cleaning their individual laboratories. If an individual laboratory requires specialized cleaning, the researcher or laboratory manager must reach out to facilities for needed materials.
- All cleaning must meet **CDC** and **EPA** disinfection guidance with respect to contact times (e.g., laboratory benches, common areas, equipment, etc.)
- While working in laboratories, face coverings are recommended at all times. Each researcher will determine the specific type of PPE and face covering for their laboratory based on **OSHA**, CDC and EPA recommendations and current risk management standards and guidelines.

Training/Monitoring/Compliance



- All chemicals, biologics and other materials and equipment will be inventoried and properly handled and stored at all time.
- All IRB, IBC and IACUC protocols are in place and updated for any modified protocols.

Plan Details

Identify research maintenance activities that must continue when our operational status is under “Stay At Home” conditions.

Movement in and out of this stage is dictated by federal, state or local “Stay At Home” orders. When “Stay At Home” orders are in effect, research moves into a “maintenance” stage. During this stage, DORED will work with provost’s and deans’ offices to implement a similar process that was used for the March 2020 move to this stage in which mandatory research employees were identified. It is recommended that an online form be developed and implemented specifically for research activities, as opposed to the emailing and spreadsheets that were used during March of 2020, as part of general campus activities.

This “maintenance” state will require research activities to focus on what can be accomplished under telework. Maintenance is defined as getting laboratory activities to a place where new data collection activities can be paused without setting the research back. For example, maintenance of animal breeding lines, maintenance of cell cultures, etc. The only ongoing new data collection will be related to time sensitive activities such as ongoing longitudinal studies or COVID-19 related activities in the laboratory. Data collection activities should focus on telework conditions that can be carried out remotely under safe conditions and not laboratory research.

The process will be managed through DORED, with requests for faculty and staff who need access to their laboratories processed from chairs, to deans, to the vice chancellor for research and economic development. Graduate students are not typically granted access to research laboratories at this time. However, in rare circumstances, graduate students may be given permission to assist with maintenance, if it is typically part of their assistantship or critical to the research mission. A very limited number of research faculty and staff are expected to access their laboratories to perform maintenance related activities. Minimal new data collection will be occurring.

Develop a list of research data collection activities that when moved into a research maintenance activities stage, risk resulting in considerable loss of resources.

Graduate students whose dissertation or thesis is dependent upon research conducted in laboratories will request access to said laboratory to complete graduation requirements, or risk delay in their graduation. Some national guidance has stated that a semester is an acceptable delay, as this often happens for a variety of reasons, but longer is significant enough to be detrimental to the student's career trajectory. In a similar manner, early career faculty and funded faculty can risk significant setbacks to their careers if research is limited to maintenance activities for longer than a semester. It is acknowledged that "Stay At Home" orders may severely restrict these activities, but as activities are allowed, consideration and prioritization should be given to these activities.

It is important to note, that when under "Stay At Home" orders, either federal, state or local, only maintenance activities as described above will be approved. However, as the pandemic lingers, and/or state and local guidance regarding social distancing guidelines are relaxed, faculty will request access following the procedure described above for access for research activities beyond maintenance. Work on theses and dissertations will only be considered with special approval. Through collaborative work with the Office of the Provost, DORED, The Graduate College and the college deans, a request for an approval process for graduate student access to laboratories was developed and released April 21, 2020. The form should be updated and added as an online request form to the research webpage. The process is focused on graduate student activities. As N.C. A&T transitions to different stages (see staged approach below), faculty and students will be allowed to move into laboratories and/or field research in a structured manner. All research/laboratories that follow social distancing recommendations can receive access to their laboratories if their research is deemed time sensitive to maintain the survivability of the research enterprise.

Develop a plan for continuing research data collection activities at the undergraduate/graduate/faculty levels while social distancing recommendations are in effect.

Once "Stay At Home" orders are lifted, laboratories will be able to reopen granting access in the following procession: faculty; research staff including post docs; graduate students; and then undergraduate students. During this time, DORED will work with various university units—e.g., Human Resources, deans, chairs, faculty, etc.—to ensure all time-sensitive research is allowed. Research that cannot comply with the CDC recommendations of social distancing of at least six feet, will not be allowed at this time.

Given the small number of graduate students and the integral nature of research to their education, it is possible that under this scenario graduate education on campus could resume operations with appropriate social distancing guidelines in place. Certainly, graduate programs that require in person experiences could and should be allowed to continue. DORED and laboratory operations should be allowed to return using the staged approach below. Only necessary graduate students, i.e., those associated with funded research and completing theses and dissertation work should be allowed in the laboratories. It is possible that select groups of undergraduates, e.g., those with clinical or laboratory experience requirements, might return.

Considerations for research operations:

- Faculty member is responsible for their individual laboratory
- Ethics protocols are updated and approved (e.g., IRB, IACUC and IBC)
- Establish unidirectional building access (entry/exit) and signage throughout building
- Define laboratory capacity for social distancing (All laboratories)-depending on size
- Identify work that can be accomplished remotely to reduce need for laboratories
- Introduce shift schedules to limit the number of people in laboratories
- Create structure for ensuring people in laboratories maintain the six-foot distancing (one person per 200/250 square feet)
- Ensure laboratories and public spaces be cleaned frequently
- Place signage in cross traffic areas in laboratories
- Maintain access log with times of entry/exit and full contact information
- Use/install electronic access mechanisms if possible
- Detail shut down procedures
- Define protocols for research maintenance in case of a shut down
- Human subject research studies that can follow social distancing recommendations should be allowed to continue, but that which cannot should be disallowed (IRB approval must reflect this)
- Human subject research studies should:
 - o Be completed with remote interaction tools whenever possible
 - o Include face-to-face assessments or visits only after careful assessment and weighing risks and benefits for the participants
 - o Putting special procedures for visits/interactions to ensure safety and social distancing when face-to-face interactions are allowed
 - o Include measures that reduce direct contact
 - o Include daily wellness checks for research personnel when participant interaction is face-to-face
 - o Include remote wellness screenings for subjects prior to them reporting for study

Table 1.1.i. Consideration for Various Types of Research

TYPE OF RESEARCH		CONSIDERATIONS
Laboratory research (wet and dry labs)		Hygiene practices, PPE, social distancing, access control (capacity + directional traffic)
Laboratory (animals or living organisms)		IBC, IACUC - Hygiene practices, PPE, social distancing, access control (capacity + directional traffic)
Field research (animals, plants, sites)		IACUC - Hygiene practices, PPE, social distancing
Clinical/human subject research (clinical, focus group, observation)	In-person	IRB - Hygiene practices, PPE, social distancing, risk assessment, communication
	Surveys	IRB - Can be managed in telework
Computational and remote sensing research		Privacy, minimal adjustments/ITS support

Staged Approach

N.C. A&T’s planning for returning research activities to capacity is broken down into three stages: (1) maintenance activities only; (2) focus on survivability of the research enterprise with special approvals granted; and (3) normal operations. In the approach advocated here, stages are detailed to give faculty/researchers more information:

- Stage 1 represents access restricted to only the maintenance of critical research capability.
- Stage 2A represents access restricted to prioritized activities, such as COVID-19 rapid response research, time-sensitive research activities, funded research activities, and graduate student thesis and dissertation activities.
- Stage 2B represents increasing access and activities as social distancing guidelines are relaxed.
- Stage 3 represents a return to business as usual, full campus density and activity.

Table 1.1-ii. Staged Approach to Increasing Research Activities

STAGE	EXTERNAL CONDITIONS	SUMMARY & METRICS	CRITERIA
1	<p>Situation unknown and changing.</p> <p>COVID-19 hospitalizations on the rise</p> <p>Testing limited; PPE shortages</p> <p>Governor's Stay At Home orders in effect</p>	<p>Only maintenance activities are allowed</p> <p>Researchers must be designated as mandatory employees to be on site</p>	<p><i>New data collection activities are extremely restricted with special approval given to longitudinal research that would suffer irreparable damage if moved to a maintenance state.</i></p> <p><i>Activities focus on protecting life, safety and critical research infrastructure/capability (maintaining cell lines, animal health, instrumentation, etc.).</i></p> <p><i>Minimum staffing anticipated.</i></p>
2A	<p>Social distancing relaxed with the governor's Safer At Home guidelines in effect</p> <p>Preparations for next stage</p>	<p>On-campus access allowed to maintain research capability or prevent catastrophic disruption</p> <p>COVID-19 related research encouraged</p> <p>Paused and ongoing time-sensitive research allowed to resume or continue</p>	<p>Research access limited to social-distanced essential personnel only for priority research activities:</p> <ul style="list-style-type: none"> • Life safety and time-sensitive research (as stated above) • "Time-sensitive research," where a delay would have significant financial impacts or catastrophically disrupt the project or protocol (including avoiding necessary euthanasia of research animals) • COVID-19 related rapid response activities (e.g. testing, ventilators, etc.) ** • Field research: Prioritize seasonal data collection or experiments close to completion where pause or deferral would lead to "catastrophic loss" of research results (Note: Undergraduates are not approved to participate.) <ul style="list-style-type: none"> • Laboratories are able to purchase necessary supplies • Social distancing, facial coverings, cleaning measures understood and in place
2B	<p>Further relaxation of restrictions / standards for return to normal</p> <p>Preparations for next stage</p>	<p>Gradually expand number of people on campus while maintaining social distancing</p> <p>Time-sensitive new on-campus research allowed, with social distancing</p> <p>All research that can be done remotely should continue to be, including all seminars, group meetings, etc.</p>	<ul style="list-style-type: none"> • Allow access for researchers whose work cannot be conducted remotely, if it can be conducted safely under the proposed guidelines (including social distancing, that they are not high risk, that they feel safe doing so, that they wish to do so and are not being pressured by their PI). Prioritize access for graduate students and postdocs close to completing their degree/term of appointment (e.g., within three months of completion). • Allow access to offices for faculty and graduate students on application, 1-3 days per week to allow for psychological relief and family harmony. Must maintain social distancing and maximum occupancy per building. • Prioritize research for completion of grants with end dates within three months (where funding agency has not granted leniency). • Humanities and Social Sciences: Prioritize researchers with deadlines (tenure, book contracts, degree completion, etc.). Some monitored access to offices for those at critical career points (tenure, promotion). • Field research: expand approvals depending on what current restrictions are in the counties where field research is to be conducted. <ul style="list-style-type: none"> • Laboratories are able to purchase necessary supplies • Social distancing, face mask/covering, cleaning measures are understood and in place
3	<p>No (or minimal) state restrictions</p>	<p>All types of on-site research are allowed</p>	<ul style="list-style-type: none"> • Resume normal research operations, including open museums and libraries, field research and human subjects research

Resources

- Congressional Research Service Reports
<https://crsreports.congress.gov/product/pdf/R/R46309>
- APLU COVID-19 Resources
<https://www.aplu.org/news-and-media/communications-resources/coronavirus/index.html>
- AAU COVID-19 FAQs
<https://www.aau.edu/covid-19-federal-guidance-faqs>
- Council On Governmental Relations (COGR) Resources
<https://www.cogr.edu/institutional-and-agency-responses-covid-19-and-additional-resources>
- Centers for Disease Control and Prevention (CDC)
<https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/considerations.html>
- Contact Tracing
<https://www.theverge.com/2020/4/10/21216550/contact-tracing-coronavirus-what-is-tracking-spread-how-it-works>
- N.C. A&T COVID-19
www.ncat.edu/coronavirus/aggies-care
- N.C. A&T's COVID-19 Return to Work Guidelines
https://www.ncat.edu/coronavirus/returntowork_guidelines_final.pdf
- N.C. A&T Office of Environmental Health and Safety
<https://hub.ncat.edu/administration/business-and-finance/facilities/safety/>

- N.C. A&T Request for Access to Research Labs Instructions

Once application is submitted in Competition Space:

For STUDENTS: Faculty advisor and department chair will receive email from "Panda Powell" with subject "Request to Review an Application."

For FACULTY, STAFF and VISITING SCHOLARS: Department Chair, and College Dean will receive email from "Panda Powell" with subject "Request to Review an Application."

Please contact below if you have any questions or issues with Competition Space:

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