

Phased Resumption of Research Activity Framework (07/21/20)

(Based on UNH document created in partnership with VCRs/VPRs from the University of California system and APLU, and borrowing liberally from planning at other institutions, such as the University of Washington)

Goal: To keep everyone safe, while increasing research activity in a phased approach as safety becomes easier to maintain.

Our initial focus is on managing access to those types of research spaces to be found on the main university campus and nearby university facilities. These include science research laboratories, shared research facilities, animal research areas, and specialized facilities for scientific instrumentation. They also include clinical research facilities and makerspace. Finally, they include sites remote from the main university campus, such as field sites.

The Phased Resumption of Research Framework is informed by the following principles and observations.

Principle #1: *Follow the cognizant Local, State, and National Public Health Authority directives to stay-at-home and implement social distancing.*

- Observation: Public Health authority directives have thus far become more restrictive over time (recommendations, urgent recommendations, identification of essential businesses and closures, identification of allowable activities like exercise, more restrictive social distancing directives such as closing of parks and beaches, recommendation/requirements of face coverings, etc.). We can expect that “loosening” will look similar in reverse.
- Observation: Most experts seem to agree social distancing should continue indefinitely, and the State of NH has issued guidelines for essential businesses that PSU will have to abide by. Higher risk groups—like older faculty or those with underlying health conditions—shelter at home longer.

Principle #2: *Protect the health and safety of the faculty, staff, students, clinical patients and research subjects, and community, emotional as well as physical.*

- Observation: No one should feel they are being compelled to work on campus or in the field during periods of stay-at-home directives if they do not feel comfortable. Safety within laboratories must be rigorously maintained, with adequate access to PPE and other safety related supplies. EHS must be made aware of all research and engagement activities within university spaces, and those that are being conducted in-person at a remote site.
 - The method of obtaining permission work onsite either on campus or at another location is to complete the PSU [Application for Research Resumption](https://campus.plymouth.edu/research/wp-content/uploads/sites/163/2020/07/PSU_Application_for_Research_Resumption_2020-07-21.docx), which can be found at https://campus.plymouth.edu/research/wp-content/uploads/sites/163/2020/07/PSU_Application_for_Research_Resumption_2020-07-21.docx . Once reviewed and approved by Director of Research & Innovation, the plans will be forwarded to EHS and Provost. Research plans will not be approved to allow access unless adequate safety supplies and procedures are available and in place. EHS will work

with faculty and staff to determine appropriate PPE and will assist in procurement. For research involving human subjects, or the use of vertebrate animals, subsequent approval will be needed from the IRB or IACUC. The Principal Investigator (PI) must identify those considered to be essential research personnel.

- Observation: Limited access is likely to persist for some time. A vaccine is many months away.
- Observation: It may be challenging to re-start projects that are distributed over multiple sites or depend on international collaborations.
- Observation: Graduate students often play multiple roles at the university. Care must be taken to ensure the appropriate balance between the student educational mission and the PI's research mission. Policies for graduate students must also take into account that research is often part of the requirements for their degrees.
- Observation: Lifting of travel restrictions such as restrictions on international travel and requirements for essential travel only are necessary before most field research can fully recommence. This includes human subject related field research that must be conducted in person.
- Observation: A number of research projects have successfully and safely transitioned to being fully remote, requiring infrequent or no access to university spaces. While also considered important and essential, **they are not considered in the priority tiers discussed below**. Furthermore, even if research can be conducted at home, we recognize that this may not be as productive or efficient for some researchers.

Principle #3: *Protect the careers of researchers, and assign priority based on need, e.g., for those whose careers may be more vulnerable, who are funded only by research, or for whom an interruption in research productivity may jeopardize future funding.*

- Observation: Early career faculty, research faculty, research staff, and graduate students, in particular those nearing the end of their programs, may be dramatically impacted.

Principle #4: *Undergraduates are students first, researchers second.*

- Observation: Except under the most exceptional of situations (e.g., the undergraduate student is an essential team member for research that must be performed in person at a research site, or depends on the research activity for their financial aid and for whom remote work is impossible to assign) undergraduate students should be sheltering-at-home under the Public Health authority directives until further notice

Principle #5: *The process for granting access should be fair and transparent, and decisions should be data-driven.*

- Observation: Provost, EHS, and CRI will develop and endorse the guidelines for re-starting research; IRB or IACUC engagement in the process may be required.
- Observation: Enforcement of access policies will be necessary. Building access can be monitored remotely, but there are needs for monitoring tools to ensure safety inside labs and at field sites. Faculty need to be partners in enforcement.

Principle #6: *Ensure as rapid a research restart as the public health conditions permit. (We must be prepared for both opening and reclosing)*

- Observation: General considerations for smooth re-start of research activity may include flexible work schedules, ability to hire, planning for supply chain issues, and preparing core facilities in advance of need.
 1. To ensure social distancing requirements and to reduce density of research personnel in university research spaces to 250 ft²/person, consider permitting 7 day/24 hour lab access, work shifts or staggered work days.
 2. HR should allow externally-funded hiring of necessary staff so that re-start can proceed as quickly as possible.
 3. There are likely to be supply chain issues on restart. Deliveries of scientific supplies should be coordinated with Mailroom. Under no circumstances should safety be sacrificed due to lack of adequate supplies, type, and quality of PPE.
 4. Plans must be in place for quickly ramping back down should public health conditions warrant.

Principle #7: *Participate in mitigating the health-related impacts of COVID-19 and respond to needs of our constituents.*

- Observation: Some PSU researchers are contributing to health-related research, while others are working with industry and communities on research and engaged scholarship.
- Outreach to state and local organizations, governmental agencies, and health-care providers, as well as others in the community, is critical. PSU efforts should be collaborative and coordinated.

Phases and Permitted Research Activities

(The 5-stage phasing description and tabular representation (see below) has been liberally borrowed from the University of Washington’s research restitution plan and UC Berkeley’s plan. The phased description was developed by the UC VCRs and shared widely with the APLU Committee on Research.)

Public health directives and the current state of the health care and COVID-19 public health response systems determine the timing as to when any given institution in its local context is permitted to move up or down between phases. Before allowing greater researcher access to labs, libraries, and research collections, a plan and rigorous enforcement of social distancing directives is necessary. Elements of such a plan may include (this list is intended to be illustrative, not exhaustive): scheduled/work-shift access; required facial coverings; 6-foot distancing; depending on size of research space and nature of activity therein, density limits such as no more than 2 researchers per bench, max 3 per lab unless further density is justified and approved; temperature checks at start and end of work shift; disinfecting work surfaces after use; etc.

PHASED APPROACH

At the highest level, most institutions appear to be planning around three phases: shutdown, business as usual, and some intermediate state. In the approach advocated here, we identify finer graduations between “shutdown” (most institutions are never fully closed but support some minimal standby capability) and return to full access and activity. Note that these phases will need frequent review and adjustment. Also, at any time, plans must be in place for a return to a previous phase.

PHASE	EXTERNAL CONDITIONS	SUMMARY & METRICS	CRITERIA	TIME PERIOD
1	<p>Situation unknown and changing.</p> <p>COVID-19 hospitalizations on the rise</p> <p>Testing limited, PPE shortages</p>	<p>Only research deemed critical is allowed</p> <p>Researchers must be designated as Critical to be on site</p> <p>On site research activity estimated at 5% of normal site-based access/activities</p>	<p><i>Research facilities and field stations are closed, except where personnel are required to protect life safety and critical research infrastructure/capability (maintaining cell lines, animal health, instrumentation, etc).</i></p> <ul style="list-style-type: none"> • Minimum staffing. • Authorization for one-time access to faculty offices to pick up books and materials, shut down instrumentation, etc. delegated to Center for Research & Innovation. 	3/15/20 - 3/25/20
2	<p>COVID-19 hospitalizations on the rise, testing limited, PPE shortages</p> <p>Initial Stay Home/Stay Healthy directive in place</p>	<p>On-campus access allowed to maintain research capability or prevent catastrophic disruption</p> <p>No undergraduate students are allowed to participate in on campus research</p> <p>Researchers must be designated as Essential to be on site</p> <p>On-site research access/activity transitions to up to approximately 15% of normal</p>	<p><i>Research facilities and field stations are closed, except where personnel are required to protect life safety and essential research infrastructure/capability (maintaining cell lines, animal health, instrumentation, etc).</i></p> <ul style="list-style-type: none"> • Life safety and critical research (as stated above) • “Critical Research”, where a delay would have significant financial impacts or catastrophically disrupt the project or protocol, or adversely affect populations of research animals. • Finish up critical projects - no “new” projects can be initiated on campus. • Field Research: Prioritize seasonal data collection or experiments close to completion whose pause or deferral would lead to “catastrophic loss” of research results. • Graduate student research approved only with appropriate justification. • Labs are able to purchase necessary supplies • Social distancing, facial coverings, hospital grade cleaning measures understood and in place (e.g. PPE requirements, disinfection protocols) 	3/15/20 - 5/28/20

<p>3</p>	<p>Local COVID-19 hospitalizations flatten, then drop</p> <p>COVID-19 testing capacity increases</p> <p>PPE shortages still exist</p>	<p>Definition of “essential” relaxed to include time-sensitive research.</p> <p>All research that can be done remotely should continue</p> <p>Undergraduate students are NOT allowed to participate in on campus research</p> <p>Undergraduate students may be allowed to participate in offsite field research with social distancing</p>	<p><i>Deadline-driven research activities:</i></p> <ul style="list-style-type: none"> • Seasonal data collection such as field and agricultural work, experiments close to completion, or deadline driven, whose pause or deferral would lead to catastrophic delay or loss of research results. • Prioritize access for graduate students close to completing their degree/term of appointment. • Prioritize research for completion of grants with end dates within 3 months ~July 31, 2020 (where funding agency has not granted leniency). • <u>Field research</u>: expand approvals depending on what current restrictions are in the state and counties where field research is to be conducted. • <u>Humanities and Social Sciences</u>: Expand access to electronic collections where electronic delivery is possible. Research consultations provided remotely. • <u>Human Subjects</u>: Group 3, low-risk human subjects research (work with IRB). 	<p>5/28/20 – TBD</p>
<p>4</p>	<p>Local COVID-19 hospitalizations continue to decrease</p> <p>On-campus COVID-19 testing at needed capacity</p>	<p>Gradually expand # of people on campus and field operation while maintaining social distancing</p> <p>Continue all research that can be performed remotely</p>	<p><i>Low-risk and non-essential research activities:</i></p> <ul style="list-style-type: none"> • Limited access to research offices. Must maintain social distancing and max occupancy per building research space, PPE required in common spaces. • Onsite research that can be done by a single person • Offsite field work that can easily be accomplished using social distancing 	<p>Expected: Aug, 1, 2020</p>

	PPE widely available	<p>New on-campus research and low-risk research allowed but only at 50-70% capacity, with social distancing.</p> <p>Undergraduate students are allowed to participate in on campus research</p>	<ul style="list-style-type: none"> • <u>Lab Research</u> - expand on case by case basis. Maintain social distancing and reduced occupancy per research space. Where shared space is permitted, personnel should work standard shifts to minimize contact and facilitate contact tracing. • <u>Field Research</u> - expand on case by case basis (depending on local conditions/restrictions at field sites, travel restrictions, ability to travel safely and ability to social distance at field sites) • <u>Humanities and Social Sciences</u> - Expanded access to electronic collections to the extent that partner library services are available. Research consultations provided F2F with appropriate cautions. • Human Subjects: Group 2 & 3, medium-risk human subjects research (work with IRB) 	
5	Vaccine or effective treatments used in combination with widespread testing to identify COVID-19 positive individuals or immunity along with contact tracing and quarantine protocols that reduce the risk of community transmission of COVID-19 to a low level.	<p>All types of on-site research are allowed</p> <p>On site research access/activity transitions to normal</p>	<ul style="list-style-type: none"> • Restart normal research operations, including field research and Group 1 human subjects research. 	

**These include research that: (a) will help deal with the pandemic, (b) has the potential to lead to therapies for COVID-19, and (c) will help the nation recover after the pandemic eases. Must file a safety plan; spot checking with facilities staff and EH&S safety and biosafety

inspection.