CMU CENTRAL MICHIGAN UNIVERSITY | Office of Laboratory & Field Safety

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Restarting Research Activities in Laboratories, Studios and Shops

The CMU Fired-up for Spring website contains details and expectations for safely returning to campus. Highlights to consider from this website include:

- Safe Staffing Levels
- Mandatory Self-Screening
- COVID-19 Workplace Training
- Face Masks and Coverings
- Cleaning and Disinfecting

In addition, there are many laboratory-specific things to consider. The following checklist has been developed by the Office of Laboratory and Field Safety (OLFS) in conjunction with CMU Leadership to establish expectations of researchers returning to campus. It is meant to serve as a source of information and an aid to Principal Investigators (PIs) and other Supervisors in their development of research resumption plans under SARS-CoV-2 (COVID-19) mandates. CMU requires written plans to resume research activities to ensure worker safety and compliance with current university directives. If you have questions, please contact your College Dean or the Vice President of Research and Innovation.

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Checklist for Restarting Research Activities in Laboratories, Studios and Shops

This general checklist is intended to aid you and your research team as you plan to restart laboratory, studio or shop operations. This checklist will help to minimize potential disruptions and to ensure safety for all working in a research facility. For specific areas such as Radiation, Biological or Chemical Hazards, be sure to contact the Office of Laboratory and Field Safety for specific guidance. Items that do not apply to your spaces may be marked N/A.

Lab, Studio or Shop Environment:

ITEM	Complete	N/A	Notes
Review any ongoing experiments that were planned or running during suspended operations that could have been affected by loss of electricity, water, or other services.			
Closeout student research projects remaining in the labs, studios, and shops from prior semesters.			
Ensure chemical fume hoods are functioning properly.			
Ensure biological safety cabinets are functioning properly.			
Ensure that all refrigerators, freezers, and incubators are functioning properly.			
Ensure any essential equipment that was on emergency power is functioning properly.			
Ensure any sensitive electrical equipment that was shut off and unplugged is functioning properly.			
Review equipment operation safety manuals. • Review equipment manuals for safe startup instructions. • Review equipment status and safely release any stored-up energy sources.			
Ensure any unplugged non-essential electrical devices particularly heat-generating equipment such as hot plates, stir plates, vacuum pumps, or ovens are functioning properly.			
Pour water down dry traps/floor drains to mitigate sewer gas smells that are often confused with natural gas leaks.			

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ITEM	Complete	N/A	Notes
Confirm all chemicals and glassware on the benchtops or stored in cabinets are still secured.			
Confirm dewars and cryogen containers that were used for sample storage and critical equipment are still filled.			
Confirm that storage of perishable items that used alternate cooling methods (e.g. liquid nitrogen, dry ice, etc.), vulnerable items that were put in storage units that have power backup systems, or items that were stored in duplicate locations are still secured and safe.			
Ensure that containers of chemicals, biohazardous, radioactive materials, and hazardous waste are still properly labeled, closed, stored in secondary containment device, and secured in appropriate storage areas. Confirm that all chemicals with special storage conditions (water-reactive, pyrophoric) are being maintained in the appropriate environment. Check that desiccators contain enough active desiccant to maintain proper storage conditions. Note expiration dates on peroxide-forming chemicals and confirm they are safe to remain in the lab. **Hazardous Waste Disposal** and **Biohazardous Waste Process** are functional and following usual protocol.			
Check infectious material and toxins that were put away for storage are still secure.			
Check all gas cylinders to ensure that they are still secured, and valves closed. Ensure natural gas lines in the lab, studio, or shop are still closed.			
Ensure that all water sources (e.g. circulating water baths, aspirators, etc.) are not leaking.			
Contact Vivarium staff to ensure animals used in your research have been cared for and safe.			
If necessary, restore any backed up secure data and turn on non-essential/non-critical computers and equipment.			

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Personnel and Personal Protective Equipment

Workers in Labs, Studios, or Shops are the most important asset and must be granted a safe workspace. Until directed otherwise, physical distancing will still be a valuable tool to reduce spread of COVID-19 and other respiratory diseases. **Face coverings worn in labs, studios, or shops should be part of the risk assessment for the work to be done to ensure that flammability hazards have been addressed.**

ITEM	Complete	N/A	Notes
Form staffing teams and rotations to limit staffing numbers to help with physical distancing. Establish staggered schedules (AM vs PM, every other day, etc.).			
Slow start approach: Assign minimal staff to make media, set up cultures, etc. before beginning full research.			
Appropriate face coverings must be worn per CMU guidance.			
Implement stronger, more frequent disinfecting protocols (a minimum of twice daily per worker or between workers) for laboratory and office spaces utilizing a cleaning log for documentation and auditing purposes.			
Document what PPE is required and if it is still available. Assume that there may be a strain on purchasing and receiving needed items. Plan for limited Personal Protective Equipment availability (including N95s, face shields, and gloves).			
If you utilize the Lab Coat Program through OLFS, contact OLFS to resume laundering and delivering services.			

CDC Cleaning Guidance
https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html

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Beginning Lab, Studio, or Shop Research Activities

Careful attention should be given to the types and duration of research following re-opening of your laboratory or shop. Back-logs in purchasing and media prep, animal husbandry, reduced staff size, and **potential subsequent step-downs must be considered**. All researchers should document their research plan and include flexibilities in this uncertain climate.

ITEM	Complete	N/A	Notes
What are your first planned experiments and what is the necessary duration of the research?			
Is enough PPE available or able to be obtained to last throughout the duration of the project?			
What consumables need ordered/re-stocked?			
Will animals be required?			
Can a staggered start be implemented while media is made, cell lines are started, etc.?			
Will the research be easily halted if another step-down is necessary?			
Can the research be performed with limited staff and/or rotating teams?			

Resources
https://www.cmich.edu/covid19/Pages/default.aspx

https://www.michigan.gov/documents/leo/COVID-19_Workplace_Guidelines_for_Research_Labs_691403_7.pdf

https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/index.html

https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-ihe-response.html

https://www.who.int/publications-detail/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak