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# Plan for Expanded Access to Research Facilities and Sites During Pandemic

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The COVID-19 pandemic has had a dramatic impact on the normal operations of many institutions in society, including all research-intensive Ontario universities. Despite recognition of the essential contributions provided through research activities, the provincial and local states of emergency forced institutions to severely curtail such activity. Brock, like all Ontario universities, restricted access to most of its campus facilities, including research facilities, to meet provincial and public health guidelines. As of April 3, research activity in the following sites was suspended, and it was no longer permissible to access these sites without explicit permission:

- Research facilities, laboratories, or equipment on Brock campus
- Shared research facilities, laboratories, or equipment in non-Brock settings
- Any remote or isolated area with limited healthcare infrastructure

Research and scholarship continued during the shutdown when conducted under physical isolation conditions away from campus or other shared research facilities. Throughout this period of suspension, a process was in place to allow access to specific research facilities or sites under certain conditions. Authorization was provided for research studies that (a) are part of essential clinical care, (b) addressed the COVID-19 pandemic, or (c) could not be suspended without significant risk to persons, animal welfare, infrastructure, or crucial data. On May 8, some field research in local sites and analytical services also resumed with appropriate health and safety plans in place.

Being away from research facilities and sites, ranging from laboratories to library archives, is extremely challenging for members of the Brock community. There is a strong desire to resume research activities, yet any expansion of research activities must attend to public safety and the necessity of reducing risks of transmission of the coronavirus. The collective health and safety of students, staff, faculty, and the broader community must govern decisions made in relation to expanding access for research activities. The purpose of this document is to present Brock's phased approach toward expanded access to shared research facilities and sites on and off campus.

Despite the continuing provincial state of emergency, some restrictions on public and private activity have started to relax, and we are able to begin gradual and measured steps to expand access to research facilities and sites with appropriate risk-mitigation measures when government and public health guidance supports such expansion. However, the provincial government has not yet released all the sector-specific guidance that must be followed, and the coronavirus continues to circulate in our community. The strategies identified in this document are necessarily tentative and subject to change over time. Nonetheless, the University's commitments to student, staff, researcher, and partner safety, and to honouring provincial guidelines and public health recommendations, remain unchanged.

### The Research Access Task Force

The Research Access Task Force was established in May 2020 with participation by the Associate Vice-Presidents Research, Associate Deans Research, Associate University Librarian, Faculty of Graduate Studies, the Graduate Student Association, Health Safety and Wellness, Facilities Management, and Faculty Relations. Together, this collective undertook the following tasks:

1. Collectively reviewing and finalizing a set of principles to guide the incremental introduction of more research activities as pandemic conditions change;
2. Implementing a survey to seek faculty input (active from May 8-12;  $n = 62$ );
3. Implementing (in collaboration with the Faculty of Graduate Studies and the Graduate Student Association) a survey to seek graduate student input (active from May 20-31;  $n = 341$ ); and
4. Serving as resource personnel to assist the Emergency Management Group in developing the university-wide strategy for changing circumstances.

The input from the two surveys and the contributions of the Task Force members have shaped the guidance provided herein. Brock's planning and activities have been undertaken alongside partner institutions across the province. Vice-President Kenyon sits on the Executive Committee of the Ontario Council on University Research (OCUR). Associate Vice-President McGinn is a member of the OCU Research Working Group, the mandate of which is to compare and triangulate on practices and guidelines related to research under pandemic conditions. This plan attends to the COVID-19 Research Working Group's [Collective Principles for Advancing Toward Research Recovery](#) and the associated considerations.

The work of the Task Force is part of the University's broader pandemic recovery efforts through the Emergency Management Group. Expanded research activity entails custodial, shipping and receiving, purchasing, maintenance, security, special services, and safety staff come to campus more often, stay longer, and are more frequently exposed to spaces shared with other people. Advances in research must therefore accommodate a broad plan for incremental activity across campus.

### **Principles Guiding Brock's Planning for Expanded Access to Research Facilities**

Brock University has identified the following guiding principles for the COVID-19 period:

- The health and safety of students, faculty, and staff are paramount.
- Our choices will be informed by public health and government recommendations and guidelines.
- We will continue advancing the institution's strategic priorities consistent with Brock University's vision, mission, and values.
- We will seek to mitigate job losses while remaining flexible to adapt operations to maintain longer-term sustainability and minimize disruption to the University and regional community.
- We will manage finances in a manner consistent with the academic policy of the University.
- We will balance new revenue generation and expense reduction.
- We will build upon the knowledge gained through this time to improve our preparedness, response, and recovery options in the future.
- We will be open to change as societal needs and educational approaches evolve.

Consistent with these overarching principles, the incremental resumption of research activities during the pandemic will be guided by the following principles:

1. Research activities requiring the use of University facilities and off-site research facilities are currently suspended, except by exemptions as detailed in the [FAQ](#).
2. Brock University's commitments to student, staff, researcher, and partner safety, and to honouring provincial guidelines and public health recommendations, remain unchanged.

3. As pandemic-related restrictions on public and private activity begin to relax, other research activities will gradually become possible with appropriate risk-mitigation measures.
4. We can accommodate this transition by retaining the exemption process while planning for:
  - a. broadening the criteria for exemptions; and
  - b. detailing the conditions for renewed operations.
5. Brock University will respond to federal, provincial, and regional legislative and health authority advice in deciding when and how to broaden the criteria for exemptions.
6. This process will take time and be uneven.
  - a. It will not happen all at once;
  - b. Some kinds of research activity may be delayed much longer than others.
7. This process must be sensitive to a range of distinct constraints, including:
  - a. changes in provincial and regional guidelines;
  - b. existing Brock policies and guidelines, whether research-specific, such as REB guidelines and Animal Care Services SOPs; or general, such as workplace safety; availability of personal protective equipment, training, and other risk-mitigation measures; and
  - c. the need for an integrated campus-wide Brock strategy for increased activity;
8. The relationship between changes in provincial and regional restrictions and the permissibility of research activities will not be linear.
  - a. Research activity depends on a complex backdrop of infrastructure, people, and processes.
  - b. Difficulties in any one of those areas will be difficulties for expanding research activities, irrespective of whether other research areas have increased latitude.
9. Research activity is tightly integrated with other activities at the University, which influences whether and how research is authorized in particular cases.
  - a. Any increase in the use of research facilities entails that custodial, shipping and receiving, purchasing, maintenance, security, special services, and safety staff come to campus more often, stay longer, and are more frequently exposed to spaces shared with other people.
  - b. A plan for incremental research activity must therefore accommodate a broader plan for incremental activity on campus.
10. Campus units that have remained in operation throughout the pandemic may be useful examples of what enables functioning under restrictions.
11. Research activity under pandemic conditions implicates complex and often competing needs of students, especially graduate students involved in research.
  - a. Completing their own research is a critical priority for students and their supervisors.
  - b. Access to research facilities interacts with program requirements and details in a wide range of ways that require careful attention from supervisors, GPDs, the Faculty of Graduate Studies, and students themselves. These program-specific questions do not fall under a strategy to access research facilities safely.
  - c. Participating in faculty research is a source of needed income for students and a desired learning opportunity, but (therefore) also holds the potential for coercion to engage in activity perceived as unsafe.
  - d. Any agreement of research students to participate in research under risky conditions must be understood in light of the fundamental dependence of those students on the good will of their supervisors.

12. The strategy will require ongoing consultation, managing expectations, and a commitment to process and collegiality.
  - a. We must recognize and accept up front that some researchers (including students) will have access before others.
  - b. Researchers in different disciplines and sub-disciplines have distinct needs and practices to be planned for and borne in mind, even if not all can be accommodated on the same schedule.
  - c. As a collegium, we must understand and show appropriate patience regarding the additional compliance, reporting, administrative, maintenance, and special project planning workflow that staff members—research enterprise and otherwise—are dealing with.
13. Health experts predict a significant probability of multiple waves of infections, requiring subsequent reinstatement of restrictions. Increased activity in facilities must be conducted under a plan to decrease or cease activity in a structured way if needed.

### **Accommodating Differential Research Needs**

- Some researchers and research programs have more flexibility with timing than others.
- Some are anxious about getting back into research sites as soon as possible, and some are anxious about being pushed into research sites too soon.
- Some researchers (faculty and students) are more vulnerable to the virus than others, and some have care responsibilities for others who are vulnerable.
- It is important to consider equity, diversity, and inclusion factors, such as the differential effects of the pandemic on research by members of designated groups.
- Parents and un-tenured scholars may be facing the biggest hurdles.
- Many researchers work in shared laboratories or use shared equipment that necessitates consideration for rotational schedules to accommodate the collective needs; patience and flexibility will be required.
- Some research is more isolated than others on the basis of the number of people and square metres per person, as well as the actual activities involved (e.g., collecting samples from human participants where droplets could be aerosolized).
- Research involving in-person contact with human participants will be a late-stage addition to the research priority timelines due to its complexity. Additional steps may be needed for Research Ethics Boards to mitigate risks and ensure fully informed consent from research participants.

### **Considerations for Student Researchers**

The University is committed to supporting students to complete degree requirements in timely fashion. Students nearing degree completion will be prioritized at each stage of the research expansion, subject to the following considerations:

- Students must not be compelled to conduct research on campus or in the field. Personal life circumstances will influence each student's readiness to undertake on-site research. They must feel free to voluntarily return to campus labs or field research activities. The Faculty of Graduate Studies will confirm with each graduate student that they wish to conduct on-site research.
- No student research activity can occur without adequate training and supervision. These needs vary depending upon student level and the specific research activities. Requests for authorization for student research must include strategies to ensure

these training and supervision requirements are met despite the steps necessary to reduce risks due to the coronavirus.

- The flexibility and creativity demonstrated in regard to new methods of course delivery and modifications around assessment of degree-level expectations are needed to ensure that student researchers are supported and can complete their research programs in a timely manner. At the same time, it is essential to respect that academic requirements remain in place and that academic integrity must be maintained.

### **Guidance for Re-Opening Research Facilities**

The province has indicated an intention to release sector-specific guidance for re-opening research facilities. In the absence of that guidance, the University is relying upon the best available guidance, including models from other jurisdictions. All strategies identified in this document will need to be re-assessed upon the release of the provincial guidance. In the interim, Health, Safety, and Wellness has released guidelines for lab re-opening (see Appendix A). The Academic Safety Committee is available to review research facility preparedness and risk-mitigation plans to help researchers prepare for broadened access to campus research facilities. A training program for the Brock community is also being introduced.

Time-sensitive research needs mean that some research will be authorized before all these steps can be put in place. Authorization granted under current circumstances will need to be re-assessed when the provincial guidance is released, and Brock is prepared to release a full plan for re-opening all sectors of the University.

### **Authorization Required to Access Research Facilities or Sites**

For the foreseeable future, research that can feasibly and safely be done remotely without significantly compromising the efficiency and integrity of the work, including adherence to ethical standards and maintenance of confidentiality, should continue to be done remotely, even if it could be done on campus consistent with health guidelines.

Authorization will continue to be required to access research facilities or sites. Faculty researchers/supervisors must apply through their Associate Dean Research (or Research Institute Director for adjuncts, research affiliates, and research scientists appointed directly to a Research Institute). If authorization is provided, all regulatory clearances must be confirmed before beginning or continuing with research activity.

Authorization for access to any research facility or site may be reversed based on University or government direction.

After the province releases sector-specific guidance for re-opening research facilities, the plans identified here will be assessed, including a possible shift in the authorization process.

### **Research Priority Timelines for Expanding Access to Research Facilities and Sites**

Access to research facilities and sites will follow a set of research priority timelines. Access will be granted in order from immediate priority to long-term priority, in a manner that attends to the safety of researchers and the communities in which research is undertaken.

*Priority Timeline 1: Research requiring immediate on-site activity (authorized in April and May)*

- Specific projects related to COVID-19;
- Research activities that are part of essential clinical care;
- Research that could not be suspended without significant risk to persons, animal welfare, infrastructure, or crucial data;
- Life science and other field research in local sites (not involving human participants) that does not involve site activity by students (qua students) or access to research facilities (beyond one-time equipment pick-up); and
- Time-sensitive analytical testing services provided to partner organizations deemed essential under provincial orders.

*Priority Timeline 2: Research requiring immediate on-site activity to minimize negative impacts that would occur by the end of the summer*

- Time-sensitive life science and other field research in local sites (not involving human participants), including those activities that necessitate (a) laboratory/research facility to protect data samples collected in the field and (b) the engagement of students to support degree completion;
- Research that, if paused, would negatively impact the ability of a student to complete program requirements and requires minimal on-site work/time to complete;
- Research that is at a critical stage or close to an endpoint; and
- Highly unique research circumstances.

*Priority Timeline 3: Research requiring immediate on-site activity to minimize negative impacts that would occur by the end of 2020*

- Research that is needed to address degree progress milestones, critical career stages, or grant applications in Fall 2020; and
- Life science and other field research (not involving human participants) in sites beyond the Niagara Region, subject to site permissions, location-specific public health guidance, risk-mitigation strategies, and any travel restrictions.

*Priority Timeline 4: Research where the impacts of being unable to conduct on-site activities start after the end of 2020*

- Faculty researchers presenting new and early-stage projects or experimental directions;
- Analytical testing services provided to partner organizations that have not been deemed essential under provincial orders;
- Research that can be undertaken remotely due to the nature of the research; and
- Routine access to campus offices or laboratories without need for specialized equipment.

### **Coordinating Shared Access to Research Facilities and Sites**

Many researchers work in shared laboratories or use shared equipment that necessitates consideration for rotational schedules to accommodate the collective needs. Each shared campus research space should designate an individual (e.g., lab coordinator, principal investigator) to establish and monitor usage schedules with due consideration for the identified principles, priorities, and risk-mitigation strategies.

A one-hour gap must be scheduled between individuals occupying research space to allow individuals to arrive and depart without crossing paths and to allow the air in the space to be exchanged through existing systems.

Until further notice, occupancy for any University research laboratory will be restricted to one individual at a time, subject to the following exceptions:

- Research procedures that require more than one person for safe performance may be performed with the full use of personal protective equipment, and are to be restricted, to the greatest extent possible, in both frequency and prolongation.
- Larger spaces within the Cairns Family Health and Bioscience Research Complex can accommodate multiple occupancy calculated at a minimum of 18m<sup>2</sup> (194 ft<sup>2</sup>) per person.

### **Working From Campus Offices**

Consistent with the [collective principles across Ontario universities](#), research that can feasibly and safely be done remotely without significantly compromising the efficiency and integrity of the work, including adherence to ethical standards and maintenance of confidentiality, should continue to be done remotely at least until the end of 2020, even if it could be done on campus consistent with health guidelines.

Part of the overall risk-mitigation strategy is to reduce the number of individuals present on campus. Therefore, those who do not require specialized equipment or facilities will be expected to continue to work from off campus whenever possible.

As part of Brock's commitment to equity, diversity, and inclusion, exceptions will be made for researchers who have primary care responsibilities for dependents. Upon request, these individuals may be authorized for one day office access per week. Department Chairs will receive and track these requests for access and the days chosen, and share this information with their Deans to enable tracking of usage. Other researchers will be expected to limit office use to short visits to collect or store research materials. (A separate [request procedure](#) is in place through the Provost's office for access to offices or teaching spaces to support teaching and learning needs.)

### **Field Research**

Life science and other field research in local sites (not involving human participants) must:

- follow strict physical distancing and hygiene protocols as informed by location-specific public health guidance while on site, and during travel to and from the site;
- respect the prohibition against gatherings of more than 10 people;
- have been approved by any relevant local authorities (e.g., parks or conservation authority, First Nations band council);
- not take place in remote areas where emergency services access would be very difficult, or where there is a risk of infecting members of communities with limited healthcare facilities; and
- not require overnight travel (while the current research travel suspension is in effect).

The Academic Safety Committee will determine the suitability of the risk-mitigate strategies identified.

## Human Participant Research

Research involving human participants should be conducted online where possible. Where in-person contact is required, researchers are expected to use appropriate measures to reduce the risk of virus transmission, including physical distancing and non-medical facial coverings. Where physical distancing is not possible, other suitable procedures such as the use of PPE, enhanced sanitation protocols, and physical barriers such as Plexiglass dividers are required. Research Ethics Board clearance must include assessment of the risks to participants based upon the risk-mitigation strategies implemented with respect to current pandemic conditions.

Brock University facilities are currently closed to visitors (other than required service personnel). Updates will be provided through the [coronavirus FAQ](#).

## Researcher Responsibilities

- Researchers must complete the relevant online training modules.
- Researchers must respect prioritization and scheduling decisions to accommodate collective needs.
- Researchers must sign in and out as they enter and leave the lab to confirm dates, times, and completion of sanitization routines.
- Researchers must observe public health guidance by maintaining, whenever possible, at least 2 metres from anyone other than household members. Until further notice, 18 m<sup>2</sup> per person is used as a guideline to support this physical distancing in research laboratories or other enclosed spaces.
- Researchers must limit the number of individuals in a research laboratory to the maximum gathering size established by provincial and public health guidance (current maximum of 10).
- Researchers who resume research on-campus need to be prepared for a sudden closure based on University or government direction.
- Any situation that alters the health and safety of personnel or changes the circumstances around which authorization for access was granted must be reported in a timely manner to the Associate Dean Research (or Research Institute Director).

The below considerations are in addition to the general measures already established by the government regarding how to conduct as individuals and as society to prevent the transmission of the virus. Government guidance is available at these links:

[Federal Government](#)

[Provincial Government](#)

[Regional Government](#)

[Brock Guidance](#)

### A. Core Principles for Minimizing Exposure to Virus

1. Maintaining distance for respiratory protection.
2. Maintaining distance for contact protection.
3. Following strict hygiene protocols, respiratory protection etiquette, and minimizing contact with potentially contaminated/contaminated surfaces.
4. Wearing PPE where advised/needed for respiratory and contact protection.

### B. Preparing Shared Campus Spaces for Reopening

1. Install standard University signage across entry/exit points to buildings, higher traffic areas, and points of gathering.
2. Where there is a narrow walkway and multiple users, establish one-way traffic. Indicate so with directional arrows on the floor and eye-level, eye-catching signage at point of entry, and pointing to exit. (University signage to be available.)
3. Limit passage through doorways and narrow spaces to one individual at a time.
4. Where possible, avoid using hands to open doors. Instead, push door open with the forearm or body. As well, use the elbow to press the elevator buttons as possible.
5. Establish separate entry and exit ways to research labs whenever possible and identify with clear signage.
6. Establish foot traffic plan for common areas where possible, e.g., lounges and study areas.
7. Redistribute seating in graduate students' areas as needed to keep distancing side to side and back to back, when inserting a physical barrier (e.g., Plexiglass) is not enough.
8. In labs and student office areas, reduce seating in multiuser spaces to accommodate occupancy restrictions (currently set at 1 individual per 18 m<sup>2</sup>) or designate individual chairs for each user.
9. Demarcate a 2 m area (per individual) at the bench and on the floor.
10. Complete the [Brock University Workplace COVID-19 Supervisor Checklist](#).

### C. Preparing Users for Reopening

1. All researchers must complete the online training module on Sakai once released.
2. Supervisors must communicate and discuss requisites for working in the lab and all associated protocols to ensure comprehension and acceptance of the terms by lab users.
3. Initially, supervision or frequent contacts with lab users will be required until the supervisor has confirmed that personnel can work safely under the modified procedures.
4. Screening will occur at designated entrances on Brock University campus.
5. Complete the Lab Entry Checklist.

### D. Scheduling Requirements

1. Identify a scheduling manager for each shared campus research space.

2. Until further notice, occupancy for any shared campus research space will be restricted to one individual at a time, subject to the following exceptions:
  - a. Research procedures that require more than one person for safe performance may be performed with the full use of PPE, and are to be restricted, to the greatest extent possible, in both frequency and prolongation.
  - b. Larger spaces within the Cairns Family Health and Bioscience Research Complex can accommodate multiple occupancy calculated at a minimum of 18 m<sup>2</sup> per person and up to the maximum gathering size established by provincial and public health guidance (current maximum of 10).
3. The identified scheduling manager will determine admittance to shared campus research space and stagger users based on the ability to keep distancing at benchwork, desk area, and shared spaces/equipment.
  - a. Institute a one-hour gap between individuals occupying research space to allow individuals to arrive and depart without crossing paths and to allow the air in the space to be exchanged through existing systems.
  - b. Require wearing medical masks (i.e., procedure masks) where incidental simultaneous occupancy of a space is a possibility.
  - c. Identify appropriate risk-mitigation strategies where safety requirements demand multiple users share one space. The Academic Safety Committee is available to review the suitability of these strategies.
4. Schedule undergraduate lab activities with consideration for traffic flows and disinfection requirements.
  - a. Stagger start of undergrad lab activities for labs sharing a hallway, whenever possible.
  - b. Open doors to labs in anticipation to time of entry and exit to prevent students from handling the knob and gathering at the point of entry/exit. This will necessitate TAs to go in well in advance and for sufficient time to be allocated between class bookings.

### E. Requirements for Lab Users

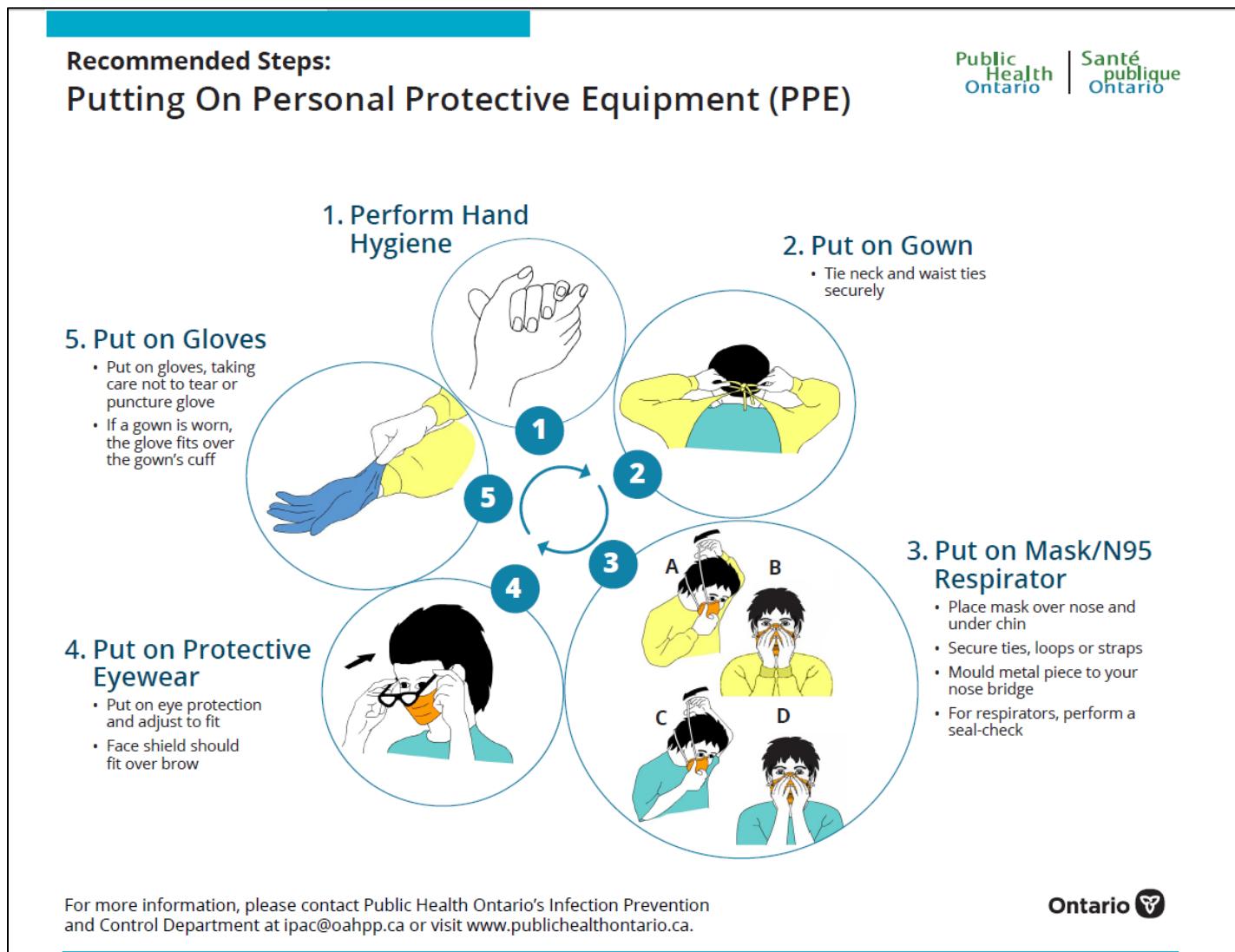
1. All lab users must sign in and out as they enter and leave the lab to confirm dates, times, and completion of sanitization routines. A digital sign-in/sign-out procedure is in development. In the interim, labs may use a paper-based system only if each lab user has an individual sheet affixed to a visible surface within their designated workspace that is accessible to others and cannot be easily damaged. Data on any such sheets must be uploaded to an online site periodically, e.g., weekly or every two weeks.
2. PPE to be worn at all times in wet labs include lab coat, gloves, and goggles.
  - a. Medical masks (i.e., procedure masks) to be worn when 2 meters distancing could be compromised.
  - b. Medical masks (i.e., procedure masks) to be used when more than two individuals occupy the same space.
  - c. When putting on and removing PPE, care must be taken to avoid contaminating the inner side of the PPE (side that goes in contact with the skin) with contaminated hands or objects. See [Annex # 1](#) for the procedures for putting on and removing PPE.
  - d. Lab coats and gloves remain for lab use only.
3. Hands to be washed upon entry to the lab and before exit. Hands to be sanitized upon exit.
  - a. Paper towels to be available at every handwashing sink.
  - b. Paper towel and sanitizer to be available in all common areas (e.g. kitchenettes, lounges, study areas).
4. Workspaces, common use equipment, faucets, and chair arms to be decontaminated by the user at the end of the work session in all labs whether wet, dry, undergrad, or grad. See [Annex # 2](#) for guidance on decontamination procedures.
5. For common use equipment rooms:
  - a. To be occupied one individual at a time. Users to attend to provided schedules and check the occupancy status of the room through a glass panel, where available, or by calling at the door and wait for a signal /lack thereof before entering.
  - b. Where hazards present require the use of PPE (e.g., liquid nitrogen generator room MC G200, autoclave rooms), personal protective equipment to be worn while inside the room.
  - c. Lab coat and gloves to be transported in a bag, worn while inside the room and removed before leaving.

- d. Bags used for the transport of PPE to be of individual use, kept within the individual's designated space in the lab and to be disinfected before and after use; alternatively:
  - i. Boxes of gloves of various sizes can be made available in the room. Nitrile gloves to be worn before putting on cryogenic gloves.
  - ii. Single-use lab coats can be made available inside the room. This will necessitate either disposable lab coats or a supply of reusable coats with arrangements for centralized collection, washing and returning of the coats.
- e. An appropriate disinfectant to be maintained inside the room to surface-decontaminate objects. See [Annex # 2](#) for considerations on cleaners and disinfectants, and for the recommended disinfectants.

### Annex #1. Personal Protective Equipment Procedures

The way and order in which personal protective equipment is donned and doffed is of great importance to prevent self-contamination during the process. It should be done sequentially and carefully. Follow the steps as shown in diagrams below.

<https://www.publichealthontario.ca/-/media/documents/ncov/ipac/ppe-recommended-steps>



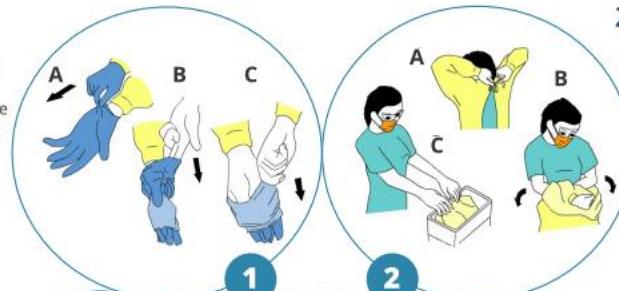
### Annex #1. Personal Protective Equipment Procedures (cont.)

#### Recommended Steps: Taking Off Personal Protective Equipment (PPE)

Public  
Health  
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publique  
Ontario

##### 1. Remove Gloves

- Remove gloves using a glove-to-glove / skin-to-skin technique
- Grasp outside edge near the wrist and peel away, rolling the glove inside-out
- Reach under the second glove and peel away
- Discard immediately into waste receptacle

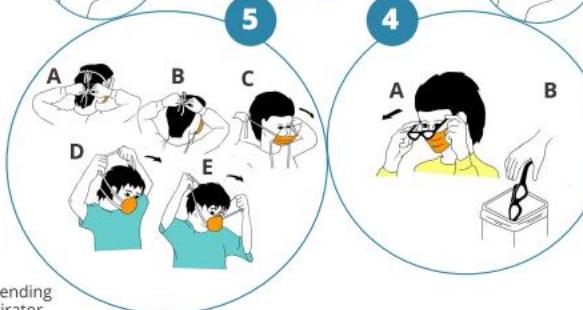


##### 6. Perform Hand Hygiene



##### 5. Remove Mask/ N95 Respirator

- Ties/ear loops/straps are considered 'clean' and may be touched with hands
- The front of the mask/respirator is considered to be contaminated
- Untie bottom tie then top tie, or grasp straps or ear loops
- Pull forward off the head, bending forward to allow mask/respirator to fall away from the face
- Discard immediately into waste receptacle



##### 2. Remove Gown

- Remove gown in a manner that prevents contamination of clothing or skin
- Starting with waist ties, then neck ties, pull the gown forward from the neck ties and roll it so that the contaminated outside of the gown is to the inside. Roll off the arms into a bundle, then discarded immediately in a manner that minimizes air disturbance.

##### 3. Perform Hand Hygiene

##### 4. Remove Eye Protection

- Arms of goggles and headband of face shields are considered to be 'clean' and may be touched with the hands
- The front of goggles/face shield is considered to be contaminated
- Remove eye protection by handling ear loops, sides or back only
- Discard into waste receptacle or into appropriate container to be sent for reprocessing
- Personally-owned eyewear may be cleaned by the individual after each use

This is an excerpt from Routine Practices and Additional Precautions In All Health Care Settings (Appendix L) and was reformatted for ease of use.

Ontario

Watch the videos in the links below to learn how to don and doff PPE and how to properly wash and sanitize hands. Practice the techniques as needed until you are confident you can do it correctly.

[How to Hand Rub](#)

[How to Handwash](#)

[How to Put on a Gown and Gloves](#)

[How to Put on a Medical Mask](#)

[How to Remove Goggles and Face Mask](#)

[How to Remove Gloves](#)

### Annex #1. Personal Protective Equipment Procedures (cont.)

#### Considerations on and care for medical masks (i.e., procedure masks)

The nature of lab work imposes frequent movements within the space and shared use of some equipment, items and resources. This can make physical distancing difficult to attain, at times. Hence, medical masks (i.e., procedure masks) should be used while working in the lab when simultaneous occupancy of a space is a possibility or when more than two individuals are in the lab.

If worn properly, medical masks (i.e., procedure masks) help block large-particle droplets that may contain germs keeping it from reaching your mouth and nose. Medical masks (i.e., procedure masks) may also help reduce exposure of your saliva and respiratory secretions to others.

While a medical mask (i.e., procedure mask) may be effective in blocking large-particle droplets, a medical mask (i.e., procedure mask), by design, does not filter or block very small particles in the air that may be transmitted by coughs or sneezes. They also do not provide complete protection from germs and other contaminants because of the loose fit between the surface of the medical mask (i.e., procedure mask) and your face.

Since lab activities do not pose a significant risk of exposure to the COVID-19-causing virus, medical masks (i.e., procedure masks) provide the necessary protection when paired with physical distancing. Loud speaking and yelling should also be avoided.

Any coughing or sneezing suspected of being caused by a respiratory infection will disqualify the individual to work in the lab. If you suspect you have contracted a respiratory infection, stop working in the lab, notify your supervisor and follow the public health authorities' guidelines on how to proceed further regarding testing, isolation and medical help.

Following, there are instructions on how to put on and remove medical masks (i.e., procedure masks), and on how to care for medical masks (i.e., procedure masks) if reused.

#### How to put on a mask

1. Before entering the lab, remove any jewelry; tie and secure hair back, if you have long hair.
2. [Clean your hands](#) with soap and water or [hand sanitizer](#).
3. Remove a mask from the box and make sure there are no obvious tears or holes in either side of the mask.
4. Determine which side of the mask is the top. The side of the mask that has a stiff bendable edge is the top and is meant to mold to the shape of your nose.
5. Determine which side of the mask is the front. The colored side of the mask is usually the front and should face away from you, while the white side touches your face.
6. Follow the instructions below for the type of mask you are using.
  - o *Face Mask with Ear loops:* Hold the mask by the ear loops. Place a loop around each ear.
  - o *Face Mask with Ties:* Bring the mask to your nose level and place the ties over the crown of your head and secure with a bow.

# Brock University. Health, Safety & Wellness

## Reopening Shared Campus Spaces in COVID-19 Pandemic Conditions. General Guidance

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- *Face Mask with Bands:* Hold the mask in your hand with the nosepiece or top of the mask at fingertips, allowing the headbands to hang freely below hands. Bring the mask to your nose level and pull the top strap over your head so that it rests over the crown of your head. Pull the bottom strap over your head so that it rests at the nape of your neck.
- 7. Mold or pinch the stiff edge to the shape of your nose.
- 8. If using a mask with ties: Then take the bottom ties, one in each hand, and secure with a bow at the nape of your neck.
- 9. Pull the bottom of the mask over your mouth and chin.
- 10. Watch the [video](#) on how to put on and take off a mask.

### How to remove a single-use mask

1. Clean your hands with soap and water or hand sanitizer before touching the mask. Avoid touching the front of the mask. The front of the mask is contaminated. Only touch the ear loops/ties/band. Follow the instructions below for the type of mask you are using.
2. *Face Mask with Ear loops:* Hold both ear loops and gently lift and remove the mask.
3. *Face Mask with Ties:* Untie the bottom bow first then untie the top bow and pull the mask away from you as the ties are loosened.
4. *Face Mask with Bands:* Lift the bottom strap over your head first, then pull the top strap over your head.
5. Throw the mask in the trash. Clean your hands with soap and water or hand sanitizer.

Medical masks (i.e., procedure masks) are not intended to be used more than once. If your mask is damaged or soiled, or if breathing through the mask becomes difficult, remove the mask, discard it safely, and replace it with a new one. To safely discard your mask, place it in a plastic bag and put it in the trash. Wash or disinfect your hands after handling the used mask.

If a medical mask (i.e., procedure mask) needs to be reused due to low availability, reduce the numbers of times of reuse to the minimum possible. Discard the mask daily or after three times of use, whichever comes first, and if it gets wet or when it becomes hard to breathe through it. Since the handling of masks increases the chances of contaminating its inner side (the side in contact with the mouth/nose), any handling must be done with extreme care, following the procedures below.

### Storing used masks

1. Designate a container exclusively for keeping the reusable mask. Label it as “reusable mask and [name of the user]”. A rectangular plastic box with a lid that can accommodate the mask flat on the bottom with the bands extended is appropriate.
2. Remove gloves following the procedure shown in the [video above](#).
3. [Wash](#) or [disinfect](#) your hands.
4. [Disinfect](#) the lid and sides of the container with an appropriate disinfectant.

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5. Remove the container's lid and lay it on its outer side over a clean surface, taking care not to contaminate hands with the surrounding objects, counter, etc. If hands get in contact with any object/item, disinfect them immediately.
6. Disinfect the container on the inside.
7. Remove mask following the procedure shown in the [video above](#). Taking the mask by the band, lay it flat inside the container. The inner side (side in contact with your face) will face the bottom of the container. Determine how you will orient the top of the mask and always place it in the container the same way to avoid confusion.
8. The bands will lay free from contact with both the inner and outer sides of the mask.
9. Close the container.

### When removing the mask for reuse

1. [Wash](#) or [disinfect](#) hands.
2. [Disinfect](#) the lid and sides of the container with an appropriate disinfectant.
3. Remove the container's lid and lay it on its outer side over a clean surface, taking care not to contaminate hands.
4. Take the masks by the bands taking care not to touch the mask surface.
5. Put the mask on following the instructions on the video above.
6. At any point during the process, if you think you contaminated the inner side of the mask, discard it. Disinfect hands any time you consider hands could have been contaminated.

When wearing masks, they will be covering the mouth and nose or will be removed. The mask should NOT be slid out of its protective position (covering the mouth / nose) to temporarily uncover the nose, as doing so may cause its inner side to get contaminated.

<https://www.fda.gov/medical-devices/personal-protective-equipment-infection-control/n95-respirators-and-surgical-masks-face-masks#s2>

### Annex #2. Cleaning and disinfection. Recommended Disinfectants.

Routine and effective cleaning and disinfection is an essential activity to prevent the spread of the virus that causes COVID-19. Coronaviruses are enveloped viruses. This means they are one of the easiest types of viruses to kill with the appropriate disinfectant when used according to the label directions.

- Use only disinfectants that have a Drug Identification Number (DIN). A DIN is an 8-digit number given by Health Canada that confirms it is approved for use in Canada.
  - Alcohols at proper concentration are effective and widely used. See the directions below for the [use of alcohols](#).
  - Sodium hypochlorite solutions at 1000 ppm (household bleach) are effective against the COVID-19 causative virus; however, it is not the most suitable disinfecting agent for lab surfaces and equipment lab as it a corrosive, it must be prepared fresh daily because it loses potency quickly and it is easily inactivated by organic matter. Guidance for bleach is provided [further down](#).
- Check the expiry date of products you use and always follow manufacturer's instructions.
- A list of commercially available effective disinfectants published by Health Canada can be found at this link: <https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>

#### Disinfection general guidance

- Every lab user is responsible for the cleaning and disinfection of their space.
- PPE must be worn at all times in the lab (nitrile or latex gloves for disinfection are good, lab coat).
  - Every time a cleaning and disinfection round is completed, gloves will be removed, and a fresh pair of gloves will be put on.
  - Check gloves often for rips/tears, or any other defect and change them if so happens.
- Equipment, items, and surfaces that have been touched during the workday should be disinfected at a minimum at the beginning and the end of the work.
- Periodic disinfection rounds to high-touch surfaces/objects/items are necessary to remove viral particles or reduce the viral load.
  - When the lab is used by multiple individuals, they may coordinate cleaning and disinfecting different areas each to increase efficiency.
  - If no coordination is made or when in doubt, all common-use surfaces and objects must be cleaned and disinfected by the last individual to leave the lab.
- For disinfectants to be effective, the surface/object/item must be free from visible soil. Therefore, before applying a disinfectant clean first if there is soil, including dust. Clean with water, detergent and a friction movement with an object over the surface/object to be cleaned.
- In chemistry labs, contamination of surfaces with the chemicals in use is likely to occur. Hazardous interaction between the disinfectant and the chemical residues may occur.
  - Check beforehand that there are no incompatibilities between the chemicals in use with water and the disinfectant to be used during the cleaning and disinfection processes.
- Ensure the disinfectant is compatible with the surface before using.
- Never mix disinfectants - a dangerous chemical reaction may occur.
- Safety staff can assist in determining if the available disinfectants are appropriate for use [besafe@brocku.ca](mailto:besafe@brocku.ca) or [lvistorte@brocku.ca](mailto:lvistorte@brocku.ca).

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### Electronics

- Consider putting wipeable covers on tablets, touch screens, keyboards, cell phones, and laboratory equipment monitors for easier disinfection.
- A good option is the use alcohol-based wipes containing at least 70% alcohol and dry surface thoroughly. Otherwise, follow the Health Canada [link](#) for other disinfecting agents options.
- Do not spray electronics if you use a liquid disinfectant.

### How to disinfect with alcohols

1. Use 60-80% ethanol or 70-80% isopropanol (aka IPA).
2. Put on clean gloves on clean hands or if wearing gloves, disinfect hands.
3. Clean the area/surface if visible dirty.
4. Apply the solution (squirt the solution directly over the surface or on a piece of cloth or paper towel) and spread it with a piece of paper towel over the surface or object to form a layer.
5. Allow to air dry. Do NOT wipe dry the alcohol.
  - a. If disinfecting wipes are available, they are a sound option. Rub the surface or object with the wipe various times and allow to air dry.
6. Discard the piece of paper towel or wipe in the trash.
7. Continue to clean another object/surface, or if this is the end of disinfection round, remove gloves.
8. Wash or sanitize hands.

### How to disinfect with bleach

Bleach solution for the disinfection of general surfaces and equipment in the lab is not the best option as it is a corrosive; it must be prepared fresh daily because it loses potency quickly and it is easily inactivated by organic matter. Use bleach as a general disinfectant on surfaces and equipment if you do not have a more suitable alternative. If you must use bleach, follow these instructions:

- Put clean gloves on clean hands or if wearing gloves, disinfect hands.
- Solutions with at least 1 000 ppm sodium hypochlorite are effective. Most household bleach products contain 5.25% sodium hypochlorite, so a solution of 20 ml bleach + 980 ml water is effective.
- The [Chlorine Dilution Calculator](#) is a useful tool to calculate your dilution.
- Ensure the stock product is not past its expiration date. Some bleaches, such as those designed for safe use on colored clothing or for whitening, may not be suitable for disinfection.
- Prepare the bleach solutions fresh daily and date the bottle. Discard any leftovers.
- Apply the solution (squirt the solution directly over the surface) or on a piece of cloth or paper towel and spread it over the surface or object to form a layer.
- Leave solution on the surface for at least 1 minute. Wipe dry.
- Wipe the surfaces and equipment with water to remove bleach residues, if the material they are made up of is corrodible.
- Remove gloves and wash hands.

A list of commercially available effective disinfectants published by Health Canada can be found at this link:

<https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>

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The Environmental Protection Agency of the US list of approved disinfectants is available at this link

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>. This list is also posted on our [webpage](#) as an Excel spreadsheet.

Other literature available on this topic:

<https://www.publichealthontario.ca/-/media/documents/B/2018/bp-environmental-cleaning.pdf>

<https://www.canada.ca/en/health-canada/services/drugs-health-products/disinfectants/covid-19/list.html>

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/hand-hygiene.html>