

Chemistry Academic Laboratory Guidelines for Prevention of COVID-19 Transmission

As the United States Center for Disease Control (CDC), the World Health Organization (WHO), and New York State guidelines and recommendations continue to evolve, we must consider how to operate in a way that keeps students, faculty, and staff safe in the laboratory environment during in-person laboratory activities. This document includes [safety guidelines SUNY Geneseo has established](#)¹, and is also more specific to chemistry academic laboratories to maximize the safety of students while continuing to reduce the spread of illness.

Reinforcing College policy, no student, faculty, or staff member shall be required or pressured to come to campus and/or a laboratory if they suspect illness, or present any of the symptoms listed in the [SUNY Geneseo COVID-19 protocols](#)² (listed below).

Possible symptoms include:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

If a student is experiencing severe symptoms and requires urgent medical attention, the faculty instructor should call 911 and notify the dispatcher that the distressed student may have COVID-19 symptoms, so emergency medical service responders may use appropriate precautions.

All engagement of allowable laboratory and stockroom work must minimize the number of students in the laboratory or other facilities at any one time. This is a guideline, as every circumstance cannot be envisioned. Always use your best judgment and if you are unsure, contact your faculty instructor.

¹ <https://www.geneseo.edu/coronavirus>

² <https://www.geneseo.edu/hr/covid-19-hr-protocols>

Health and Wellbeing in a Stressful Time³

The Office of the Provost has offered guidance on how COVID-19 may impact students, and the following recommendations are also endorsed by Chemistry. Your health and wellbeing are important, and safety guidelines for chemistry laboratories supplement both self- and community-care with respect to COVID transmission prevention. Of course, laboratory safety guidelines alone do not meet all the health needs of students, so it is important to acknowledge further resources that may assist you.

The changes brought on by COVID-19 have impacted us all in a number of ways, and will continue to do so at various times and to varying degrees during the upcoming semester. Student's health and wellbeing are foundational to the ability to learn. If you find that you are feeling unwell (physically or mentally) and it is impacting your ability to complete your coursework or student employment, please reach out. Because the learning environment will be different than it has been in the past, the indicators that usually let you know something is wrong may not be as clear to you or those around you as they would be during a typical semester. Additionally, the ways in which you normally engage in self-care may have been disrupted. Please remember that it's never too late to ask for help. Dr. Sancilio, the [Dean of Students](#)⁴ (585-245-5706) can assist and provide direction to appropriate campus resources. The college also has collected resources in a [Coping with COVID webpage](#)⁵.

Guidelines for Laboratory Safety Risk Assessment

1. Stop, think, and assess – perform daily assessments of personal wellness and report your assessment through the SUNY Geneseo wellness app.
2. Do not come to class if you are experiencing any symptoms of infection. In particular from the list of possible symptoms above, no one should come to class if they are beginning to experience any of the following symptoms:
 - a. Fever
 - b. Cough
 - c. Shortness of breath or difficulty breathing
 - d. Any respiratory symptoms
 - e. New loss of taste or smell
3. If you come to class and begin experiencing any possible symptoms of illness, follow SUNY Geneseo policy outlined in the SUNY Geneseo Restart Plan⁶, including informing your faculty instructor, leaving the lab, and informing a healthcare provider including Lauderdale Student

³ <https://wiki.geneseo.edu/display/PROVOST/Syllabus+Resources+Related+to+COVID-19>

⁴ https://www.geneseo.edu/dean_students

⁵ <http://go.geneseo.edu/copingwithcovid>

⁶ <https://www.geneseo.edu/restart>

Health Center (and your primary physician and/or emergency medical personnel, if appropriate). If a health care provider suspects or confirms you have COVID-19, you must follow SUNY Geneseo policy outlined in the Geneseo Restart Plan.

4. If you have had close contact with anyone who is COVID-19 positive (e.g. friend, family member, roommate), it is important to follow SUNY Geneseo policy outlined in the SUNY Geneseo Restart Plan⁷.
5. Develop a plan that minimizes proximity to other people in the lab. Follow the instructions of your faculty instructor and consider room locations, work processes, risk assessment, crowded hallways, and instrument and equipment bottlenecks.
6. Be present in the lab only as long as is necessary for your experiment as defined by your faculty instructor. Minimize time around other people.
7. Assume everyone you see is infected, including yourself, and use all appropriate precautions as indicated by SUNY Geneseo and CDC guidelines, which include:
 1. Social/physical distancing (keep 6 feet distance from others when possible)
 2. Wearing a CDC-approved mask^{8,9} according to CDC guidelines indoors at all times when in the ISC
 3. Washing your hands regularly for at least 20 seconds with soap and warm water
 4. Not touching your face or your face mask

Attendance and Public Health¹⁰

The Office of the Provost has provided guidance about class attendance in the context of the COVID-19 pandemic, as it is vital that we all do what we can to protect the health and safety of each other. If you are feeling unwell on a day when lab meets in-person, do not attend. Remember that it is better to stay home if you are not feeling well than to attend lab and risk spreading illness to others. Throughout the semester, please be proactive in communicating about absences to your faculty instructor and contact the Dean of Students¹¹ if you expect to be out for an extended period of time.

The college has developed an online COVID-19 screening report app for students. Be sure to familiarize yourself with this process and complete the brief screening report before leaving for class. If you are experiencing common symptoms of COVID-19, stay home and contact Health and Counseling Services¹² as soon as possible. You are strongly encouraged to set a daily reminder to fill out the screening report.

⁷ <https://www.geneseo.edu/restart>

⁸ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.html>

⁹ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-to-make-cloth-face-covering.html>

¹⁰ <https://wiki.geneseo.edu/display/PROVOST/Syllabus+Resources+Related+to+COVID-19>

¹¹ Dr. Leonard Sancilio. sancilio@geneseo.edu (Phone: 585-245-5706)

¹² Lauderdale Student Health Services. health@geneseo.edu (Phone: 585-245-5736)

Face-Masks and Other Behavior in the Laboratory¹³

SUNY Geneseo policy requires face masks in all public locations in academic buildings, residence halls, and common areas across campus. If you forget your mask, free disposable masks are available in dispensers throughout the Integrated Science Center (ISC) or from the Chemistry stockroom (ISC 329). The designated mask dispenser in Chemistry is located on the wall adjacent to the hand sanitizer dispenser next to the women's restroom closest to the Chemistry Stockroom.

Masks must be worn for the duration of the lab and the entire time you are indoors in the ISC. If you do not have a mask or are unwilling to wear one, you will be asked to leave the laboratory. It is not safe for all students if all students are not wearing face masks.

Disposable face masks should be worn blue side out, with the white side facing the inner portion which touches your face¹⁴.

Face shields do not substitute for face masks as per CDC guidelines¹⁵ and established studies of efficacy¹⁶ for prevention of cough aerosol droplets. Students wearing face shields alone will be asked to leave the laboratory.

Please familiarize yourself with any special seating or station arrangements indicated by your faculty instructor in the laboratory. Be sure to always maintain and practice 6-foot physical distancing at all times. This includes entering and exiting the laboratories.

Guidelines for Safe Laboratory Routines

1. Adhere to your lab schedule indicated by your laboratory instructor. This schedule will minimize the number of people in each laboratory room at any one time.
2. Review the experiment protocols outlined by your instructor in advance and follow them. Ideally, consult your faculty instructor with any questions you may have in advance using technological resources (email, Zoom, Canvas, etc). If advance communication is not possible, clarify as soon as possible before engaging an experiment in lab.
3. Practice situational awareness and immediately report potential exposures to your instructor.

¹³ <https://wiki.geneseo.edu/display/PROVOST/Syllabus+Resources+Related+to+COVID-19>

¹⁴ [https://www.who.int/images/default-source/health-topics/coronavirus/masks-infographic---final-\(web---rgb\).png](https://www.who.int/images/default-source/health-topics/coronavirus/masks-infographic---final-(web---rgb).png)

¹⁵ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html#face-shields>

¹⁶ <https://www.tandfonline.com/doi/full/10.1080/15459624.2013.877591?src=recsys>

4. Wear all required laboratory personal protective equipment (PPE) (including your goggles, lab coat, face mask, and gloves, if applicable) PRIOR to entering the laboratory. Do not enter the laboratory without wearing all of the listed PPE at any time.
5. Always use¹⁷ and wear¹⁸ a CDC-approved mask properly (cloth or disposable).
6. Create safe distancing zones to maintain at least 6 feet between individuals whenever possible, including when navigating the laboratory space and when entering and exiting the room. Do not “wolfpack” when entering or exiting the lab and maintain your distance from others.
7. Engage proper hand washing hygiene¹⁹ and wash your hands frequently for at least 20 seconds with soap and warm water²⁰. At a minimum, students should wash their hands upon arrival to the lab, after touching their face or face covering or any common contact surfaces (balances, door handles, chemical bottles, etc.), and when leaving the lab.
 - a. *Disinfecting solutions and hand sanitizers such as Purell are not better substitutes for hand washing if soap and warm water are available²¹. **Wash hands with soap and water while in the lab.***
 - b. Outside of the lab, if using hand sanitizer, use enough to spread liberally across both hands, ensuring the back of the hands, your palms, and between your fingers are very wet with sanitizer counting as indicated by the World Health Organization (WHO) video in the footnote. Do not shake your hands dry or rub the sanitizer off on a towel or cloth. Rub your hands together in a handwashing motion until dry²².
8. The equipment and materials in a lab have been placed in locations to ensure safe spacing in the laboratory. Please do not move or relocate equipment or materials without the express permission of the faculty instructor.
9. Disinfect shared materials prior to use as described below in the “Enhanced Cleaning for COVID Transmission Prevention” section of this document and as indicated by your instructor.
10. Be sure to sanitize surfaces such as benchtops, chairs, and other shared items and laboratory equipment before and after using such facilities²³. There are sanitizing stations in

¹⁷ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/about-face-coverings.html>

¹⁸ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-to-wear-cloth-face-coverings.htm>

¹⁹ <https://www.cdc.gov/handwashing/show-me-the-science-handwashing.html>

²⁰ <https://www.cdc.gov/handwashing/when-how-handwashing.html>

²¹ <https://www.cdc.gov/handwashing/pdf/hand-sanitizer-factsheet.pdf>

²² WHO: How to handrub? With alcohol-based formulation. <https://www.youtube.com/watch?v=ZnSjFr6J9HI>

²³ https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/Higher_Ed_Research_Detailed_Guidelines.pdf

each laboratory, please use what you need, and replace items back where they belong when you are done.

- a. Follow manufacturer's and chemistry department faculty and staff instructions for contact time for the sanitizer on a surface (sanitizers at various concentrations require specific contact times with different surface substrates to be thoroughly effective).
- b. Wash your hands for at least 20 seconds with soap and warm water after using shared disinfecting and sanitizing devices such as spray bottles.

11. Do not share writing utensils or other personal items.

12. Wash your hands before and after using a restroom or a snack break and do not lower or remove your face mask to eat or drink anything in the laboratory.

13. If while in lab you begin to feel ill or exhibit any symptoms listed in the [Geneseo COVID Safety Guidelines](#)²⁴, tell your faculty instructor right away. Per Lauderdale Health Center, faculty will safely direct the student away from the teaching area and direct the student to call Lauderdale Health Center at 585.245.5736 on the student's personal mobile device to determine if a COVID-specific response is appropriate. If the student does not have a personal mobile device, a faculty or staff member may call Lauderdale on behalf of a student with the student present.

Enhanced Cleaning for COVID Transmission Prevention

1. For your safety, wipe down high-touch surfaces before you touch them, such as balances, hood sashes, chemical pumps, and water faucets. Wipe them down again after you are done.
2. Engage good hygiene and wash hands with soap and water for at least 20 seconds before and after cleaning.
3. Know the difference between cleaning, disinfecting, and sanitizing²⁵.
 - a. Cleaning removes germs, dirt, and impurities from surfaces or objects. Cleaning works by using soap (or detergent) and water to physically remove germs from surfaces. This process does not necessarily kill germs, but by removing them, it lowers their numbers and the risk of spreading infection.
 - b. Disinfecting kills germs on surfaces or objects. Disinfecting works by using chemicals to kill germs on surfaces or objects. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface after cleaning, it can further lower the risk of spreading infection.

²⁴ <https://www.geneseo.edu/coronavirus>

²⁵ <https://www.cdc.gov/flu/school/cleaning.htm>

- c. Sanitizing lowers the number of germs on surfaces or objects to a safe level, as judged by public health standards or requirements. This process works by either cleaning or disinfecting surfaces or objects to lower the risk of spreading infection.

Create a Plan for Safe Practices in the Lab

1. When in the laboratory, scan the lab prior to moving to a different location. Plan to always keep a distance of at least 6 feet away from other people when at all possible. If not possible, communicate to affected individuals where your path intersects. Let them know where you wish to go so they may accommodate your path and move to maintain as much distance as manageable. Do not stealth around another person and invade their safety space.
2. Wear ALL required personal protective equipment (PPE) at all times in lab. If PPE needs to be adjusted, fogs up, or needs to be replaced, DO NOT remove it in the lab to expose others or yourself to risk of infection. Leave the room, and adjust your PPE or replace damaged PPE separate from other people. If you need a new mask, the stockroom can provide one for free at no charge. Additionally there will be free disposable face mask stations throughout the ISC. Per SUNY Geneseo policy, face masks are required at all times in all academic buildings including in hallways.
3. Avoid touching your face and your face mask as much as possible.
4. Engage proper hand hygiene and wash your hands before and after touching your face covering and EVERY TIME after you touch your face.
5. Engage proper hand hygiene when entering and when leaving the lab and after using any shared equipment or materials. If you touch a door handle, wash your hands.
6. Use your own chemistry lab drawer and/or station equipment and do not share your labware with others unless specifically instructed to do so by your faculty instructor in lab.

Create a Plan for Shared Equipment

1. Disposable gloves must be worn when using shared equipment to prevent cross-contamination.
2. Keep your face mask on at all times and especially any time you are using shared equipment or materials in a shared environment.
3. Know where sanitation supplies are in each lab to sanitize spaces you come in contact with before interacting with shared materials and equipment and to sanitize spaces and shared materials and equipment once you've used them.

Create a Plan for Interactions Outside of a Lab

1. Use precautions when entering a restroom or other shared-use facility. Call out in order to determine occupancy. Use a disposable paper towel to touch door handles, use your elbow if possible, and wash your hands upon entering and leaving.
2. Avoid going to the Chemistry Stockroom window unless it is an issue related to your Personal Protective Equipment (PPE). For issues not related to PPE, consult with your faculty instructor and they will communicate with the stockroom to ensure you have the resources you need.
 - a. The stockroom cannot assist you if you are not wearing a proper face mask for any reason unless it is specifically only to offer you a disposable mask should disposable masks not be available in the mask dispenser on the wall between the stockroom window and the women's restroom.

Learn, Engage, and Stay Safer in the Lab

If all students in a laboratory use the precautions listed in this document, we will all collectively maximize prevention and safety and minimize the risk of COVID-19 transmission in laboratory spaces. **Speak up and speak out** to your faculty instructor and/or the department chair if you observe someone not following precautions or following safety guidelines. Our responsibility for stopping the spread of the virus is shared amongst us all, and we are all in it together to be GeneseoStrong.