

PPE Guide for Instructional Laboratories

Introduction:

Students engaged in instructional laboratory experimentation are required to wear appropriate personal protective equipment (PPE) for protection against potential laboratory hazards. In wet laboratories, this is taken to mean that students wear, at a minimum, a lab coat, safety glasses, and gloves while working in the laboratory. Based on the nature of the potential hazard present in the laboratory, required PPE may be increased to include, for example, cryogenic gloves for handling ultra-low temperature materials, full face shields for enhanced face protection, splash resistant chemical goggles, and hard hats and safety shoes for more industrial laboratory settings. Detailed information concerning PPE may be found in Appendix Z of NJIT's Chemical Hygiene Guide: <https://www.njit.edu/environmentalsafety/sites/njit.edu.environmentalsafety/files/App%20Z%20-%20PPE%20Program%20WEB.pdf>

COVID-19:

The advent of the COVID-19 pandemic has required laboratory managers to reconsider the implementation of PPE programs in instructional laboratories. The NJIT Pandemic Recovery Plan includes the procurement and distribution of two reusable and washable cloth face coverings for each member of the campus community. The cloth face coverings are appropriate to be worn for most general campus, classroom, and office activities. However, in order to prevent the dissemination of potential contamination outside the laboratory, disposable PPE is favored in the laboratory environment.

Workplace Hygiene:

In addition to the use of appropriate PPE, instructional laboratories also need to implement sound workplace hygiene protocols, including:

- Monitoring of student and instructor health status
- Practicing adequate social distancing
- Practicing proper hand hygiene
- Practicing proper respiratory etiquette
- Decontaminating common touch surfaces

Disposable PPE:

To meet the needs of the instructional laboratory community, the NJIT Pandemic Recovery Plan also includes the procurement and distribution of disposable surgical masks, gloves, and protective gowns. These disposable supplies will be made available during phase 2 and phase 3 of the recovery process.

Standard PPE: Prior to the COVID-19 pandemic, the minimum level of PPE required for all basic instructional wet laboratory experimentation has included:

- Lab coat (cloth or disposable)
- Protective Eyewear (safety glasses w/side shields or goggles)
- Gloves (typically latex and powder free, non-sterile, nitrile gloves)

COVID-19 Standard PPE:

The advent of the COVID-19 pandemic has temporarily necessitated the use of disposable face coverings and other PPE in the instructional laboratory. The COVID-19 minimum level of PPE required for all basic instructional wet laboratory experimentation includes:

- Disposable face covering (surgical mask, procedure mask, or the equivalent)
- Disposable protective gowns (typically disposable lab coat or gown made from Dupont Tyvek or the equivalent)
- Disposable nitrile gloves (latex and powder free, non-sterile)

Additional Reusable PPE:

The disposable PPE described above is intended to be discarded upon completion of the laboratory session and not worn outside the laboratory (see waste disposal below). As much as disposable PPE is favored in the laboratory environment, it is inevitable that reusable PPE will also be required.

Examples of reusable PPE include:

- Face shields
- Protective eyewear
- Hard hats

Assignment and Decontamination of Reusable PPE:

Similar to the disposable PPE described above, reusable PPE should also not be worn outside of the laboratory. Reusable PPE should be assigned to individual students and not shared between them. Reusable PPE should be decontaminated daily. Adequate decontamination procedures may include washing with soap and water, cleaning with disinfecting wipes, or cleaning with disinfecting spray. Reusable PPE should be stored in a clean and secure manner.

Donning PPE:

Upon entry to the laboratory, students will be required to don the PPE required for the course. Face coverings are required to be worn by all Americans when in public and the instructional laboratory is no exception. It is anticipated that students will already be wearing a fabric face covering when they arrive to the instructional laboratory. Immediately upon entry to the lab, students should remove their fabric face covering, store it properly with their personal belongings, and don the disposable face mask made available in the instructional laboratory. Care should always be taken when removing the fabric face covering. The face covering should always be handled by the straps, ties, or ear loops and avoid touching the inside surface of the mask that faces your nose and mouth.

Physical laboratory configurations differ between buildings and departments throughout campus. It is anticipated that a PPE table or section of bench will be needed, located in close proximity to the laboratory entrance, where instructors can lay out the required PPE for the course. It is important to avoid bottlenecks while students retrieve their PPE. Yellow tape or floor decals can be used to demarcate appropriate waiting points and circulation patterns within the laboratory. Each department or instructor will need to develop course and laboratory specific protocols when implementing PPE guidelines to meet the needs of the course and the physical characteristics of the laboratory.

Removal of PPE:

Upon completion of the course activities, students should remove used PPE and discard in the appropriate laboratory waste container (see waste disposal below). Reusable PPE should be cleaned and stored for future use. Disposable PPE should be discarded in the appropriate laboratory waste container located in close proximity to the laboratory exit. Hand hygiene should be practiced prior to the removal of the facemask and protective eye wear. This is intended to limit potential contamination related to bringing a potentially contaminated gloved hand to the students face when removing used PPE. It is important to avoid bottlenecks while students remove and discard their PPE. Yellow tape or floor decals can be used to demarcate appropriate waiting points and circulation patterns within the laboratory. Each department or instructor will need to develop course and laboratory specific protocols when implementing PPE guidelines to meet the needs of the course and the physical characteristics of the laboratory. Hand hygiene should be practiced upon exiting the laboratory.

Disposal of Used PPE:

Instructional laboratories are routinely provided with waste containers to manage the various laboratory waste streams. Used PPE may be discarded as follows:

- General Instructional Laboratories (including chemical labs) should discard used PPE in the non-hazardous laboratory waste stream. This waste stream is typically collected in fiber drums, lined with plastic bags, covered, and labeled with the green NJIT Non-Hazardous waste label.
- Instructional Laboratories Engaged in Biological and Biomedical Experiments should discard used PPE in the biological waste stream. This waste stream is typically collected in Regulated Medical Waste boxes, lined with red bags, sealed, and labeled with the red NJIT Biological waste label.
- Note: In order for EHS to collect waste from instructional laboratories, all waste containers need to be properly packaged, sealed, and labeled. Open, overflowing, unlabeled, unsealed containers will not be collected. Detailed information regarding laboratory waste disposal may be found on the EHS website: <https://www.njit.edu/environmentalsafety/waste-management>