

# Cleanroom Walkthrough training document

## post-COVID-19 Orientation content

1. Certification of the lab for cleanroom is a rigorous demand.
  - Cleanroom certification: discuss certification 1000 particles >0.5 micron size per cubic ft, airflow design, and specialized space. Outdoor air averages 2.6Billion of these size particles per cubic foot.
  - Below, we review how that impacts entrance and admissible supplies.
2. CLEANROOM PAPER Discussion
  - We use a specialized type of paper, it is the only paper that is permitted in the cleanroom.
  - polyester cellulosic blend created by heat processing so that it does not create its own particulates.
  - **Cleanroom materials are very specialized.**
3. Materials permitted in the cleanroom review (if not mentioned, assume **not** permitted)
  - a) [Review dress code](#) (no hoodies, no turtlenecks, no very dusty or fuzzy articles, be cautious with narrow heels)
  - b) If you have a fabric face mask, please switch to a provided face mask before entering the cleanroom side.
  - Technology – phones, laptops, tablets, etc.
    - a) You can take non-porous devices inside if properly wiped. (Proper wiping reviewed below)
    - b) If porous case, remove or put in a zip-lock baggie.
    - c) Wipe off before going inside, using particle removing station described in virtual tour.
    - d) Anything that fits in your pockets it can stay in your pockets – it is then contained for particulate.
  - Handwritten note taking –
    - a) CR pens are in cups inside, only pen that can be used.
    - b) Pens: filtered and low alkaline ink so it doesn't produce particulate while you're writing.
    - c) CR notebooks are \$15 or \$25, examples available at lab.
    - d) two notebook types, hard bound is patent compatible, available for cost to PI.
    - e) Quick notes can be jotted on CR wipes or on CR post-it notes.
  - Sample carrying – how to bring things in/out of cleanroom.
    - a) -Clear -plastic -sealing container (Tupperware/gladware, wafer boxes ok, or we can help)
    - b) Wipe off before entry every time (particle removal procedure reviewed below)
    - c) Use cleanroom grade foil for light exclusion (if you have light sensitive sample)
    - d) Some PI groups have a storage box in the gowning area, which stays there.
4. Login --
  - **Express login** – Select meaningful end time to ensure sufficient equipment access to complete your task.
  - If entering Cleanroom without equipment use, log in to “CR – Clean Room” directly for the duration of your visit.
    - a) This is our safety list: if an emergency occurs, we use this to determine who may be affected.
    - b) Remember to log out of cleanroom, too.
  - **Remember to LOG OUT of all equipment when leaving** – email [nfcfappeals@pitt.edu](mailto:nfcfappeals@pitt.edu) if you forget
5. Training
  - expires after 6 months of no use. Based on experience level, full retraining may be required after expiry.
6. Wrists off ground: when gowning, we need to keep the wrists of the coverall off the ground, as demonstrated.
  - Training staff will assist you with this on your first visit.
  - Please alert staff if it will be your first CR entry when you are scheduling for your training.

We have a pre-COVID dated [virtual tour](#) posted on our website to allow for instructions and location.

(<https://www.pqi.org/tour/nanoscale-fabrication-and-characterization-facility>)

**Gowning area photos, there are some organization changes as pictured:**

- Cleanroom gloves– you **must** use cleanroom-provided coverings to enter cleanroom.
- Order and method of putting on cleanroom coverings can be re-watched at the following link, please select the version appropriate for current mask mandates - <http://www.nano.pitt.edu/GowningMask>



- If any bins are found empty, extras are available above and/or below, labeled in clear boxes
- Particle removal supplies are pictured on tray of shelf



- Coveralls to be pulled down from over-head bins in appropriate size, stored in the bag

## 2. Cleanroom Specific Instructions - you may view these steps in action here: <http://www.nano.pitt.edu/GowningMask>

- At the entrance, if you are wear a fabric mask you will change to a new mask, as provided.
- Inside gowning, while entering you will:
  - a) Place a beard cover or hood over top of the surgical mask. This provides both medical protection and particle protection.
  - b) Eye protection is required at all times inside the lab – please disinfect shared goggles before wearing them, or use one of the disposable face shields provided. You may also bring your own if you prefer.
  - c) Put on gloves from the red bins, based on the size you need
  - d) Put on shoe covers – be mindful of clean and dirty side of bench for this
  - e) Use the wiping station supplies to clean/disinfect any shared resources
  - f) From “General Use Gowning” select an appropriate size gown, put it on with consideration to keep wrists of the garment from touching the ground
- Exiting cleanroom:
  - a) Gown should be taken off at the “dirty side” of the gowning room and hung on a hanger
  - b) Place your gown on a hanger in the general use gowns area, and **zipper it all the way up**
  - c) Step to the “dirty side” of gowning by stepping over the bench, then remove other gowning supplies (head covers, shoe covers, gloves)
  - d) Please be careful that your surgical mask stays on when removing head cover items



## 3. EHS Required elements

- Fire alarm – Exit procedure, exit building and cross a street
- Show our specialty alarms -Gas and Exhaust failure - Exit Procedure, exit lab and stand at distance, alert us that it is going off.
- Show hydrofluoric acid treatment: supplies location and procedure review for HF emergency care
  - Enter the emergency wash station - 5 minutes, ensure water has access to any exposed area
  - Call Pitt police 412-624-2121 (This is programmed on speed dial: cleanroom phones are located at end of Deposition Hallway, past hood 1 and 2, inside EBL room, and at corner of main Cleanroom hallway.)
  - Treatment cream is on acid hood and in first aid kit - must be spread with acid glove or stick
  - Lastly, you must seek urgent medical treatment, please go to the Emergency Room to be seen
- Emergency exits –
  - If possible, go back out gowning: do not ungnown in case of emergency, exit fully gowned, and once safe, discard all gowning (no longer clean)
  - Show Emergency exit locations – alarm will sound, staff key required to close it back up.

Card and cleanroom activation to follow – contact [NFCFadmn@pitt.edu](mailto:NFCFadmn@pitt.edu) if you experience any problems with access.