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Overarching Goals

- Maintain safety of staff and users
- Facilitate research
- Serve the MIT community
- Implement transmission-based precautions
- Minimize occupancy
- Optimize staff time
- Prioritize resources

Learning Objectives

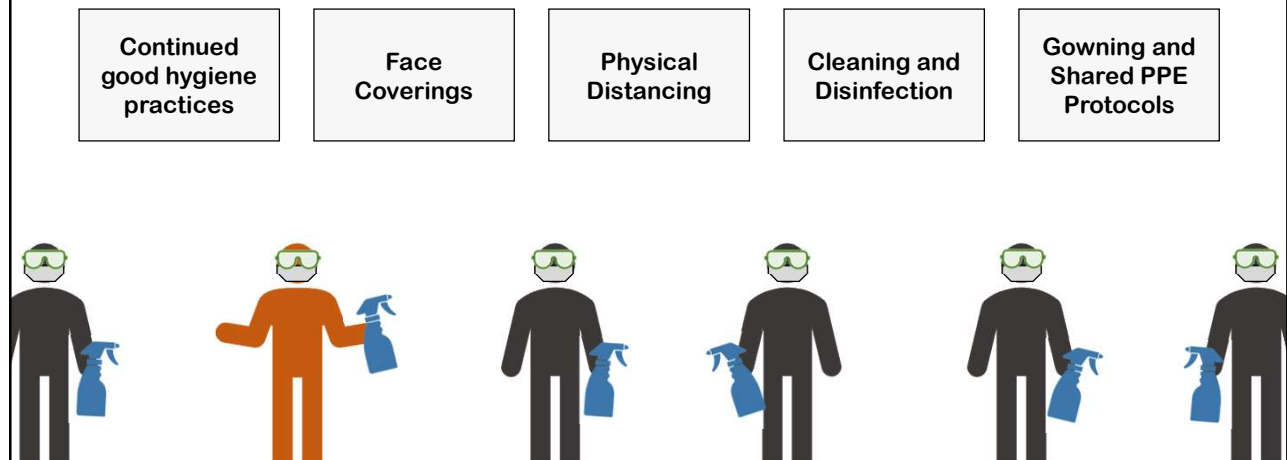
You will be...

- 1 prepared to develop new behaviors to reduce risk
- 2 more familiar with new signage and changes to how we use with the building
- 3 familiarized with new gowning and lab protocols
- 4 ready to schedule your first use of MIT.nano tools

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What to expect when you return:

New behaviors and routines



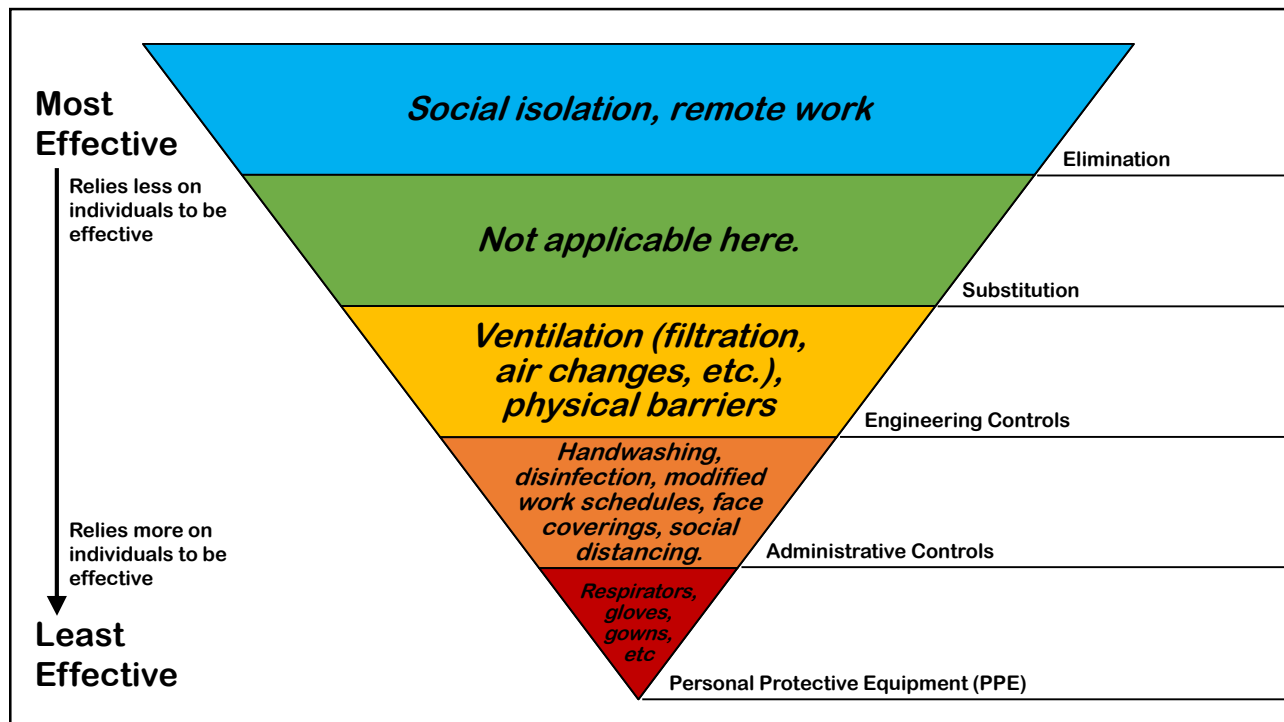
3

What to expect when you return:

Think of these as measures taken to reduce risk



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PRACTICE PHYSICAL DISTANCING

6 feet
or 2 meters

WEAR A FACE COVERING

Making an analogy to cleanroom hoods:

Face coverings...

- ① Are NOT personal protective equipment.
- ② DO protect those around us and the environment from respiratory droplets.

Physical distancing mantras:

Maintain a minimum 6 feet of physical distancing, whenever possible.

Minimize close-proximity, transient interactions with others.

Wearing a face covering is required in all campus spaces, with limited exceptions.

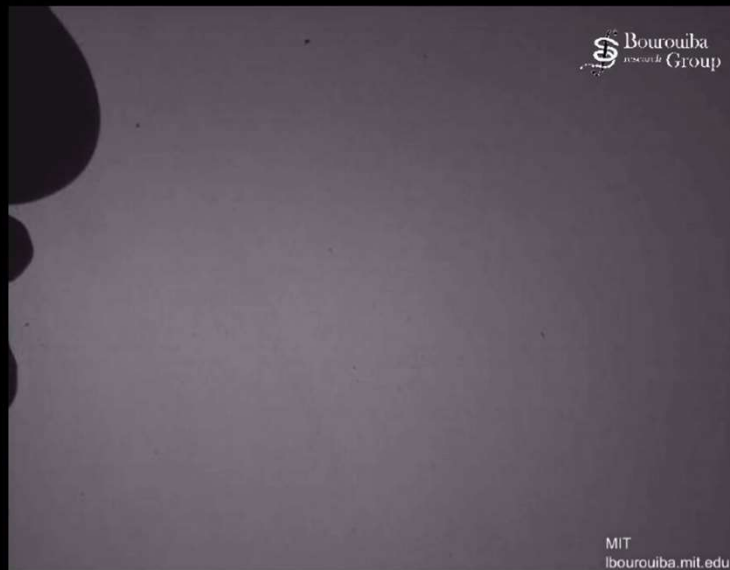
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The cleanroom hood has an integrated face cover, but must be worn the correct way to be effective.



Plastic bags available for face covering storage while in the cleanroom (in your pocket).

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<https://lbourouiba.mit.edu/video/fluid-fragmentation-violent-expirations-sheets-ligaments-beads-droplets>

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A combination approach to cleaning and disinfection

MIT Custodial:

- Custodial staff have received enhanced training in cleaning and disinfecting touch points in public areas.
- Cleaning of high-touch points and restrooms is done twice daily using a registered EPA List N disinfectant solution.

MIT.nano:

- Supplementing with external cleaning staff to regularly clean and disinfect high-touch points in the gowning rooms in Buildings 39 and 12.
- Used safety glasses will be disinfected on a weekly basis and put back into rotation.
- Provide disinfectants in the lab.

YOU:

- Continue practicing good hygiene.
- Clean in / clean out your workstation and equipment.
- Follow the new gowning and shared PPE protocols... more on this next.



Types of disinfectants you will find in MIT.nano for SARS-CoV-2:

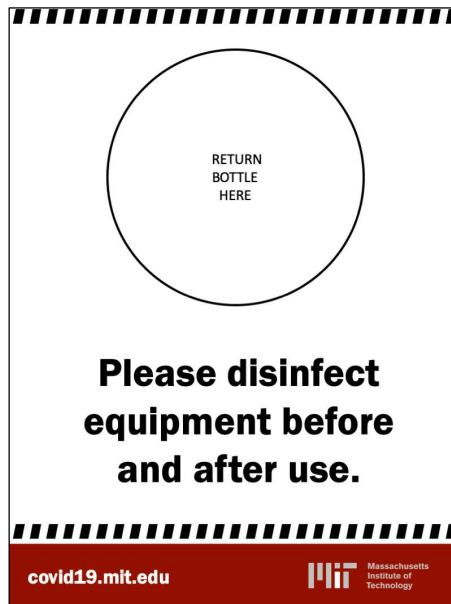
- Quaternary ammonium solutions (Morning Mist, Shockwave) – disrupts lipid membranes
- 70% alcohol (isopropanol or ethanol) – disrupts lipid membranes
- Activated hydrogen peroxide solutions (PREempt) – oxidative damage

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Disinfection signage will be posted in the lab

Spray bottles of 70% isopropanol will be distributed throughout the lab in strategic locations.

Must remain wet for at least 1 minute to be effective against SARS-CoV-2.



**Please disinfect
shared PPE
before and
after use.**

covid19.mit.edu



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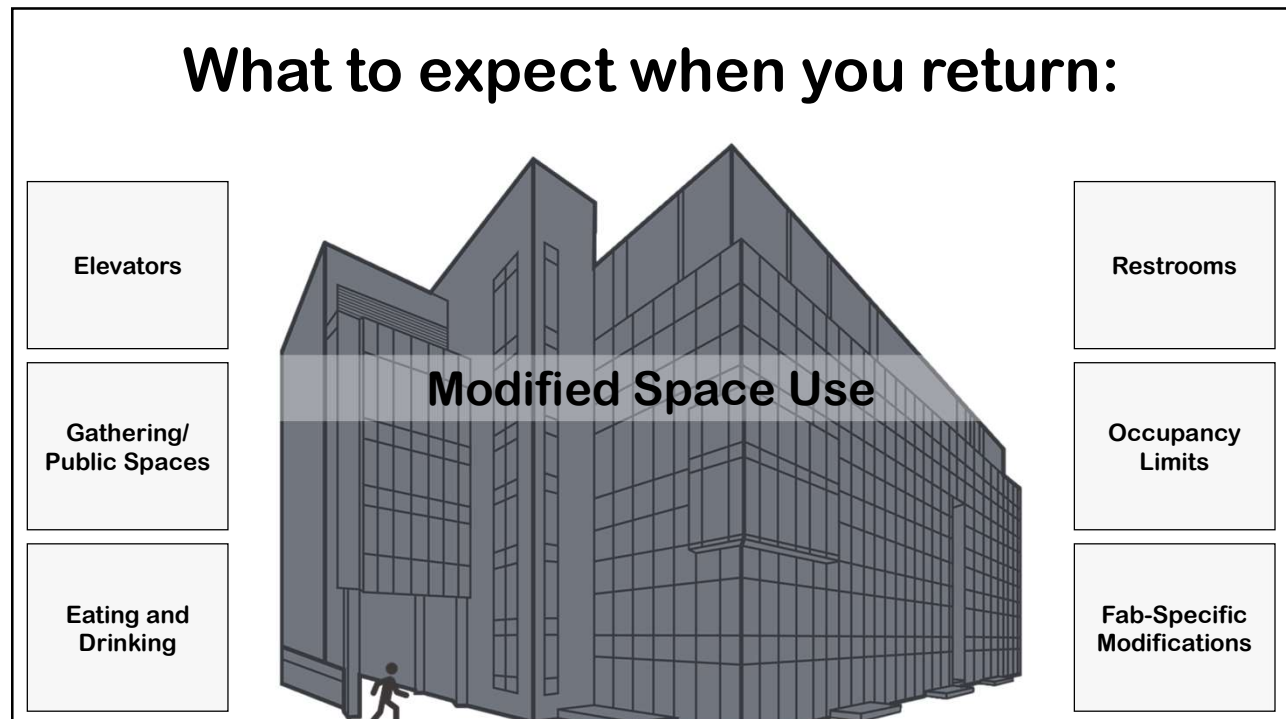
New protocols minimize shared gowning and PPE

Whenever possible, protocols have been modified to eliminate sharing of garments and PPE.

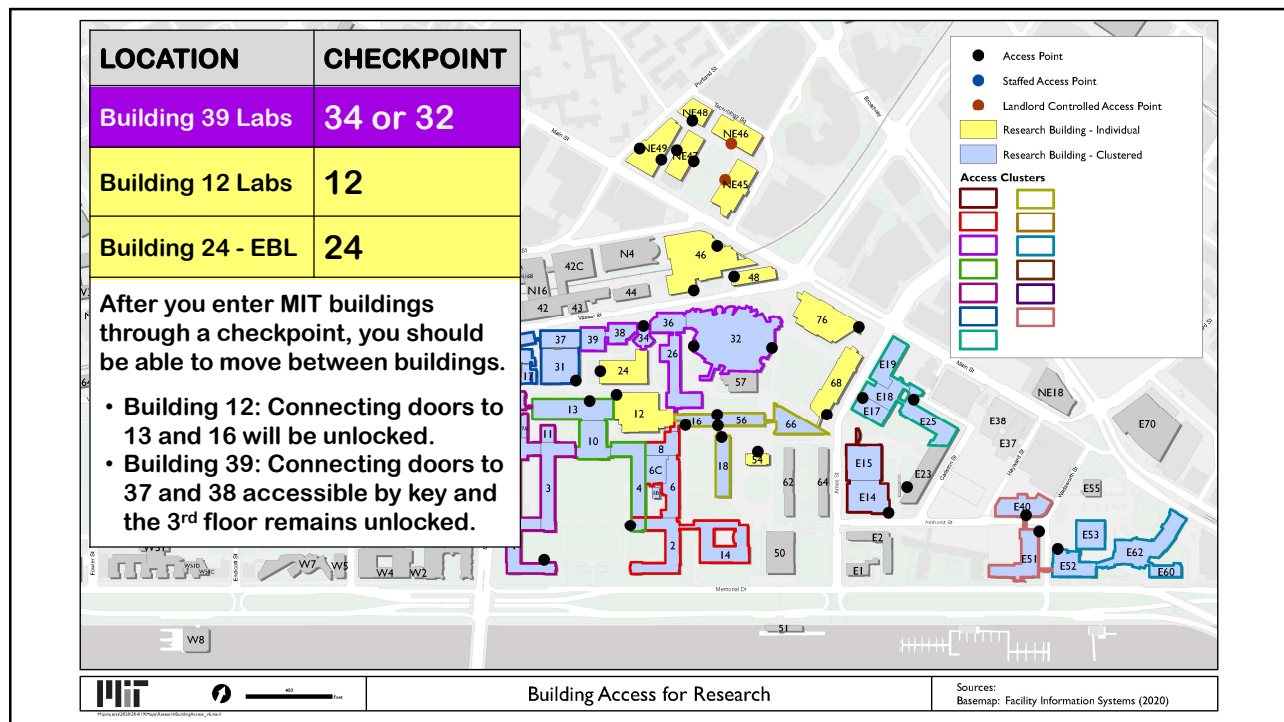
ITEM	USE	CLEANING/DISINFECTION
Bunny suits & frocks	● Individual use (NO sharing)	- Laundered weekly
Safety Glasses	● Bring your own ● Individual use from stock supply (NO sharing)	- User disinfects before/after use with 70% IPA - User keeps with bunny suit or puts in used bin - Used safety glasses will be disinfected weekly
Face Shields	● Shared	- User disinfects before/after use with 70% IPA
Chemical Apron and Arm Gauntlets	● Shared	- None, not necessary
Nitrile Gloves	● Individual use	- None, disposable
Nitrile/Neoprene Gloves	● Individual use	- None, disposable
Trionic Gloves	● Shared	- None, additional gloves are worn underneath

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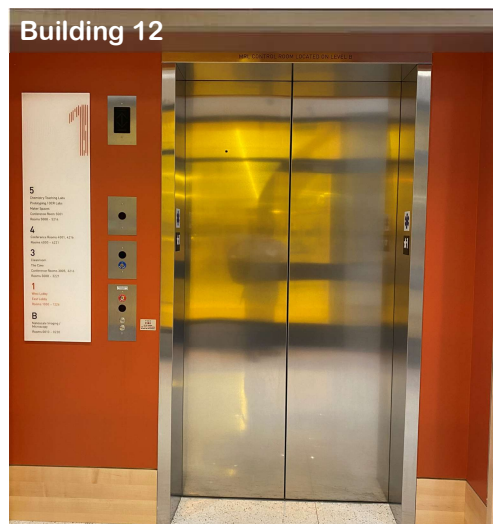
What to expect when you return:



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Elevators will be labeled with occupancy limits



Quick Tip: If possible, take the stairs to minimize wait time and your time spent in close-proximity spaces.

Plan ahead to avoid gathering and eating in MIT.nano

LOCATION	STATUS
2 nd Floor Kitchen (B39)	● Closed
Adler Room (B39)	● Closed
Conference Rooms (B12)	● Level 3: Closed ● Level 4: Closed ● Level 5: Closed
Innovation Alcoves (B12)	● Level B: Active EM reservations only ● Level 3: Closed ● Level 4: Closed
Seating areas (B12)	● 12-0168: Closed ● Level 1: Closed ● Level 3: Closed ● Level 4: Closed

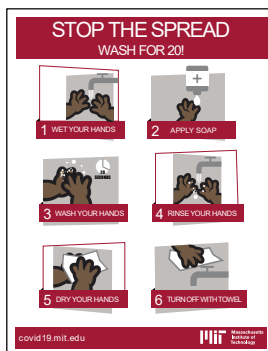
Quick Tip: Use the auto-fillers on water fountains, if available, or bring your own drinking water.



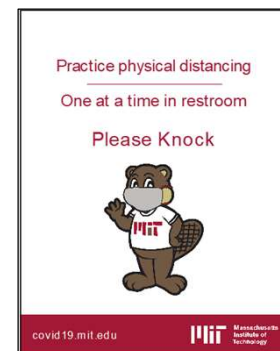
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Dedicated handwashing stations and all-gender restrooms located in Buildings 39 and 12

One restroom on each level will be converted to a single occupancy hand-washing station. Doors will be propped open to reduce touch points.



One restroom on each level will be converted to a single occupancy all-gender restroom. Remember to knock before entering.



This will improve access to hand-washing sinks and throughput for enhanced hygiene practices.

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Occupancy signs for limited space-constrained areas

Boundary Conditions:

- 6 ft physical distancing (MA, MIT)
- 160 ft²/person (MIT)

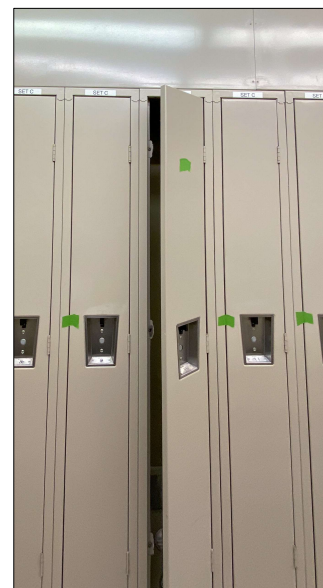
MIT Department of FACILITIES

Refer to occupancy maps posted on the MIT.nano User website for details about the spaces you access for research.

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Gowning Specifics: FAB.nano Building 39

- Back to laundered garments!
 - NO shared garments in all Building 39 labs.
 - **Tyvek Frocks** in EML will be stored on a larger rack in the old deposition (AJA) room. Gown as normal in the entry area, then enter the lab to get your frock.
- Vinyl Gloves moved to lab entry points. Gloves go on first to minimize touch contamination.
- One person per locker, sign up in advance, the locker is yours for the week.
 - Garments will be removed and lockers disinfected on Mondays.
 - Green tape across a locker door indicates the locker is cleaned and no one has opened it yet.
 - Move green tape to door and write your name for identification.
 - Plastic bags will be used for garment storage in the ebeamFP room.
- Safety Glasses:
 - Bring your own safety glasses.
 - If you use lab stocked safety glasses, store in your locker or hanger for the week.
 - Do not put used safety glasses back in the bins or cabinet with clean glasses.
 - Used safety glasses will be cleaned and returned to the rotation the following Monday.
- Plastic bags will be available for face covering storage while in the cleanroom (in your locker or pocket).
- Nitrile Gloves will be available in the normal "glove room" as PPE for the cleanroom, this is identical to Building 12 protocol.



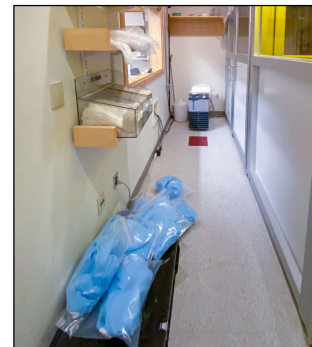
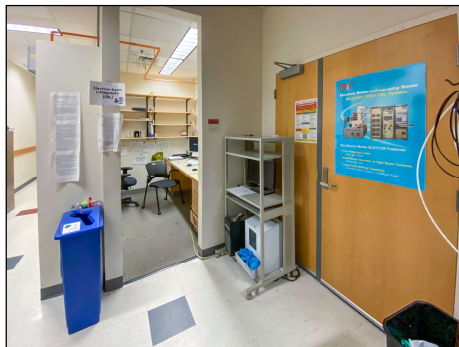
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I C L T R L E M L				Max Occupancy 1 in each gowning room ½ lockers available	
				Max Occupancy 1 in each gowning room All lockers available	
				Max Occupancy 1 in gowning room	Additional garment rack is now located in 39-514 NO sharing frocks

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Specifics: EBL Building 24

- Users will wear face coverings and gloves in any part of the lab (not just the clean area).
- Users will store shoe covers and frocks in a plastic bag with their name.
- Bouffant caps and gloves will be disposed of in the usual, labeled waste containers.
- Users should wipe down and disinfect work stations before and after use with provided disinfectant (keyboards, mouse, etc)



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Gowning Specifics: FAB.nano Building 12

ALWAYS maintain 6 feet physical distancing while queuing up in Building 12 gowning rooms.

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Hands-free access
(in and out) after
swiping your card

Max occupancy
2
in each gowning area

Most storage
lockers will be
closed-off.

Some will remain
open for coats
and backpacks
and handles will
be disinfected
daily.



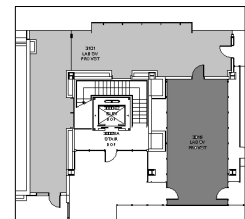
Vinyl gloves have
been moved to the
Pre-Gown entrance
in order to minimize
high touch-point
contamination.



Bring your own safety glasses.

If you forget, safety glasses in the Pre-Gown rack
will still be provided.

- Do not put used safety glasses back in this rack.
- Used safety glasses will be disinfected and returned to the rotation on the following Monday.



We'll cover gowning next...

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Gowning Specifics: FAB.nano Building 12

ALWAYS maintain 6 feet physical distancing while queuing up in Building 12 gowning rooms.

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Plastic bags
available for
storing your
face covering
while you are in
the cleanroom
(keep in your
pocket).

All users will wear a full
bunnysuit (no frocks).



Garments will be pulled and
laundered weekly.

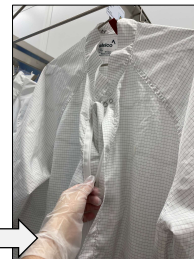
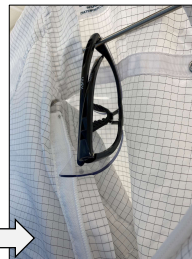
- Shared boots and belts remain on the boot rack.
- Name badges will be moved to straps at the end of each rack.
- New name badges are located in Pre-Gown bins.

Hangers are spaced further
apart and fixed into place.



Snap hood to the bunnysuit, tuck
hood inside, and zip up bunnysuit
to store your garments. This
prevents contact with other
users' garments.

If you use lab stocked safety
glasses, store on the hanger with
your garment for the week.



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Specifics: 5th Level Packaging Lab

ALWAYS maintain 6 feet physical distancing while working in the Packaging Lab.

Wearing a personal face covering is required at all times.



One at a time in gowning. Please wait outside the door for your turn to go in.



Bring your own safety glasses. If using the stocked supply, disinfect before use. Place in the Used Bin when finished.



70% Isopropanol disinfectant near the diesaw.

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Reminders of what hasn't changed:

The chemicals, gases, and hazards that we work with in the lab have not changed. Inside the lab, in many cases these hazards pose a higher risk to your health and safety than SARS-CoV-2.

As a result most of our lab policies remain the same.

Some highlights include:

- Continue proper chemical hygiene and hazardous waste management practices:
 - Only store compatible chemicals together
 - Minimize hazardous chemical use and use less hazardous alternatives, when possible
 - Always add acid to water
- Use proper Personal Protective Equipment (PPE)
 - All times: Safety Glasses
 - Solvents and photolithography: Nitrile Gloves
 - Corrosive hoods and wet benches: Aprons, Arm Gauntlets, Face Shields, and Corrosive Gloves (Trionic in 39, Nitrile-Neoprene in 12)
 - Note that Vinyl Gloves are not PPE



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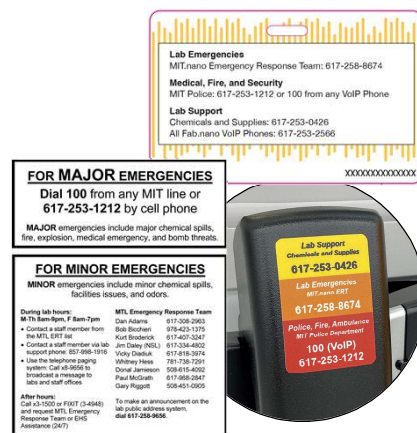
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The chemicals, gases, and hazards that we work with in the lab have not changed. Inside the lab, in many cases these hazards pose a higher risk to your health and safety than SARS-CoV-2.

As a result most of our lab policies remain the same.

Some highlights include:

- **Working Alone Policy**
 - Best practice is to always have a buddy nearby for safety and responding to emergencies
 - A buddy is **REQUIRED** for working on any corrosive hood or wet bench (acids, bases, oxidizers)
 - In Building 12 or 24 a buddy is not required for other work
 - Remote Buddy policy still applies in Building 39
- **Emergency Response:**
 - Police, fire, or medical emergency: Call **100** or **617-253-1212**
 - Lab emergencies: In Building 39 call **617-253-1500** and ask for the MTL ERT
 - Lab emergencies: In Building 12 call **617-258-8674** for the MIT.nano ERT
- Lab support phone: Call **617-253-0426** for delivery of chemicals and supplies, now including requests for precious metals.



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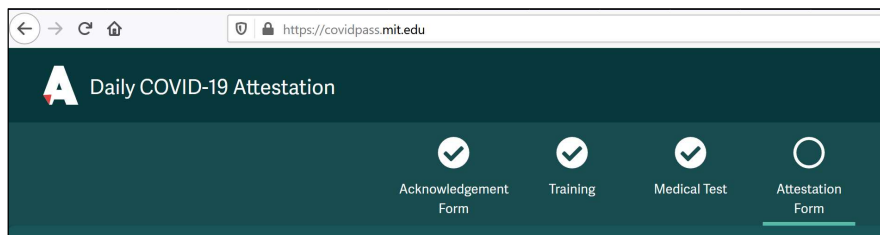
Prerequisites for accessing the lab:

MIT Prerequisites

- Check marks on COVID Pass.
 - Acknowledgement Form
 - EHS COVID-19 Lab Reorientation Training
 - Medical Test
 - Attestation Form – this needs to be filled out and submitted every day you come to campus
- All EHS core trainings completed (check Learning Center in Atlas).
- Remember that the hours in Core Facilities count toward your hours on campus.

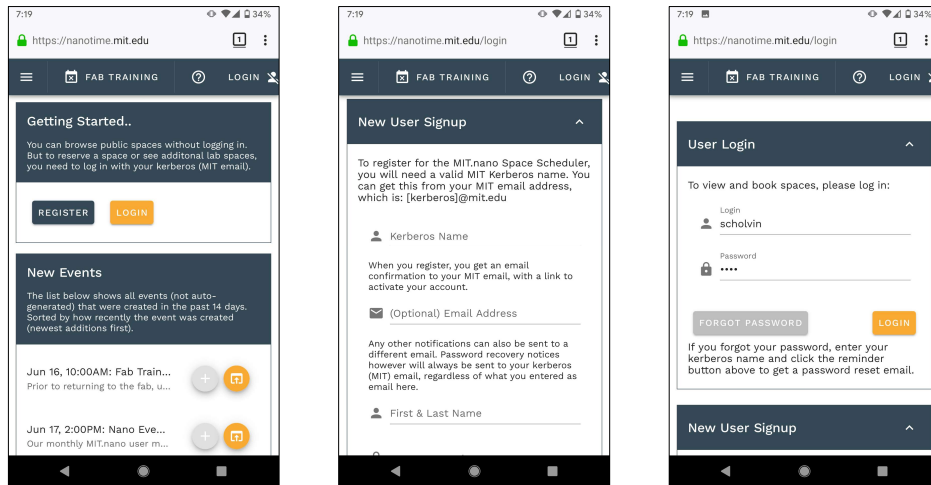
MIT.nano Prerequisites

- All trainings prerequisites completed (check MUMMS).
- You must attend this training!
- Sign up for lab access on the MIT.nano Scheduler (more on this at the end).
 - Sign up to request a locker/hanger: reservations for 1-week duration.
 - Reserve your equipment in CORAL: plan your reservations to optimize time in the lab and minimize entries/exits.
- In your planning, keep in mind that gowning rooms are the bottleneck for all labs.

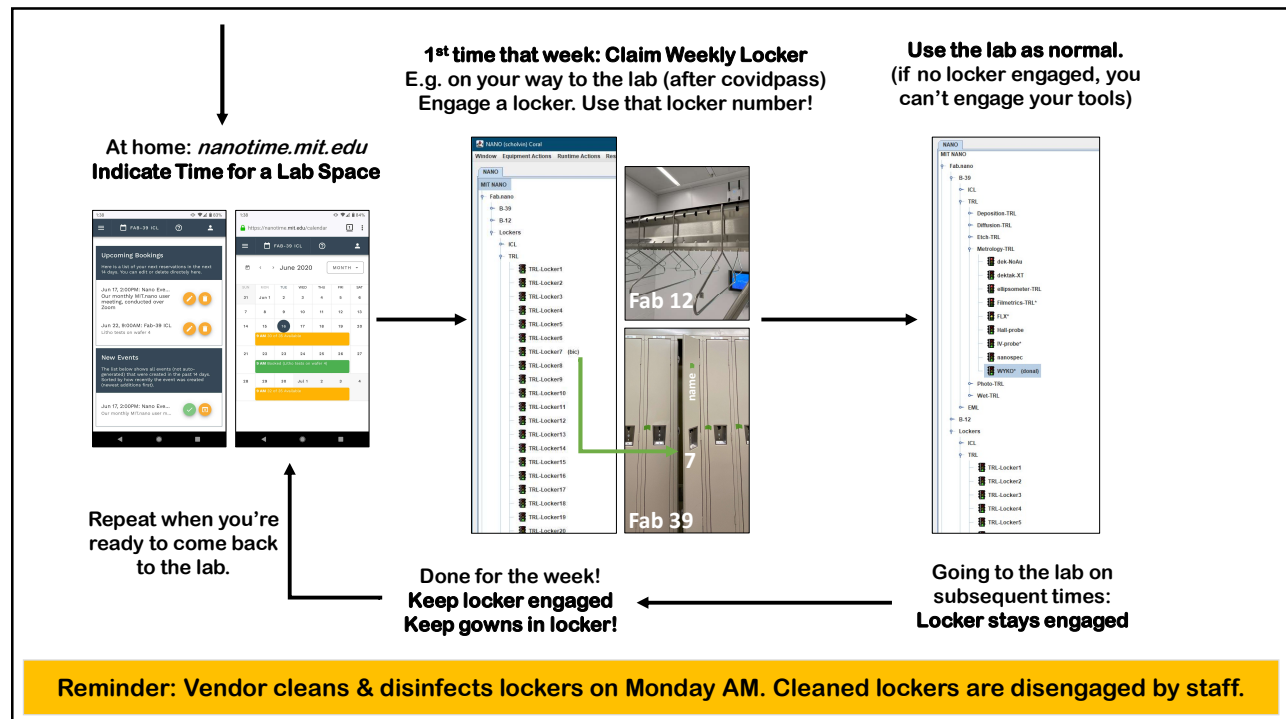


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MIT.nano Scheduler - Register and Log-In:



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Accessing the lab:

Lab Hours of Operation		
Building 39 ICL/TRL/EML	Building 24 EBL	Building 12 Fab.nano/Packaging
Mon-Fri: 9am-5pm	24/7 Access	Mon-Fri: 9am-5pm
24-hour access enabled June 29 for qualified users		24-hour access enabled June 29 for qualified users

Staff will be on a reduced schedule during the ramp-up.

- Fab Staff Hours: Mon-Fri, 9am-5pm
- EBL Staff Hours: Mark Mondol is available by phone 8am-11:59pm
- Fab Staff will work alternating weeks to minimize personnel in offices and labs
- Report ALL tool problems in CORAL (this notifies ALL staff including back-ups)
- Staff will provide remote support as much as possible

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Accessing the lab: Staged approach to Training and New Users

1 Early Ramp-Up

- Guide for Returning to MIT.nano Labs: Offering multiple sessions each week to train existing users on modified protocols.
- Broad topic trainings: Classroom trainings will resume via Zoom.
 - Emergency Preparedness Training for new users
 - Wet Chemical Processing Training for wet bench users and 24-hr users.
- 24/7 User Qualification interviews will resume in July via Zoom.

2 Mid Ramp-Up

- Training on “Similar Tools”: Staff are working to enable “distanced training”.
 - Spin coaters and photolithography
 - New MLA-150
 - AMAT tools (similar interfaces)
 - Metrology equipment (Dektaks, Filmetrics, etc)

Reach out to the tool owners to discuss your “Similar Tool” training needs.

3 Late Ramp-Up

- Training on “New Tools” (i.e. if you never used an etcher before).
 - We are investigating ways to safely enable training on equipment that requires close-proximity between staff and the users.
- New Users to the Lab
 - This requires a combination of classroom training and hands-on training, as well as “New Tool” training.
 - New User Orientation will resume via zoom.
 - Quick Start will resume and will be modified from its current format.

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Main takeaways

These new behaviors and modified lab protocols are precautionary measures taken to reduce risk

Continued
good hygiene
practices

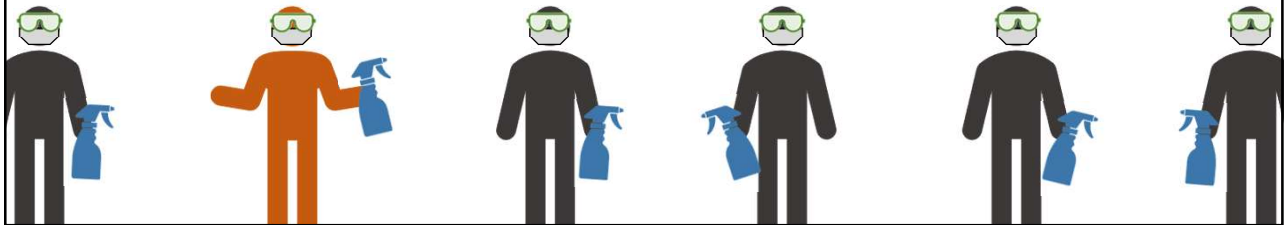
Face
Coverings

Physical
Distancing

Cleaning and
Disinfection

Modified Lab
Protocols

Personal responsibility will contribute to the overall well-being of the MIT.nano community



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