CNST NanoFab

NEMO User Manual

[Image of NEMO interface with upcoming reservations, alerts, and current NanoFab usage]

- **Upcoming reservations**
  - You're late for your A115 reservation!
    - Starting on Wednesday, July 1st @ 3:00 PM
    - Ending on Wednesday, July 1st @ 8:00 PM
  - You're late for your Classroom reservation!
    - Starting on Wednesday, July 1st @ 3:00 PM
    - Ending on Wednesday, July 1st @ 7:00 PM

- **Alerts & outages**
  - Phase One will initiate on July 6th 2020
    - Limited personnel only

- **Current NanoFab usage**
  - You are logged in to the G107. Usage time is being billed to the project named Base Project.
Using NEMO to access the CNST NanoFab labs and tools

Log in to NEMO

- NEMO is accessible on or off campus at nemo.nist.gov.
  - Login through a NIST computer is automatic, no username or password is required.
  - Login off campus or through a personal device will require you to input your username and password.
- The NEMO landing page below is used to navigate the NEMO website and provides important information.

1. NEMO navigation bar provides easy access on every NEMO page. Click NEMO to return to the landing page.
2. All upcoming reservations are displayed.
3. All alerts and outages are displayed.
4. All current area and tool usage are displayed.
Make a reservation in the area you plan to use.
Area reservations are only required in the Cleanroom and Soft Lithography labs.

1. Select “Calendar” from the navigation bar.
2. Select the area to make a reservation in.
   a. The icon next to the area name indicates the occupancy status (green is good, red is at or above the occupancy limit).
   b. The number of users in the area and the occupancy limit are indicated next to the status icon (e.g. 0 / 10).
3. On the calendar, click the start time and drag to the end time.
   a. If the maximum number of slots is already reserved, you will receive an error.
Note:
- Reservations can be reviewed and/or canceled by clicking the reservation then clicking the cancel button.

- Reservations can be moved by dragging the reservation to another time.
- Reservations can be resized by clicking the resize bar on the bottom of the reservation box.

Restrictions:
- You will not be able to enter the lab without an area reservation.
- You will not be able to make tool reservations without an area reservation.
- Reservation rules will be implemented to maximize the availability of the labs to the researchers and may change with demand for the lab.
- You must leave the lab before the reservation end time to allow others to enter.
Make tool reservations

1. Select “Calendar” from the navigation bar.
2. Select the tool to make a reservation on.
3. On the calendar, click the start time and drag to the end time.

Note:
- Reservations can be canceled by clicking the reservation then clicking cancel.
- Reservations can be moved by dragging the reservation.
- Reservations can be resized by clicking the resize bar on the bottom of the reservation box.

Restrictions:
- Tool reservations in the Cleanroom and Soft Lithography labs require an area reservation prior to making tool reservations and the tool reservation start time must be within your area reservation time window.
Log into the lab.
Cleanroom and Soft Lithography labs only.

1. Scan your badge at the entrance tablet to enter the lab.
Select project

2. If you have multiple projects, select the project to use using the stylus.
3. The door will unlock for five seconds allowing entry.

Restrictions
- The entrance tablet will only allow access to the lab if the occupancy is below the limit and you have a reservation.
- If you are more than 30 minutes late for your area reservation it will automatically be canceled.
Be aware of room occupancy limits in all labs and NanoFab spaces

- Occupancy limit signs are posted in each area. Do not enter if area is at capacity.
- Always maintain 6 feet of social distance between yourself and others.
- If you need to access an area that is at capacity or you can’t get to your work area without maintaining social distancing, ask one of the people in the area to step out of the area.

Enable and use any tools required.

1. Select “Tool control” from the navigation bar.
2. Click on the tool to be enabled.
3. If you have multiple projects, select the project to use.
4. Click the start button.
5. If you have any problems, report the issues in NEMO on the Tool control page, Report a problem tab.
1. Select “Tool control” from the navigation bar.
2. Click on the tool to be enabled.
3. Answer post-usage questions (most tools don’t have post-usage questions).
4. Click the stop button.

Disable tools when finished.
Report any tool issues encountered.
If you encounter trouble with a tool, report it in NEMO. Staff are automatically alerted by email when a problem or shutdown is reported.

1. From the tool page of interest, select the Report a problem tab.
2. Select a category from the dropdown list that best describes the type of problem. If there is no appropriate category then leave the field blank.
3. Provide details of the issue encountered. Provide all relevant information to help the staff determine how the tool was being used, what was going on immediately before the issue occurred, what happened, and any observations following the issue.
4. If the issue a safety issue check the safety hazard checkbox. If the issue will prevent the tool from being used by others check the shutdown checkbox.
5. If the detailed description could be improved with a picture, then take one and upload it through the Choose Files dialog.
6. When all information is complete, click the Report problem button.
Log out of the lab.
Cleanroom and Soft Lithography labs only.

1. Scan your badge at the exit tablet to log out of the lab.
2. The tablet will show a green background if no tools are in use and a red background if tools are still in use.

Restrictions:
- You must leave the lab before the reservation end time to allow others to enter.
- Staying beyond your reservation time can prevent other users from entering the lab.
- Late exit times are reported to the lab manager and may result in loss of access.
Safety

If you observe any safety issues, please report them immediately. On the landing page, click the “Safety suggestions” icon to open the safety page.

1. Provide the location of the problem observed.
2. Provide details of the safety observation or suggestions. The more information provided, the easier it will be for the staff to identify and resolve the issue.
3. If you prefer not to identify yourself, click the check box to report anonymously. However, staff will not be able to contact you for clarifications or questions.
4. Click the “Report a new safety concern” button to submit. Staff will be notified and take action as needed.
Staff contacts
If you require assistance, contact a staff member or the user office. On the landing page, click the “Contact NanoFab staff” icon to open a directory listing of all staff members.

1. Staff member email address is also a mail link.
2. Phone numbers are also call links when accessed from a mobile device.
3. Send a text message is also a message link when accessed from a mobile device.
4. Office location identifies where the staff member can be found if not in the lab.
**Status Dashboard**

The status dashboard provides a current view of area occupancy and tool usage. From any NEMO page, click ‘Status dashboard’ on the navigation bar to access the page.

**Area occupancy**

Area occupancy displays a summary of all users, staff, and service personnel in an occupancy-controlled lab. The default status dashboard view is area occupancy.

1. Status dashboard link on navigation bar. Click to access the status dashboard page.
2. Area occupancy is the default view. Click ‘Tool status & usage’ to switch views.
3. Current users out of total users allowed is displayed as well as staff and service personnel.
4. User details include login day/time and current project.
Tool status & usage

Tool status & usage displays a summary of tools currently in use and their status. The default tool display is usage.

1. Status dashboard link on navigation bar. Click to access the status dashboard page.
2. Area occupancy is the default view. Click ‘Tool status & usage’ to switch views.
3. Filter. Click the drop down to select what information to display.
   a. Tools in use – the default view displays tools that a user or staff are currently logged into.
   b. Problematic tools – displays tools that have a problem or shutdown active.
   c. Idle tools – displays tools that are not currently in use.
   d. All tools – displays all tools listed in NEMO.
4. Tool details include Tool name with status icons, current user if enabled, and login day/time if enabled.
View your billing
The view your billing dialog can be used to review NEMO activity and charges. On the landing page, click the “View your billing” icon to open the billing page.

Billing Information
The billing information view displays a summary of actual charges. If the user is also the PI, a summary of charges by each user on the project is displayed. Charges can be displayed by month or a date range can be entered. The default view your billing view is billing information.

1. Select a month/year from the drop down or enter a date range.
2. Click update to load data for the selected range.
3. Details are provided and summarized by account, application, and project. If the user is also the PI for the project, a summary of each authorized user is also displayed.
4. The view can be switched between billing information and usage details by clicking the appropriate button.

Usage
The usage view displays a summary usage events for the current user.

1. Select a month/year from the drop down or enter a date range.
2. Click update to load data for the selected range.
3. Usage details are provided by area access, tool usage, supplies and consumables, staff charges, training sessions, and missed reservations. Details are provided include date/time, project, and area/tool/supply.
4. The view can be switched between billing information and usage details by clicking the appropriate button.
News and events

The news and events dialog is used to provide users important information such as upcoming lab events, new tools, or large facility projects.

On the landing page, click the “News and events” icon to open the page.

1. The news and events page opens to the recent news page.
2. Click the ‘view archived news’ link to see older news articles.
3. Scroll through articles.
Send Feedback
The send feedback page is a convenient way to inform staff of non-emergency issues or suggestions.

On the landing page, click the “Send feedback” icon to open the page.

1. Type the message to send to the NanoFab staff in the text box.
2. Click the “Send feedback” button to send the message.