

1. Purpose and Scope

- 1.1. This document covers general policies for the UH Nanofabrication Facilities. These policies apply to all users. These policies will be reviewed and updated periodically. This document does not cover every policy, only the general ones. Users are required to follow the policies described here as well as any additional policies pertaining to their activities.

2. Definitions

- 2.1. User: The individual who uses the UH Nanofabrication Facility
- 2.2. PI: Stands for Primary Investigator, in this context it means the person who approves payment of fees incurred by one or more users.

3. Hours of Operation

- 3.1. The facility is open from 8:00am to 6:00pm Monday through Friday. The facility is closed on university holidays. In the event of an emergency the facility may shut down.
- 3.2. Afterhours access may be granted to a user at the discretion of the facility manager and with the approval of the facility director. No explanation for why afterhours access is granted or denied to a user will be given; it is our intention that after afterhours access should only be granted on rare occasions. When afterhours access is granted it may be done so temporarily. In all cases afterhours users will be restricted from working with chemicals and other restrictions may be applied.

4. Agreement to Pay Fees

- 4.1. **The PI must agree to pay the user's fees before the user is allowed to use the Facility.**
- 4.2. The PI should notify the facility manager as soon as possible when a user should no longer be allowed to use the Nanofabrication Facility (*e.g.* when a graduate student leaves a professor's group.)

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- 4.3. Fees are evaluated and updated on a regular basis; invoices will always be generated based on the current fee schedule. When the fee schedule changes facility staff will attempt to notify the PI. The facility manager can provide the current fee schedule at any time upon request.
- 4.4. Please be aware that fees are applied based on individual users, not based on the PI's group. When a user reserves an instrument, that user must be the one who uses the instrument. Users are not allowed to reserve time and then give that time to another user. If special circumstances arise permission to change users may be granted at the discretion of the facility manger. The reason this policy is in place is because many user fees have a monthly cap, if users give away their time to others it could become an abuse of the cap system.
- 4.5. If a billing error occurs please check the invoice for a list of people to contact for help . Please be aware that most billing errors are due to confusion over which month the invoice applies to. The 'billing month' on the invoice indicates the month that the invoice applies to, the invoice will also list the dates and times when each user accrued the fees being invoiced.
- 4.6. Sometimes circumstances beyond the user's control cause him or her to lose reserved time on a tool. In these situations the user or PI must make a request by email to the facility manager to have the time/fee adjusted. This request must be made within 5 business days of the event.

5. Responsibilities

- 5.1. Trained users are expected to be able to operate the instruments independently. Facility staff will provide support when an instrument breaks down or when something occurs that is outside the user's training. When users encounter problems outside the scope of their training they should not attempt to repair or troubleshoot on their own, they should seek help from facility staff or from a user who has the appropriate training. Users should always do a pre-use examination of the instrument to make sure it is in the state they expect, this is especially important for vacuum systems.
- 5.2. The responsibility of conducting research and conducting process development lies with the users. Facility staff will endeavor to provide accurate help and advice but it is the users' responsibility to decide how best to use the tools in the facility in order to meet their particular needs, time restrictions and budget. Process development may include calibrating the tool and/or the user's process to produce the desired result; it is the user's responsibility to conduct this work. Occasionally the operational characteristics of an instrument may change due to such things as repair work, new consumables being used, etc. Facility staff will endeavor to keep the operational characteristics of the equipment constant however when events occur it is not the

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responsibility of the staff to return the instrument to exactly the same operational characteristics as before, only to return the instrument to operating condition.

- 5.3. The facility does not have staff dedicated solely to assisting users. Facility staff will be available to assist users as much as possible during normal operating hours but the unavailability of staff is not an excuse for the user to attempt repairs or procedures outside his or her training.
- 5.4. Chemical usage at the facility is considered a privilege not a core deliverable of the facility. Chemical users are granted a great deal of flexibility to pursue their research but they are completely responsible for all aspects of the chemicals and chemical processes that they use. The role of staff is to supervise only, the users themselves are responsible for providing chemicals, storing them correctly, providing proper equipment, spill cleanup, providing waste containers, waste disposal, etc. For more details refer to the Chemical Use Policy.

6. Requirements

- 6.1. Prior to using any instrument the user must be trained and certified.
- 6.2. Users are required to set up an account on the Facility's online scheduling system here: <http://nanofab.egr.uh.edu/scheduler/> We use this system to distribute emails about what is happening at the Facility. A PI may also set up an account in order to receive these emails.
- 6.3. Users are required to attend EH06-General Laboratory Safety and Hazardous Materials Orientation or an equivalent course from the user's parent organization/university. Additional safety training may be required as determined by the facility manager.
- 6.4. Users are required to clean up after themselves. This is a simple but very important requirement.
- 6.5. Upon request users will be provided with a storage tub. Non-liquid and non-hazardous samples as well as tools, notes etc. must be kept inside this tub. The tub must be labeled with the user or PI's name and the tub must be kept closed when not being used. Any items found left out of the tub, left laying around the facility, will be thrown away unless there is a note present with the user's name, contact info and an expiration date stating when it is OK to throw away the item.
- 6.6. Guests are not allowed in the cleanroom. At the discretion of the Facility manager exceptions can be made but it is our intention that this be done only on rare occasions.

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7. Reservations

- 7.1. Users are required to reserve instruments using the online reservation system prior to use. Instruments can be reserved up to 72 hours in advance. Cancellations are allowed up to 24 hours in advance. Users may make a request of the facility manager to cancel their reservation if there is less than 24 hours until they were schedule to use an instrument. At the facility manager's discretion the request may be granted and normally will be granted. If it is very close to or even after the start time of the reservation the facility manager may make a partial cancellation. Users are encouraged to make these requests so that unused equipment can be freed up for other users.
- 7.2. Users entering the cleanroom are required to fill out the Cleanroom Log. This form is on a clipboard near the door leading from the gowning room to the cleanroom.
- 7.3. If a user has reserved an instrument but is not present other users are not allowed to use that instrument.
- 7.4. If an instrument breaks down during the user's reserved time slot the fee for that time slot may, and in almost all cases will, be waived or reduced at the discretion of the facility manager. It is the responsibility of the user to make such a request via email to the facility manager.
- 7.5. If an instrument that broke down is returned to an operating condition during a user's reserved time, that user may use the balance of the remaining time. That user may not encroach on the time of the next scheduled user.
- 7.6. Facility staff will attempt to inform users in advance of an instrument maintenance event. Regardless of whether a user knew of a maintenance event in advance, maintenance takes priority over user reservations. This will normally only apply when a service contract technician comes to work on an instrument.

8. Consumables, Chemicals and Hard Drive Space

- 8.1. The Facility provides PPE and a few common chemicals; all other consumables must be provided by the user. Users must either provide their own consumables or get permission from the owner to use someone else's consumables. Consumables include things such as photoresist, developer, sputtering targets and AFM probes. The chemicals that are provided (IPA and Acetone) are for cleaning purposes only and should not be used as reagents.

8.2. Users may bring chemicals into the cleanroom and store them there. Users are required to tell the facility manager, by email, the name and quantity of chemical being stored. The user must provide a MSDS sheet if requested to do so by the facility manager. The user must also notify the facility manager when a chemical has been used up or is being removed from the facility. Notification should be made via email.

8.3. Instruments such as the FIB, AFM and SEM have hard drive space available to store the users' data. Users should transfer their data off of the hard drives as soon as possible and then delete their data from the hard drive to keep memory available for others. The Facility is not responsible for data lost due to hard drive failure. Periodically a request will go out for users to clear their data off the hard drives, data lost due to the user not responding in a timely manner is not the responsibility of the Facility.

9. **Infractions**

9.1. Users who do not follow Facility policies may be temporarily or permanently banned from the facility.

9.2. Users who are not able to exhibit sufficient competency or whose behavior constitutes a threat to the safety of people or instruments may have their right to use the Facility temporarily or permanently suspended.

9.3. Users who do not follow facility police or who engage in disruptive behavior may incur a noncompliance fee. If a user is noncompliant, the PI responsible for the user's fees will be contacted; if the user continues to be noncompliant a fee will be charged each month until the facility user comes into compliance. In cases where a threat or perceived threat to the health and safety of others is involved the noncompliance fee may be applied on the first incident and without giving prior warning to the PI; in severe cases multiple noncompliance fees may be assessed for different aspects of the same incident. The PI may elect permanent banishment from the facility for the users involved instead of paying the fees. .

10. **Liability**

10.1. The Nanofab Facility is not responsible for lost stolen or damaged property.

11. Displaying Your Work at the Nanofab Facility

- 11.1. The Facility has a widescreen TV monitor that constantly plays a slideshow demonstrating the Facility's capabilities; all users are welcome to contribute content to be displayed in this slide show. We also have some wall space to display posters and manuscript reprints. We would like to display your work, please contact the facility manager if you would like to have your work displayed.

12. References

- 12.1. Doc Number 0000022 Chemical Use Policy

13. Revisions

- 13.1. Version 1
- 13.1.1. No revisions
- 13.2. Version 2
- 13.2.1. Added section 4.6.
- 13.2.2. Added section 5.4.
- 13.2.3. Added section 6.5
- 13.2.4. Added clarification to section 8.1 that chemicals provided by the facility are for cleaning, not for reagents.
- 13.2.5. Specified in section 8.2 that notifications must be made via email.
- 13.2.6. Added section 9.3
- 13.2.7. Added reference 12.1.

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