NRF User Guide

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1.0   Introduction to the NRF

1.1 Obtaining Access to the NRF

Visit https://nrf.aux.eng.ufl.edu/ .Login with your Gatorlink ID and follow the instructions to start the process of obtaining NRF Access.

1.2 NRF Safety Class.

The NRF safety course is require for all persons to become qualified NRF users.

1.2.1 Cleanroom Users - You must complete the NRF Clean Room Safety class before you will be admitted into the clean room. The class lasts approximately 4 hours. Following the online guide to becoming a NRF User and this will generate an email to staff and add you into the que for safety training. Cleanroom Users are responsible to understand and follow for both "All Users SOP" and "Cleanroom users SOP".

1.2.2 Metrology Users - Metrology Users are those that only use the NRF tools located outside the cleanroom. The general user safety class is still required to become a "metrology user" and access these areas. Metrology Users are responsible to understand and follow the "All Users SOP". Follow the online guide to becoming a NRF User and this will generate an email to staff and add you into the que for safety training.

1.3 Key FOB Assignment

 Access to the cleanroom and the building afterhours requires the use of a key FOB. Once the user has completed NRF safety training and their completed user form is submitted, the key FOB request can begin. Key FOB requests are uploaded twice a week and typically take 7 to 10 business days to complete the entire process.

Cleanroom users will be issued a user ID badge and a key FOB. Metrology users will only be issued a user ID badge. Keys and FOBs to the metrology rooms are available for daily checkout at the NRF reception area.

1.4 Tool Training

Tool (resource) training is performed only by NRF staff. User-User training is not permitted; however, new Users are encouraged to observe senior Users to gain insight to tool operations. Standard training is provided at a discounted rate compared to the standard use rate.   Ad-hoc or immediate training (i.e. requests outside the normal training schedule) on a specific tool is available at the non-discounted tool rate. See NRF website for all tool training rates.

Please refer to the Training Calendar on the web site for specific training dates for each tool. Find the date that fits your schedule and request training from the main NRF web page. If the requested tool is not on the training calendar, please comment on your availability in your training request. We try to maintain training within 2 weeks of your request. Your training request is sent by email to your PI for approval. Only after your PI has approved the training request will the request be sent to the NRF staff. Once it reaches the NRF staff, you will receive an email from NRF staff confirming the date.

NOTES:
- Tool training will be performed using a standard sample. If the user requests training to be performed on their sample, the non-discounted training rate will be applied.

- Cancellation of training must be made **24 hours** in advance. Cancellations made with less than 24 hour notice will be considered based on circumstances.

- Any missed training will incur a Missed Training Processing Fee of $24.00.

Example of the process of requesting training using the NRF Website

User Interface

(NOTE: the links in this guide are not the same as will be used in the live web site)

In order to avoid confusion (with actual UF Courses) RSC Courses are labeled 'Training Topics' when presented to users. Training can be managed by users from their User Panel. This portion of the guide provides examples of the process of requesting training on resources. There are three categories of training;

Scheduled training, this type of training will appear on the NRF training calendar on a recurring schedule

Unscheduled training, this type of training does not appear on the NRF training calendar.

Immediate Training, this training type allows the user to schedule a training session in advance of the regularly scheduled session and in advance of the trainers schedule. Please note that there will be additional fees associated with this type of training. The PI may choose to speed up the training process by approving this option.

Once a user logs onto the NRF web site the "User Panel" will be displayed. The User Panel allows the user to manage all of their online tasks from a single point. Explore the page and links to become familiar with the links and functionality. What follows is a walk-through of arranging for training on resources.

Training Links

My Training Records
This page displays the training records for a user and shows the date submitted, type, trainer, resource, and expiration date. Any expired records will appear highlighted.

Training Topics

This page displays the training topics that are currently set as offered. The user may search the listing and view a list of available sessions.

Training Calendar

Scheduled sessions can also be viewed and joined from the Google training calendar. Details can be viewed by clicking on the Detail View Icon for each day.

Detail View Icon

Session Details for Day

Sign Up Link

Sign Up & Status Log

This log displays the user's training activity. Users can view the status of their training requests and history of their activity.

Example Flows

Scheduled Session

In these examples a user will sign up for a scheduled session for the Dicing Saws course.
The user logs in and clicks the Training Calendar link in the Training section of their User Panel:

They find a Dicing Saw session scheduled for Nov. 8th, and they click on the Detail View icon. They can now see that there are spots available, so they click on the Sign Up link.

User Panel > Training Topics >

Training Calendar

Click on the NRF icon **nf** to view details or to sign up for session.

Today ◄ ► November 2013 ▼   🖶Print Week **Month** Agenda ▼

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28 **nf** 1:30pm Deep RIE STS	29 **nf** 9am Ellipsometer J.A 1:30pm RIE/ICP Trior	30 **nf** 9am NRF Safety Trair 9am SEM JEOL 5700 1:30pm RIE/ICP Unax	31 **nf** 1:30pm RTA Steag Tr 3pm NRF Staff Engine	Nov 1 **nf** 9am Wafer Bonder E\ 1:30pm Photospectror	2
nf 3	**nf** 4 1:30pm Sputter Depo	**nf** 5 1pm E-beam PVD Ev 1:30pm Laser Writer I 1:30pm microRaman	**nf** 6 9am Spin Coater Tra 1:30pm PECVD Traini	**nf** 7 9am Profilometer Del 1pm Mask Aligner EV 3pm NRF Staff Engine	**nf** 8	9
nf 10	**nf** 11 9am RIE/ICP Trion T 1:30pm Ellipsometer I	**nf** 12 9am RIE/ICP Unaxis 1:30pm SEM JEOL 57(	**nf** 13 9am NRF Safety Trair 9am RTA Solaris 150 1:30pm RTA Steag Tr	**nf** 14 9am Photospectrome 3pm NRF Staff Engine		16
nf 17	**nf** 18 9am Mask Aligner Ka 1pm Dicing Saws Tra	**nf** 19 8:30am Sputter Depo	**nf** 20 9am E-beam PVD Ev 1:30pm Laser Writer I	**nf** 21 9am PECVD Training 1:30pm Spin Coater T 3pm NRF Staff Engine		23
nf 24	**nf** 25 1:30pm Deep RIE STS	**nf** 26 9am Ellipsometer J.A 1:30pm RIE/ICP Trior	**nf** 27 9am NRF Safety Trair 9am SEM JEOL 5700 1:30pm RIE/ICP Unax	**nf** 28 1:30pm RTA Steag Tr 3pm NRF Staff Engine	**nf** 29 9am Wafer Bonder E\ 1:30pm Photospectror	30

Detail View ✕

Sessions for 11/8/2013

Dicing Saws Training

› Time: 9:00 AM - 1:00 PM
› Availability: 4 seats of 4
› Location: NRF
› Instructor: Bill Lewis
Sign Up

Mask Aligner Karl Suss MA6 Training

› Time: 1:30 PM - 2:30 PM
› Availability: 4 seats of 4
› Location: NRF
› Instructor: Bill Lewis

Events shown in time zone: Eastern Time   ➕ Google Calendar

The user has the option to select additional sessions if desired, however at the moment the user only would like to sign up for this session, so they click the Choose Funding Sources link to continue.

User Panel > Training Topics >

Session Sign Up

Topic Name	Session Date & Time	PI Approval Required	
Dicing Saws Training	Fri, Nov. 8, 2013 9:00 AM	Yes	Remove

If you would like to sign up for additional training sessions, you can add them to the list above by clicking the link below.

[Sign Up for More Sessions]

If all training sessions you wish to sign up for at this time are listed above, please click on 'Choose Funding Sources' below to continue to the next step.

[Choose Funding Sources]

Home | User Panel | User Setup | Equipment | Policies & Forms | Safety | Contact Us | Logout |

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UF UNIVERSITY of FLORIDA
The Foundation for The Gator Nation

Here the user may select the funding source to charge. An explanation based on session settings is provided. The user clicks the Sign Up/Request PI Approval link to continue.

User Panel > Training Topics >

Session Sign Up - Select Funding Source

Topic Name	Session Date & Time	Funding Source	PI Approval Required
Dicing Saws Training	Fri, Nov. 8, 2013 9:00 AM	Norton - Testing NRF fiscal notice ▾	Yes

Please Note:

› If the session does NOT require PI approval, or if you are the funding source PI, you will be immediately signed up for any scheduled sessions after clicking on 'Sign Up/Request PI Approval' below.
› For session sign ups that DO require PI approval, and you are not the PI, a permission request email will be sent to the funding source PI. For scheduled sessions, you will receive a notice by email once the PI approves or denies your request.
› If your requested session is 'To Be Scheduled', you will receive a notice by email once staff have created and signed you up for the requested session.

Please select the appropriate 'Funding Source' for each session listed above. The selected 'Funding Source' will be billed any training charges.

Once your funding sources are selected, please click on the 'Sign Up/Request PI Approval' button below to submit your requests.

[Sign Up/Request PI Approval]

Since the session requires PI approval, a request email was sent to the funding source PI. The following page displays for the user:

The PI receives the following email notice. To approve, the PI clicks link:

On the following page the PI can enter a new source of funds if necessary, change the charged source of funds, approve/deny the user's request, and optionally send the user a message. Here the PI approves the training buy checking the box, enters a message to the user and clicks Save.

The PI then sees the following confirmation page:

An email notice has now been sent to the user:

Subject: NRF Approval Request Update

Cat Testing,

Gregory Norton has processed your requests.

Training Session Approval Results
You have been successfully signed up for the following training sessions:

- Dicing Saws Training Session on Fri, Nov. 8, 2013 9:00 AM - Please meet on the Ba'rok (Klingon Bird of Prey) - This session sign up may be canceled any time before Thu, Nov. 7, 2013 9:00 AM.

Session sign ups can be reviewed and managed using the NRF User Panel.
https://testnrf.aux.eng.ufl.edu/main.asp

Message from PI: Hi User.

To respond to your PI, simply reply to this message.

Regards,
Nanoscale Research Facility
University of Florida
https://testnrf.aux.eng.ufl.edu/

The user can now see and manage their sign up from their User Panel.

User Panel			Welcome Cat Testing (nrftest13, NRFID: 7898)	
⌄ NRF Menu	**Pending Work Plans**			−
Billing & Funds Mgmt	None to List			
› PI Panel	**Training Session Sign Ups**			−
Prerequisite Status	Name	Start	Instructor	Location
› For Equipment Use	Dicing Saws Training	Fri, Nov. 8, 2013 9:00 AM	Lewis, Bill	NRF Cancel Sign Up
› For Training Sessions	**Active TUMI Logins**			−
› For Service Requests	None to List			
Funds	**Your Reservations for Today**			−
› My Funding Sources	None Scheduled			
› Request Funding	**Your Future Reservations**			−
› Request & Permission Log	None Scheduled			
Reservations				
› My Reservations				

Let's assume now that the user attended the session. Once the session occurs, staff can login and manage training sessions on their User Panel.

Before finalization there is a confirmation page, staff clicks Confirm to finalize the session.

Once finalized the user's training record is entered for the Dicing Saws, the training is billed, and an email is sent to the user:

Subject: NRF Training Update

Cat Testing,

NRF Staff have recorded your completion of the following training:

Type	Equipment	Expiration	Notes
Equipment Training	Dicing Saws, ADT	No Expiration	Use and reservation of this equipment is now permitted.

If you have any questions or comments, please feel free to reply to this email.

Regards,
Nanoscale Research Facility
University of Florida
https://testnrf.aux.eng.ufl.edu/

Training flow is now complete.

Unscheduled Training Request

In this example a user will request training for the FTIR course by specifying their availability. The user logs in and clicks the Training Topics link in the Training section of their User Panel:

User Panel   Welcome Cat Testing (nrftest13)

⌄ MAIC&PAIC Menu   Training Session Sign Ups   –

Billing & Funds Mgmt   None to List

› PI Panel   Active TUMI Logins   –

Prerequisite Status   None to List

› For Equipment Use   Your Reservations for Today   –
› For Training Sessions
› For Service Requests   None Scheduled

Funds   Your Future Reservations   –

› My Funding Sources   None Scheduled
› Request Funding
› Request & Permission Log

Reservations

› My Reservations
› Create New (By Resource)
› Create New (Quick Form)

Training

› My Training Records
› Training Topics
› Training Calendar
› Sign Up & Status Log

Service

› Request Service

The user searches for the FTIR training topic and clicks the Show Sessions link:

There are no scheduled sessions available. The user clicks Request Training.

The user now enters their availability and clicks Submit.

The following page allows the user to select additional sessions so they may be processed together. Since the user only desires this one session, they click on Choose Funding Sources.

Here the user may select the funding source to charge. An explanation based on session settings is provided. The user clicks the Sign Up/Request PI Approval link to continue.

The PI approves the training in the same way as above and the user confirmation page is displayed below:

An email notice of the user's training request is sent to staff. Staff can choose from 3 options. In this example, staff will choose the Create New option. These options are also available on the staff User Panel under the Training Requests section.

Subject: MAIC&PAIC Training Request

MAIC&PAIC Team,

Cat Testing has requested the following sessions:

Topic Name	Requested Datetimes	Request Type	Session Options
FTIR/FT-Raman/FTIR Microscope Training	Thursdays anytime.	Standard	Create New	Select Existing	Remove

Please click on a session option to process a request, or click the link below to manage these requests on the MAIC&PAIC User Panel.
https://testmaic.aux.eng.ufl.edu/main.asp

To contact the user, simply reply to this email.

Major Analytical & Particle Analysis Instrumentation Centers
University of Florida
https://testmaic.aux.eng.ufl.edu/

Staff now enters a date and time for the session and adjusts any session settings (if necessary), then clicks Submit. Once submitted the session is scheduled on the calendar, the user is signed up, and the user is sent a confirmation email.

Subject: MAIC&PAIC Session Sign Up Confirmation

Cat Testing,

You have been signed up by MAIC&PAIC Staff for the following sessions:

• FTIR/FT-Raman/FTIR Microscope Training Session on Wed, Oct. 30, 2013 2:15 PM - Please meet in President Machen's office.

Session sign ups can be reviewed and managed using the MAIC&PAIC User Panel.
https://testmaic.aux.eng.ufl.edu/main.asp

Regards,
Major Analytical & Particle Analysis Instrumentation Centers
University of Florida
https://testmaic.aux.eng.ufl.edu/

The user can now manage the session from their User Panel.

Let's assume now that the user attended the session. Once the session occurs, staff can login and manage training sessions on the User Panel. Since this session has occurred, staff clicks the Finalize link. The finalization of the training is accomplished in the same manner as for scheduled training and the user will receive an email.

Training flow is now complete.

Immediate Training Request

In this example a user will request immediate training for the ALD course by specifying the time and date for the session.
The user logs in and clicks the Training Topics link in the Training section of their User Panel:

The user searches for the ALD training topic and clicks the Show Sessions link:

The user clicks Request Immediate Training.

The user now enters when they would like to be trained and clicks Submit.

User Panel > Training Topics >

Request Immediate Training

This page allows you to request a date and time for an immediate ALD Cambridge Nano Fiji 200 Training Session.

Please note: Immediate training is typically twice the rate of standard training.

To request immediate training, please indicate your availability below.

* Please enter your preferred date and times: Dec. 25th 2013

Submit

The following page allows the user to select additional sessions so they may be processed together. Since the user only desires this one session, they click on Choose Funding Sources.

User Panel > Training Topics >

Session Sign Up

Topic Name	Session Date & Time	PI Approval Required	
ALD Cambridge Nano Fiji 200 Training	To Be Scheduled	Yes	Remove

If you would like to sign up for additional training sessions, you can add them to the list above by clicking the link below.

Sign Up for More Sessions

If all training sessions you wish to sign up for at this time are listed above, please click on 'Choose Funding Sources' below to continue to the next step.

Choose Funding Sources

Here the user may select the funding source to charge. An explanation based on session settings is provided. The user clicks the Sign Up/Request PI Approval link to continue.

User Panel > Training Topics >

Session Sign Up - Select Funding Source

Topic Name	Session Date & Time	Funding Source	PI Approval Required
ALD Cambridge Nano Fiji 200 Training	To Be Scheduled	Norton - Testing NRF fiscal notice ▼	Yes

Please Note:

› If the session does NOT require PI approval, or if you are the funding source PI, you will be immediately signed up for any scheduled sessions after clicking on 'Sign Up/Request PI Approval' below.

› For session sign ups that DO require PI approval, and you are not the PI, a permission request email will be sent to the funding source PI. For scheduled sessions, you will receive a notice by email once the PI approves or denies your request.

› If your requested session is 'To Be Scheduled', you will receive a notice by email once staff have created and signed you up for the requested session.

Please select the appropriate 'Funding Source' for each session listed above. The selected 'Funding Source' will be billed any training charges.

Once your funding sources are selected, please click on the 'Sign Up/Request PI Approval' button below to submit your requests.

Sign Up/Request PI Approval

The user confirmation page is displayed below:

User Panel > Training Topics >

Session Sign Up Results

› ALD Cambridge Nano Fiji 200 Training Session - A permission request was sent to the funding source PI. You will receive an email notice once the PI or NRF Staff process your request.

Return to User Panel

The project PI receives the following email:

Subject: NRF Training Session Permission Request from Cat Testing (nrftest12)

Gregory Norton,

Cat Testing is requesting permission to sign up for the following NRF training sessions:

• ALD Cambridge Nano Fiji 200 Training Session

Please click the link below to grant/deny permission to attend and charge sessions to your source(s) of funds.

https://testnrf.aux.eng.ufl.edu/ccb/pi.asp?key=8ee115684ff674c

Thank you,
Nanoscale Research Facility
University of Florida
https://testnrf.aux.eng.ufl.edu/

When the PI clicks the link in the email they are taken to a page where they may approve the request. The PI has checked to approve the request and then clicks 'Save'.

User Panel >

Approval Requests from Cat Testing

Training Requests

Cat Testing (nrftest12) is requesting permission to attend the training sessions listed below.

To give user permission to attend a session, check the box next to the session. To deny permission, leave the box unchecked.

The user selected funding sources appear next to each training request. If desired, an alternative funding source can be selected from the dropdown menu. If the desired funding source does not exist, please click here to enter a new funding source.

	Topic Name	Session Date & Time	Req. Type	Funding Source & Rate
☑	ALD Cambridge Nano Fiji 200 Training	To Be Scheduled	Immediate*	Norton - Testing NRF fiscal notice - $40/Session ▾

* Rates for immediate training are typically double the standard rates. Please feel free to deny immediate training requests if you feel the training is not required immediately. A message can be entered below instructing the user to resubmit a standard training request.

Message to the User (Optional):

Notice the red lettering indicating that this training type will incur extra charges if approved

Please click the 'Save' button below to record your sele

Note: You will be prompted for Gatorlink authentication if you are n

[Save]

If you have any questions or comments, please email us at gnorton@ufl.edu.

Once saved, the PI is presented with the notice below:

User Panel >

Approval Requests from Cat Testing

Training Request Results

› ALD Cambridge Nano Fiji 200 Training Request - PI approval was successful. NRF Staff will now schedule this session.

Process complete. It is safe now to close this window.

An email notice is sent to staff and a new session will be created and the user signed up for the session. Once submitted the session is scheduled on the calendar, the user is signed up, and the user is sent a confirmation email.

Subject: NRF Session Sign Up Confirmation

Cat Testing,

You have been signed up by NRF Staff for the following sessions:

- ALD Cambridge Nano Fiji 200 Training Session on Wed, Dec. 25, 2013 2:45 AM - Please don't ever ask for this date and time again. - If at some point you would like to cancel your sign up, you may do so any time before Tue, Dec. 24, 2013 2:45 AM.

Session sign ups can be reviewed and managed using the NRF User Panel.
https://testnrf.aux.eng.ufl.edu/main.asp

Regards,
Nanoscale Research Facility
University of Florida
https://testnrf.aux.eng.ufl.edu/

The user can now manage the session from their User Panel.

User Panel   Welcome Cat Testing (nrftest12, NRFID: 5645)

⌄ NRF Menu	**Pending Work Plans**				–
Billing & Funds Mgmt	None to List				
› PI Panel	**Training Session Sign Ups**				–
Prerequisite Status	Name	Start	Instructor	Location	
› For Equipment Use	ALD Cambridge Nano Fiji 200 Training	Wed, Dec. 25, 2013 2:45 AM	Lewis, Bill	NRF Cleanroom	Cancel Sign Up
› For Training Sessions					
› For Service Requests	**Active TUMI Logins**				–
Funds	None to List				

Let's assume now that the user attended the session, staff can now check off the user as attended and finalize the training. Once finalized the user's training record is entered for the ALD, the training is billed, and an email is sent to the user:

Subject: NRF Training Update

Cat Testing,

NRF Staff have recorded your completion of the following training:

Type	Equipment	Expiration	Notes
Equipment Training	ALD - Cambridge	No Expiration	Use and reservation of this equipment is now permitted.

If you have any questions or comments, please feel free to reply to this email.

Regards,
Nanoscale Research Facility
University of Florida
https://testnrf.aux.eng.ufl.edu/

Training flow is now complete.

1.5 Tool Usage

Tool usage is separated into two sections; Reservations and TUMI operation. The reservations are useful to reserve a tool for your use. The TUMI records resource use time and allows access only to qualified trained users. Both reservations and TUMI are extremely useful and must be managed properly to avoid excessive charges.

NOTE: When making a reservation and using a resource, be sure to use the same project for both. Using different projects for reservation and TUMI login will create two separate transactions

1.5.1 *Reservations -* Tool reservations are made on the web site by clicking >>"Resources/Equipment" >>select the tool >> click the "nrf" logo at the bottom of the date.

Reservation Creation
Making a reservation is recommended but not always necessary. The following tools must always be reserved: Kurt Lesker Sputter, PVD Ebeam Evaporator, Heidelberg Laser Writer, EVG Mask Aligner, Cambridge ALD, SMI MOCVD. If you use a tool without a reservation you may need to give the tool up if another User with a reservation shows up to use the tool. Of course, surrender the tool when it makes sense, i.e. don't stop the tool in the middle of a deposition, exposure, etc. If disputes occur, contact Staff for assistance.

Please make your reservation for the length of time appropriate for your process/characterization. Examples of the reservation pages of the website are shown below.

Reservation Editing/Stopping

If your process run is finished before the end time of your reservation, edit the "stop" time of your reservation. From the main NRF menu click "My Reservations" and click the "stop" link next to the reservation. This will reset the end reservation time as the current time. You may also use the "edit" link to add time to your reservation if needed to insure your time on the tool.

Reservation Cancelations
Missed reservations will generate a missed reservation processing fee of $14.00 and unused portions of reservations greater than 15 minutes will generate an unused reservation processing fee of $14.00. It is wise to cancel reservations before they go unused. From the main NRF menu click "My Reservations" and click the "cancel" or "delete" link next to the reservation. Please include a comment when prompted.

PLEASE NOTE: The reservation establishes a user's right to access a tool and this reservation blocks other users from creating overlapping reservations.

1.5.2   *TUMI Operation*- The hourly usage rate for each tool can be found on the web site in the details for each tool. Each tool in the NRF is interlocked by a login computer at the end of each bay or laboratory called the "TUMI" System. You must log on to the TUMI to enable the tool. The TUMI tracks your usage time until you log off.

When something go wrong:
- Immediately log off and include a comment. The comment should include a description of what happened and make it clear that the tool is "Down".
- Place a note on the tool that it is "Down". Include a comment if your sample is still inside the tool. Cleanroom paper can be found throughout the cleanroom and in the gown room.
- Notify Staff that the tool is down and let them know if your sample is still inside the tool. Send Staff an email if outside normal work hours.
- Edit your reservation.

If you log on to a tool and it is not ready (i.e. your targets are not loaded into the sputter system), log back off and provide a comment so the transaction can be flagged. It is a good practice to check the website for reservations, targets and tool status prior to logging in via the TUMI.

Log off the TUMI when your process run is complete. If your process run is done before the end time of your reservation, edit the "stop" time of your reservation. From the main NRF menu click "My Reservations" and click the "stop" link next to the reservation. This will change the end reservation time to the current time.

Examples of the NRF website and TUMI software interface are shown below.

TIP - Usage time is charged in15 min increments. If you plan to use a tool multiple times in a short period (i.e. less than an hour), it's usually best to stay logged onto the tool since you are charged in 15 minute increments. There is a minimum charge of 15 minutes each time you log on.

Example of NRF Resource Page

The Capabilities tab outlines the operational capabilities of the machine. The Training tab lists the future scheduled training on the resource. The Calendar tab displays the reservation calendar and allows the management of reservations. The Docs tab will display links to Important documents associated with the resource. The status log displays a history of status changes and modification associated with the machine entered by the staff and users.

Examples of Reservation Calendar from NRF website

The reservations are indicated as blue blocks of time on the calendar; clicking on the NRF logo at the top of the column will produce a popup allowing the user to select a start time for a reservation. Incidentally, clicking on a red highlighted block in this popup will allow a user to send a message to the person that made that reservation. This is handy for letting the someone with a pending reservation know that you may encroach on their time for example.

Fill in the fields and click submit, your reservation should appear on the calendar as a blue block and also be posted on the user panel as an immediate reminder of the reservation upon logon.

Examples of the TUMI user interface

To use a tool

Step 1: Enter your NRF PIN

Step 2: Validate

Step 3: Enter your GatorLink password

Step 4: Select /check the project

Step 5: Click on the row of the tool

To logoff a tool

Step 1: Enter your NRF PIN

Step 2: Validate

Step 3: Enter your GatorLink password

Step 4: Click on the row of the tool

Step 5: Enter comments and click OK

1.6 Billing

The invoicing for the NRF is performed monthly and reflects the transactions incurred during the previous month.

1.6.1 Transactions

Transactions include: Clean room entry fees (daily)
                             Tool (resource) charges
                             Consumables
                             Training
                             Staff time
                             Processing Fees

- Cleanroom entry fee – This is a daily entry fee of $15.00 and is designed to recover the cost of the cleanroom entry items (gloves, booties, hairnets,…)

- Tool Charges - The transaction time for tool (resource) use is determined by the TUMI log start time and the TUMI log stop time, rounded up to the nearest 15 minute increment. This time is then multiplied by the tool rate to determine the tool charge. The current tool rates (per hour) are listed for each tool on the NRF website. Unused portions of reservations greater than 15 minutes are billed as a separate processing fee.

- Consumables – A consumable charge is applied to track able supplies provided by the NRF. Examples of consumable charges are precious metals, bare Si wafers, lithography mask blanks, ALD precursor materials, and wafer holders.

- Tool Training – A training fee is applied for each tool. The standard training fee is determine for each instrument and is based upon the fraction of the tool rate, a fraction of the staff time and an approximate training time required for the tool. Each tool has a specific training rate. The 'ad-hoc' training rate is determined by the full tool rate, full staff time and estimated training time. If the required 'ad-hoc' training time extends beyond the estimated training time, a separate transaction will be charged for the additional toll time and staff time.

- Staff time – The current rate for staff time is $50.00 per hour billed in 15 minute increments.

- Processing fees – see the section below.

1.6.2 NRF Soft CAP policy

This section describes a "soft cap" for the College of Engineering Nanoscale Research Facility (NRF).

A. Eligibility
Only internal University of Florida users are eligible. To be eligible for the soft cap, a project account must possess a valid internal Chartfield for an active contract or grant. Chartfields that are not related to research contracts/grants

such as returned overhead (211) and foundation funds (171) do not qualify, unless tied to a faculty startup package. Faculty startup commitments are eligible, but cap eligibility must be approved by the COE Dean's office. Additionally, cap eligibility of all industry-sponsored contracts and grants (209) paying less than the full IDC rate must be approved by the COE Dean's office. Projects that originate from unrestricted gifts/donations will generally not be approved.

B. Soft Cap Limits
For each eligible project account, the monthly soft cap limit is <u>$1200 per project</u> for all qualifying charges. There is no "per user" cap. For contracts/grants that involve multiple PI's, the soft cap applies individually to each sub-project account (typically each PI would have their own project account in Peoplesoft). The soft cap is calculated based on charges accrued during each UF fiscal quarter (not tied to project award start/end dates).

C. Soft Cap Subsidy Rate
For regulatory compliance, all NRF charges must be paid. Once the soft cap limit is reached, projects will be billed <u>20% of the normal internal rates</u> for qualified charges for the remainder of that quarter; <u>80% of the cost</u> will be subsidized by the university.

D. Qualifying Charges
The soft cap limit and subsidy rate only apply to the following direct charge item:
- Instrumentation/tool time

The soft cap limit and subsidy rate <u>do not</u> apply to:
- Entry/access fees
- Consumable surcharges (e.g. precious metals, wafers, mask blanks, wafer holders,....)
- Training
- Technician time
- Processing Fees

Only qualifying charges accumulate toward meeting the soft cap limit. Non-qualifying charges do not count toward reaching the soft cap limit and are billed on a separate invoice.

1.6.3 NRF processing fees

1) <u>Missed Reservation Processing Fee</u> - this fee is $14.00. This fee is applied to any completely unused reservation.

2) <u>Unused Portion of Reservation Processing Fee</u> – this fee is $14.00. This fee is applied to any unused portion of a reservation greater than 15 minutes. During normal tool use with a reservation, an unused reservation portion of greater than 15 minutes at either the beginning of the tool use or at the end of the tool use will initiate the unused reservation fee.

3) <u>Missed Training Processing Fee</u> - this fee is $24.00. This fee is applied to any missed scheduled training. Training reservations should be canceled prior to 24 hours of the training time and rescheduled with NRF staff.

1.6.4 NRF External Rates

The NRF has a tiered rate system for external (non UF researchers) users.

<u>External Academic</u> – all external academic users are charged 1.5x the current UF user rate.

<u>Government Institutions</u> – all U.S. government laboratories and entities are charged a rate of 1.5x the current UF user rate.

<u>Affiliated Industrial Partners</u> – a 1.5x multiplier applies for an UF-Affiliated Company and these are defined as one of the following:
- NRF Industrial Affiliate Member
- UF Innovation Hub tenant
- UF Sid Martin Biotechnology Incubator resident
- UF Center of Excellence for Regenerative Health Biotechnology (CERHB) resident
- Licensor of closely related UF technology[†] (a license option does not count)
- Sponsor of a UF Research Agreement on closely related project[†]

   [†] *Requires review and approval by NRF Advisory Committee*

<u>Industrial users</u> – a 2.0x multiplier is applied for all non-affiliated industrial users in the NRF. The exceptions to the 2.0 multiplier apply to the FEI SEM and the Horiba MicroRaman which have a different rate for industrial users.

Please note:
The external multiplication factors apply to tool/instrument time and cleanroom entry fees, not to staff/technician time. The multiplication factors <u>do not</u> apply to user training, process fees and direct consumable charges (e.g. precious metals, ALD gasses, etc.); these prices are the same for all users.

1.7 NRF Responsibilities and Liabilities

The NRF will:
- maintain the tools, processes and user facility to the best conditions as we are able to provide.
- supply Standard Operation Procedures (SOPs) for all process tools and provide adequate training and guidance for sample processing.
- provide basic process recipes for the tools and will provide guidance to processes.
- stand behind and support each separate process step in a process flow.

- provide a full credit for an <u>individual process step</u> when the process malfunctions are due to NRF staff errors, tool faults or facility failures/alarms.
- provide notices when a tool status changes via the users UF Gatorlink email address.
- enforce the safety policies of the University of Florida and the NRF

The NRF will not be:
- held responsible/liable for process malfunctions that are the result of an user error in a process recipe or user error during tool operation.
- held responsible/liable for providing a credit for an entire process sequence when the process sequence is ruined by one or more malfunctions of a process step(s) that are a part of the entire process sequence, regardless of the cause of the process step malfunction.
- held responsible/liable for providing a credit for a sample(s) damaged by one process step or by a process sequence, regardless of the cause of the process step malfunction.

2.0   Safety

All safety information provided by NRF Staff, including this document and the NRF Safety Training class is supplemental to the UF EH&S Lab Safety Program. It is your responsibility (with the guidance of your Principle Investigator) to read and conform to the EH&S UF Laboratory Safety Manual located at http://webfiles.ehs.ufl.edu/LabSafe.pdf and the EH&S UF Chemical Hygiene Program located at http://webfiles.ehs.ufl.edu/program.pdf at all times while using NRF facilities. The UF EH&S web site can be found at http://www.ehs.ufl.edu/ . All UF EH&S Training must be done BEFORE entering the NRF Facility.

Process equipment specific Safety Instructions are included at the beginning of each Process Equipment SOP and will be covered by the hands on training provided for each tool by NRF Staff. NRF Equipment SOP's are located at https://nrf.aux.eng.ufl.edu/safety/sops.asp

2.1   Fire and Hazardous Gas Detection System.

2.1.1 GENERAL. There are flashing white strobe lights and voice speakers for audible annunciation of alarm conditions (Fire and/or gas detection). If you hear an alarm message over the speaker system AND see the white flashing strobes, IMMEDIATELY stop all activity and exit the building. Gather outside the building at the main entrance/stairway on the West side of the building. If you are in the clean room, proceed directly out of the gowning room, through the lobby, and out the West entrance doors. ***Do not stop to remove your cleanroom garments***.

2.1.2 POST ALARM GATHERING. After you have evacuated from the building and gathered at the main entrance/stairway, do not leave the area until everyone has been accounted for. If you have knowledge of the incident or any helpful information please step forward and speak to one of the staff members, UPD officers, or firefighters. You can re enter the building only when you hear an 'All Clear' message from a staff member or firefighter.

2.1.3 CLEANROOM HAZARDOUS GAS ALARMS. The facility was designed with separate air handling and exhaust systems for the cleanroom, isolating it from the rest of the building. If a gas leak is detected in the cleanroom, only the cleanroom and north service hallway are evacuated. The alarm message over the speaker system and white flashing strobes will activate only in these areas. Each tool in the cleanroom using hazardous gas has orange strobes near the tool on the bay and chaise sides. These strobes will flash to alert you the tool or area the gas leak has been detected. If you are in the cleanroom or north service hallway, follow the procedures outlined in **2.1.1** and **2.1.2**. If you are in the office areas or lab areas, you do not need to evacuate and can continue working.

2.1.4 MAINTENANCE NOTIFICATIONS. There are also gas sensors located in the exhaust ductwork at each tool and gas cabinet. If gas is detected within the exhaust ductwork, but not in the room itself, the tool will shutdown, and the orange strobes for that tool will flash. A warning message will sound over the speaker system to alert staff of the problem. THE WHITE STROBE LIGHTS WILL NOT FLASH. You are not required to evacuate the area and may continue working.

REMEMBER—IF YOU SEE THE WHITE STROBE LIGHTS FLASH— IMMEDIATELY EVACUATE.

2.2   Safety Glasses

Safety glasses must be worn at all times in the clean room. The only exception will be when looking through microscope objectives. Safety glasses are also required in many of the NRF laboratories located outside of the cleanroom.

2.3   Shoes and street clothes

Sandals, high heels or open toed and open heeled shoes are prohibited inside the clean room and the entire NRF facility. Your shoes must completely cover your feet. Short pants, skirts and dresses may not be worn while handling hazardous liquid chemicals.

2.4   Personal Chemicals

You may not bring chemicals or substances of any type into the clean room or NRF User Lab without approval of NRF Staff. Please make an appointment with Staff if you would like to use a non NRF approved substances. If approved, you will be shown where to store the substances inside the clean room.

ABSOLUTELY NO CHEMICALS MAY BE STORED INSIDE YOUR CLEAN ROOM SUPPLIES BASKET.

ABSOLUTELY NO CHEMICALS MAY BE LEFT NEAR EQUIPMENT (INCLUDING WET HOODS) INSIDE THE CLEAN ROOM WITH OUT SPECIFIC STAFF APPROVAL AND SIGN OFF. VIOLATORS WILL LOSE ACCESS TO THE CLEAN ROOM.

2.5   User Accessible Areas

Users may only access the blue highlighted laboratories and spaces and the green highlighted "process bays" inside the cleanroom. See the colored floor plane on the following page. You may not access the service areas which are highlighted yellow. There are service areas inside and outside the cleanroom.

Entering the service area without permission of the NRF staff will cause your NRF access privileges to be revoked. This policy is in place to protect Users and the equipment and is strictly enforced.

2.6   Evacuation Routes

The emergency evacuation routes are shown on the floor plan drawing below and are highlighted in red. Two of the cleanroom evacuation routes pass through service areas that are normally off limits to users. These evacuations routes are to be used as secondary evacuation routes. The primary evacuation route for the cleanroom is the main gown entrance. The secondary evacuation routes are to be used in the event that the gown room entry is not accessible.

For all evacuation routes, the building gathering point is on the outside main building steps (west side of building). The service drive/parking lot is to remain free of evacuees in the event emergency vehicles need to gain access.

3.0   NRF All Users SOP

3.1   Chemical Hood Safety and Procedures

3.1.1. Chemical Hood Facts

Laboratory fume hoods are designed to protect you by providing an enclosed work area that has an air barrier between you and the hazardous materials you work with in the hood. The fume hood directs airflow to carry harmful contaminants away from you toward the rear of the hood and out through the exhaust duct.

Fume hood airflow velocities are relatively low (approximately 100 feet per minute) and airflow can be easily disrupted. Avoid making rapid movements while working in a fume hood and avoid walking close to a fume hood that is being used by a coworker.

Working with the sash at the proper level provides protection against inhalation of hazardous vapors, chemical splashes and splatters, fire, or explosion. The sash should be opened only as far as necessary to access your work.

3.1.2. Personal Protection Equipment (PPE)

The following is a list of personal protection equipment required for use of any hood when working with acids or bases.
- Full length vinyl apron with attached sleeves
- Long chemical resistant gloves
- Full face shield

Lack of PPE use is very dangerous and will result in suspension of access to the NRF.

3.1.3. Best Practices for Chemical Hood Safety

1. Before starting any chemical work in a hood (or anywhere else), be sure to have the following in place:
   - user contact information and date on a visible note, wipe or cleanroom paper with chemicals listed. THE FOLLOWING IS AN EXAMPLE OF THE FORM THAT NRF PROVIDES (THE ABSENCE OF THIS FORM DOES **_NOT_** RELEASE THE USER FROM THE RESPONSIBILITY OF PROVIDING THIS PROCESS INFORMATION)

Process Setup Schematic Documentation

Name / User Number: _John Doe_

Date / Time: _13 Sept 12 @ 1300_   Extended Process authorization

Contact Info: _doe.j@ufl.edu CP 352 5551212_   Projected end date and time: _15 Sept @ 1200_

Staff Initials: _Hud_

Schematic Labeled Drawing of Process Bench Setup

General acid Bench

- waste bottle(s)
- all required samples
- sample containers
- proper forceps for sample handling
- rinse water
- wipes
- any other required supplies

   Retrieving items during the processing can create accidents and spread contamination.

2. Know where the closest spill kit and wash stations are located.

3. Chemicals should be placed no closer than 6 inches from the front opening of the fume hood. Placing them closer to the front opening interferes with the airflow and reduces the level of contaminant protection for individuals working at the fume hood.

4. When possible, work in an area providing secondary containment within the hood.

5. Place heating units at least 12 inches behind the sash opening.

6. Place equipment so that it does not block airflow to slots or vents in the baffle plate at the back of the hood. When possible, elevate bulky equipment to allow air to flow under the equipment, as well as around and over it.

7. Minimize the quantities of materials that might be involved in a fire or explosion by limiting the amount of chemicals used in the hood.

3.1.4. Warnings

1. Do not lean into the hood to work with hazardous chemicals. This negates the protection the hood provides against inhalation of hazardous vapors.

2. Do not use fume hoods to evaporate hazardous wastes. This practice is illegal. It violates the Clean Air Act and is punishable by large fines.

3. Do not store chemicals inside a fume hood.

4. Run all equipment underneath the hood airfoil, along the front edge of the fume hood, to external electrical outlets. In an emergency the sash can be closed completely and cords can be unplugged without reaching into the hood or creating the potential for sparks inside the hood.

5. Gas, vacuum and water hoses that are required to operate equipment used inside the hood should be routed under the airfoil, along the front edge of the fume hood, so the sash may be closed completely. It will also permit disconnection of equipment in the event difficulties occur with an experiment.

3.2 NRF Approved Materials and User Material

3.2.1 You may not bring chemicals or substances of any type into the clean room without approval of NRF Staff. All NRF Approved materials will have a MSDS posted at http://nrf.aux.eng.ufl.edu/safety/msds.asp . If the MSDS for the material you would like to use is not listed you may submit a "New material Request Form" found at http://nrf.aux.eng.ufl.edu/safety/default.asp. Click and download the "MS Word" file "New Material Request Form". Fill out the form and follow instructions on the form.

3.2.2 If you need to bring a container of your approved material into the clean room, notify NRF Staff and fill out the Chemical log in/out sheet located in the NRF Gowning Room. Staff will let you know where to store the bottle inside the clean room. **NO USER CHEMICALS MAY BE STORED INSIDE YOUR GROUP BASKET.**

3.2.3 Personal use chemicals/substances that have been approved by NRF Staff may be stored only in the appropriate chemical storage location. NRF Staff will show you where.

3.3 No Cross Training

Users may not train peer Users without permission from a NRF Staff member. You may not operate any equipment in the NRF just because a fellow group member showed you how. Observation is OK. Users will never be allowed to "Qualify" other Users on any equipment.

3.4   After Hours Clean Room and Lab Access

The default access for all NRF users is Mon.-Fri., 8:00am to 5:00pm. Working beyond these hours requires the User to have obtained after hour access from NRF staff. This access is provided after the User submits the after hour access form and it is reviewed and approved by NRF staff.

3.4.1   After hours is defined as weekends, UF holidays and from 5PM to 8AM Mon.-Fri.

3.4.2   Users may request after hours clean room access if they have no documented Procedure Violations as described in section **5.0**. The form is located at the end of this document.

3.4.3   After hour access does not include the following equipment and processes:
a) Red Tagged Material
b) Acid Benches
c) Acids and strong bases
d) Any process that requires the Buddy System

3.4.4   Each User that enters the clean room after hours must have authorization i.e. a fellow user may not follow you into the clean room.

Any user found to be working during the after hour period without after hour access will be asked to leave the NRF facility and will have NRF access suspended.

4.0   NRF Clean Room SOP

4.1   Items not allowed in the clean room area:

- **Regular paper , wood based paper products**
- Laptop Computers
- Chewing gum or Tobacco products
- Facial make up
- Lab tissues, tissues, cardboard, books, and magazines.
- Styrofoam products.
- powders
- Erasers, pencils, felt-tipped pens (other than Sharpie markers).
- Anything that can easily shed particles or aerosolizes; i.e., anything that may serve as a source of particles.

4.2   Taking your supplies into the clean room.

4.2.1   All items entering the clean room must be wiped down with a clean wipe before entering. 2-Propanol or DI water bottles and wipes are provided in the gown room.

4.2.2   A basket to hold your samples and supplies will be provided and are located in the gown room. You may not bring your own container into the clean room. Only small sample boxes or wafer containers are allowed.

4.2.3   Your supply basket may be stored inside the clean room in the basket provided. Space on a wire rack will be provided for your basket inside the clean room. See NRF Staff for directions. If you bring your supplies out of the clean room, return the basket to the gown room.

4.2.4   ABSOLUTELY NO CHEMICALS MAY BE STORED IN YOUR CLEAN ROOM GREEN PI BASKET OR NEAR EQUIPMENT.

4.3   Acceptable Clean room items:

- Clean room notebooks and clean room paper. Single sheet clean room paper is provided.
- Your samples and tweezers, in clearly labeled small boxes.
- Pens (preferably, ball-point).
- Materials with smooth, hard surfaces such as plastic, which can be easily cleaned with moist wipes.
- Cell phone or PDA only if it is wiped down each time you enter the clean room

4.4   Tape

The only tape that will be allowed in clean room is polyimide tape. If you absolutely must use another type, discuss it with NRF Staff. Do not leave tape stuck to the tables and equipment. Please remove it when you leave.

4.5   Clean Room Entry and Exit Procedure

Day use personal lockers located outside the gown room. They are for **DAY USE ONLY**. Place items such book bags, hat, coat, umbrella and any other unnecessary street garments. To use the locker, place you items inside the locker and enter any 4 digit code of your choosing. The locker will be locked until you re-enter that same 4 digit code. If you leave your items for more than one day, they may be discarded. When your work is complete, leave the locker unlocked for the next user.

No one is allowed to follow you inside the gowning room without swiping their FOB. If you see someone entering without swiping their FOB, please notify NRF Staff.

Absolutely no FOB sharing is allowed between Users. If your FOB is not working, see the NRF Reception Desk for help.

Cleanroom entry procedure:
1. Use the shoe brush cleaner by pushing on the top handle and pushing your foot through the brushes, toe first.
2. Put on blue shoe covers provided. Do not step on the tacky mat without blue booties on your feet.
3. Put on a white hair bonnet. Tuck all hair inside the bonnet.
4. Swipe your FOB key across the FOB reader. **YOU MUST SWIPE YOUR FOB EVEN IF THE DOOR TO THE GOWN ROOM IS ALREADY OPEN**. This must be done so that we know you are in the clean room in the case of an emergency. A daily clean room access charge is also applied once every 24 hours. A new day starts at 12AM.
5. Put on a clean hood and facial veil. If a veil type facial cover is not yet available for your hood type, use a white beard cover over your nose and mouth.
6. Put on a clean room jumpsuit. Gather arms before placing your feet inside jumpsuit. Don't allow the suit to touch the floor.
7. Put on your safety glasses.
8. Put on clean booties. Use the lean rail as shown in the gowning video.
9. Put on gloves last.
10. Clean any items you're taking into the clean room and place them in the red basket provided.
11. For safety reasons, no sandals or open-toed shoes (Section **2.3**).

While in the clean room, keep your hands away from your face and safety glasses. Facial oils will easily transfer to the gloves and subsequently to the clean room equipment and your sample.

When you are ready to leave the clean room **PICK UP ALL OF YOUR PERSONAL ITEMS BEFORE YOU LEAVE**.

When exiting the clean room remove garments in the reverse order…..1. booties 2. jump suit 3. Hood. Place booties in the bootie holder located at the bottom of the gown rack. Do not snap your booties around the jump suit hanger. Drape your hood around the bottom of the gown hanger.

The blue booties and hair net should remain in place until you have exited the gown room. Once outside the gown room, these can be removed and discarded.

Note: all gowns will be pulled from hangers once per semester and sent out for laundry service. Notices for gown removal will be posted on the gown room entry sliding doors. If your gown, hood and boots have been removed, please use new items located on the wire racks in the gown room and mark the hanger sheet accordingly, indicating your user number, hanger number, and date you obtained the gown.

5.0   Violations and Penalties

5.1   Safety Violations

All NRF safety rules and equipment operation procedures must be followed without exceptions.

5.1.1   Violations of safety and equipment procedures will be documented by NRF Staff. NRF Staff reserves the right to revoke User privileges based on the severity of the violation. Three documented violations will automatically cause loss of all NRF privileges.

5.1.2   Users that witness unsafe operations such as other users not wearing proper PPE or performing improper equipment procedures should immediately notify NRF Staff via telephone. If Staff cannot be contacted immediately, ask the User to stop what they are doing until Staff can be contacted.

5.1.3   Users that find an unsafe condition such as unlabeled containers inside an acid bench should immediately notify NRF Staff.

Example Safety Violations

- Not wearing safety glasses (or other appropriate eyewear per a specific equipment SOP)
- Entering the clean room without swiping your FOB or sharing your FOB with someone else.
- Wearing open-toe shoes or sandals
- Bringing regular paper or notebooks into the cleanroom
- Not wearing proper Personal Protective Equipment per specific equipment SOP
- Using unapproved chemicals in any equipment
- Improper chemical waste disposal
- Not cleaning up after equipment and workspace use.
- Leaving unlabeled experiments, especially those that pose a risk to others
- Not labeling chemical names, contact info, date, and time when leaving chemicals unattended
- Taking open containers of chemicals out of the fume hood
- Failure to store chemicals in the assigned storage container or storage cabinet
- Entering the cleanroom "service areas".
- Leaving metallic items, such as keys or tools, around the magnetics equipment
- Bringing a food or drink into the clean room or laboratory
- Violating the after hour policy

Staff use contents check list	
Badge issue	AHA
Key Issue	Metrology
Photo	2ⁿᵈ Fl Lab
Non user access	

Nanoscale Research Facility
1041 Center Drive
PO Box 116621
Gainesville, Fl 23611-6621

ID Badge, Key Card and Key Request Form for Building 0070

SECTION 1: Key Card Request
Name: _____
E-Mail: _____
Home Address: _____
Gatorlink username:_____
UF ID# (Please print clearly)_____

Personal Phone: (_____) _____ Cell ☐ ome ☐

Required Access: ☐ Cleanroom - ☐ NRF resource Labs (Rooms 122,125,127)

☐   2ⁿᵈ Floor Labs (Complete Section 4-Key Request)
            Room #'s_____

****
SECTION 2: University of Florida (what category are you)

Faculty ☐   - Staff? ☐ NRFUF ☐ MAIC / PAIC   ☐   Student

Department: _____
Gatorlink username:_____
Work Phone: (_____) _____
Office Address: _____
Principal Investigator: _____

If you require Cleanroom access and/or use of other NRF user facility resources provide your NRF User #_____

****
SECTION 3: External customers   NRF User#_____
☐ Outside Industry   ☐ Outside Academic/Government

Company Name: _____
Work Phone: (_____) _____
Justification/Affiliation: _____
Work Address: _____

SECTION 4: Key Request

Request Key(s) to the following rooms:_____

Principal Investigator_____ PI Signature_____

■·

Once the required authorizations are received, your Key Card and/or Key will be ordered. You will receive an email notification when they are ready to be picked up at the NRF reception area. This form will be available for you to sign below upon pickup.

*********************   Office use only   *************************

Please read the following statement about your Key Card and sign below:

The KEY CARD is for your access to the Nanoscale Research Facility (NRF). This is a secure building. Entry using this FOB records your name and the time of entry. You must swipe your KEY CARD each time you go through a secured door even if the door has been opened by someone else. By accepting this KEY CARD you assume responsibility for its proper use, and for others who accompany you into NRF. It is not to be loaned to another person and shall be returned to NRF when your affiliation has ended.

I have received my Key Card on this Date:_____

Recipient Signature:_____

Staff Signature:_____ Date:_____

Key Card#_____ Key Card Access Levels:_____

Please read the following statement about your Key(s) and sign below:

I, the undersigned, acknowledge receipt of the keys designated below. I also agree not to loan, misuse, modify or alter these keys. The keys must be returned to NRF when your affiliation has ended. I understand that a violation of this agreement may render me and/or my Principal Investigator liable for the expense of re-keying the affected areas   and the suspension of access to your student transcripts if applicable.

Room Number	Key Number	Quantity	Date Received	Date Returned
		1		
		1		
		1		
		1		

I have received my Key(s) on this Date:_____

Recipient Signature:_____

Staff Signature:_____ Date:_____

NRF After Hours Request Form

After hours is defined as weekends, UF holidays, and 5PM to 8AM Mon – Fri.

Please print and fill out this form and drop it off at the NRF Reception desk.

This form must be submitted by 5PM Wednesday to obtain access for the upcoming weekend.

Name_____   Date_____

NRF ID#_____

Email address_____

You will be notified by email or verbally if approved.

1. List all process steps performed after hours that include the use of chemicals or gases. If you need to use additional chemicals or gases in the future you are responsible for submitting an updated version of this form for approval.

2. Do you need access to NRF Equipment outside the cleanroom? _____
   If yes, list the equipment name(s) and room(s)

3. I understand that no red tagged materials or processes and equipment defined in section 2.9 may be used after hours.

4. I understand every User entering after hours must swipe their personal FOB to access the clean room.

   Users Initials here _____

   _____

   Staff Approval_____   Date_____

   FOB enabled date_____

   The form will be kept on file at the NRF Reception desk.