

# Policies, Procedures & Responsibilities

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## USER RESPONSIBILITIES

- Follow relevant facility, lab and instrument training, safety, booking and standard operating procedures and protocols.
- Follow the instructions of Materials Research Facility's (MRF), Multidimensional Characterization Lab (MDCL) and Nanofabrication Cleanroom (NFCR) staff.
- Report instrument failures, issues or concerns to MRF staff.
- Report misuse, damage or negligent handling of instruments or resources to MRF staff.
- Report potential safety hazards to MRF staff.
- Do not attempt to repair any instrument.
- Do not modify the physical functioning of any instrument.
- Do not install or modify any component of any instrument.
- Do not install or modify software on any computer in MRF.
- Do not remove and/or disturb another researcher's samples or work.
- Log-on and log-off instruments promptly through FOM.
- Wear proper personal protective equipment (PPE) at all times.
- Food and Drinks are not allowed in lab and equipment rooms.
- Is responsible for the equipment and chemicals he or she uses.
  - Get trained on equipment the user wants to use.
  - Label all in-use chemicals.
- Clean up your work area when you are finished.
  - Leave the work area and all equipment in the same or better condition as it was found.
- Instrument labs and public areas are not to be used for storage of your items.
  - Store all personal equipment and supplies properly.
- Acknowledge the contribution of MRF when publishing with data derived using MRF resources.
- Serious infractions of MRF policies and procedures may result in loss of MRF, lab and/or instrument privileges.

## FOM SCHEDULER POLICIES

- Express Logon:
  - Users can immediately logon to an instrument at the time of use without a reservation
  - The requested time cannot currently be in use or reserved in FOM.
- Reservations:
  - Users may only reserve time for themselves.
  - Users may reserve up to **8 days** ahead starting at **6am** in **1hr** blocks.
  - Reservation Limits
    - Limits are applied during regular operation hours, **8am-5pm M-F**.
    - Limits are assessed based on time of active reservations and previous usage during regular operation hours.
    - Limits are applied based on the Users Supervisor as set in FOM.
    - Limits apply collectively to a Supervisor defined group of users.
    - Limits are applied as daily and weekly limits by instrument.
  - Reservations canceled **12hrs or less** before the start of the reservation will be charged a **1hr** instrument usage fee.
  - Users that do not show up for a reservation will be charged for the **total reserved time**.
- FOM automatically logs users in to instruments at a reservation's start time.
- FOM automatically logs users out to instruments at a reservation's end time.
- Users can log out at any time after logging in.
- Users are charged for the time elapsed between instrument logon and logoff.
- Users will be charged a minimum charge of **1hr** per logon-logoff session.

## FACILITY and LABORATORY ACCESS

- Hours of Operation
  - Daytime access:
    - Monday-Friday, 8:00am - 5:00pm
  - Extended access:
    - Current Discovery Park hours of operation
      - Monday-Sunday, 6:00am - 11:00pm
  - except for University, campus and lab closures due to holidays, construction, inclement weather, etc.
- Users with a UNT Issued key card are not permitted to allow access for others in the facility without prior authorization.
  - Contact [MRF.Research@unt.edu](mailto:MRF.Research@unt.edu) or a lab manager for authorization.
- Visitors
  - Visits, Tours and Class visits are not permitted without prior authorization.
  - Users and Visitors without a UNT issued key card are required to sign in at the front desk.
  - Contact [MRF.Research@unt.edu](mailto:MRF.Research@unt.edu) or a lab manager for authorization.

## FACILITY USE

- Users must not leave doors open for any reason.
- Food and drinks are not permitted in the instrument rooms.
- Users must keep MRF work areas and instrument rooms in a safe, clean, orderly and efficient environment.
- Users are discouraged from working alone.
- All users are expected to follow Facility, Lab and instrument specific safety procedures.
- Only MRF staff members can provide equipment access to users.
- Training is required before users can access MRF equipment.
- All users must have funding available to cover invoiced MRF usage, consumable and labor fees.

## EQUIPMENT ACCESS

- Users are granted 5 possible levels of access depending on institutional status, competency and need.
  - Trainee Users:
    - No independent Access
    - Responsibilities
      - Must be supervised by a User with General Access or higher while in Instrument labs and/or operating instruments
      - Must follow Users' supervisory instructions
      - Can not be in an instrument lab unsupervised
    - UNT Students, Staff and Faculty as well as External Users
    - Elevated to Trainee User status after MRF acceptance of applicant into instrument training queue
    - Can request certification training
  - Provisional Users:
    - No independent Access
      - User's Independent Access level is currently restricted
    - Responsibilities
      - All Trainee User responsibilities
    - UNT Students, Staff and Faculty as well as External Users
    - Reduction to Provisional User status at discretion of MRF Director and Staff
    - User can regain Independent Access once they complete remedial actions as determined by MRF Director and staff
  - Basic Users:
    - Regular Weekday Access
    - Responsibilities
      - Operate instruments in a safe manner
      - Clean and Maintain lab areas
      - Report instrument issues to MRF Staff promptly
    - UNT Students, Staff and Faculty as well as External Users
    - Certified to independently access the instrument
    - Elevation to Basic User status after completing certification training
  - General Users:
    - Extended Weekday Access
    - Responsibilities
      - All Basic User responsibilities
    - UNT Graduate Students, Staff and Faculty only
    - Certified to independently access the instrument
    - Demonstrates sufficient operator competency to MRF Staff
    - Elevation to General User status from Basic Status after either
      - MRF Director or Staff approval
      - completing 40 hours of independent, incident free instrument operation

- Super Users:
  - Extended Weekday & Weekend Access;
  - Enhanced Responsibilities
    - All General User responsibilities
    - Light instrument maintenance
    - Light instrument facilities supervision
    - Light supervision of instrument labs and users
  - UNT Graduate Students, Staff and Faculty only
  - Certified to independently access the instrument
  - Demonstrate enhanced competency and need to MRF Staff.
  - Elevation to Super User status only after being
    - Nominated by MRF Director and Staff
    - Full, unqualified confidence of MRF Director and Staff
  - A maximum of 2 Super Users per Instrument per Supervisor group as defined in FOM
- Equipment Managers:
  - Unrestricted access
  - Supervisory Responsibilities
    - All Super User responsibilities
    - Full instrument maintenance
    - Full instrument facilities supervision
  - MRF Director and Staff only
- Equipment is categorized depending on institutional status, instrument complexity and user need.
  - Basic Instrumentation: open to all users
  - Advanced Instrumentation: open to UNT Graduate Students, Postdocs, Staff, Faculty and External Users only; must demonstrate user/group need.
- Equipment Training
  - Training is required before users can access the equipment within MRF.
  - Training must be requested by contacting MRF Facility, Lab and/or Instrument managers.
  - Training is subject to usage and labor rates.
  - Safety Training is mandatory and must be completed prior to Equipment Training.
    - Visit RMS's Online Training site, [please click here](#), and log in with your UNT credentials to access the online safety programs.
  - Training prerequisites must be fulfilled before equipment training can start.
  - Only MRF staff members can certify Users to operate MRF equipment and the capabilities that come with it.
- Equipment Scheduling is provided using the [Facility Online Manager \(FOM\)](#).
  - Users can express logon to an instrument at the time of use without a reservation using FOM provided the requested time is not currently in use or reserved in FOM.

- Users can reserve equipment time prior to equipment use using FOM.
- FOM automatically logs users in at the start time of a reservation.
- It is the Users responsibility to log off their reservation on FOM when their usage is complete.
- FOM automatically logs users off at the set Forget-Logoff time after the stop time of the reservation.
  - Forget-Logoff time: 0 hours
- Users will be charged for the greater of
  - The minimum use time: 1hr of instrument usage
  - The FOM recorded equipment logon and logoff times.
  - The physical instrument usage time as determined by staff and/or instrument logs.
- While using MRF equipment users' must be logged on to that equipment through FOM.
  - Users are required to extend their reservations in FOM if they need to extend their reserved instrument time.
- Reservations
  - Users should not reserve more time than needed.
  - Users should not go over their reserved time if another user has reserved time after them.
  - Users may only reserve time for themselves.
  - Users may reserve instrument time in 1hr blocks of time in FOM.
  - Users may reserve up 8 days ahead starting at 6am.
  - Reservation Limits
    - Set as Daily and weekly limits of instrument reservations and usage.
    - Active only during regular hours of operation,
      - Monday-Friday 8am-5pm.
    - No limits applied to reservations scheduled during extended hours of operation.
    - No limits applied to Express Logons.
    - Groups of users defined by their Supervisor in FOM may have limits placed on the total time the group can reserve specific instruments.
      - ESEM, NanoSEM, XRD: 8hrs/day, 16hrs/wk
      - NanoSEM, TEM: 8hrs/day, 16hrs/wk
      - Atom Probe, FIB: 8hrs/day, 16hrs/wk
- Only Users currently logged on to an instrument through FOM are permitted to use the instrument at that time.
- Reservation Cancellations
  - The cancellation policy exists to increase the availability and use of MRF equipment and resources.
  - Except where noted below users can cancel a reservation up to 12 hours before the reservation start time without a fee:
  - Cancellations: If a reservation is canceled within the period listed above, a cancellation fee will be charged.

- Cancellation Fee = the minimum use time charge
- No-Shows: Failing to cancel a reservation and failing to show up for a reservation will result in a no-show fee.
  - No-Show fee = Reserved time + Forget-Logoff time
- Cancellation fees may be adjusted due to unforeseen circumstances, such as illness. Please contact [MRF.Research@unt.edu](mailto:MRF.Research@unt.edu) or an Instrument Manager if this situation occurs.

## EQUIPMENT USE

- All equipment use must be reserved and reflected using [FOM](#).
- Equipment Problems
  - Please never attempt to repair equipment yourself.
    - Always contact an Instrument Manager.
  - A MRF staff member must be notified immediately if equipment is lost or damaged.
  - If you experience a problem during your experiment, please log out of FOM and select '*Something wrong*' with a comment.
    - Instrument Managers will receive an email notice and fix the problem as soon as possible.
  - You may request to have the charges waived if the equipment is faulty but not marked '*Down*'.
    - Please contact [MRF.Research@unt.edu](mailto:MRF.Research@unt.edu) immediately to resolve.
  - You will not be charged if the equipment is marked as '*Down*'.
  - Equipment damages resulting from user negligence may be the responsibility of the user's organization. Examples of such negligence include, but are not limited to,
    - mishandling or physically damaging equipment,
    - moving or re-configuring equipment,
    - spilling liquids or other substances,
    - using equipment for any purpose other than that for which it was designed.
  - If it is determined that damages resulted from negligence, the user responsible for the damage will receive notice from MRF.
    - Repair costs resulting from negligence, or costs associated with equipment theft, loss, and/or misuse may be charged to the user's organization.
- Tools and Supplies
  - Tools and Supplies in MRF are for the exclusive use of MRF users using MRF equipment.
    - They are not to be used to support research activities not directly supported by MRF equipment.
      - Such as fixing non-MRF equipment, preparing samples for analysis and processing in non-MRF facilities, etc.
  - Tweezers, sample holders, gloves, mounting supplies and screwdrivers.
    - Provided in each instrument room as needed by the instrument.
  - They may not be transferred to another instrument without permission from an Instrument Manager.
  - Please leave them in a tidy and orderly fashion for the next user.
- Samples and Sample Preparation
  - All users are expected to follow basic laboratory safety procedures.
  - No food or drink at all is permitted in the sample preparation labs.
  - All solvents are to be kept and used in the hood.
    - Waste solvents are to be placed in solvent waste containers.



- Do not put electrolytes or acid containing material in solvent waste containers.
- All samples must be properly prepared to maintain the integrity of the instruments.
- Samples to be examined in electron microscopes must be completely cleaned and thereafter handled only while wearing gloves.
  - They must be stable in the high vacuum of a microscope sample chamber.
- Volatile samples can only be examined and/or processed after consultation with the equipment managers when a protocol for doing so has been established.
- Hazardous samples can only be examined and/or processed after consultation with the equipment managers when a protocol for doing so has been established.
  - For example: Nanoparticle samples, Biohazardous samples, Radioactive samples

## ACCOUNTING

- All users must have funding available to cover the fees for use of MRF equipment.
  - Internal Users must have an active Chart of Account number on file.
  - External Users must have an active Research Services Contract on file.
- Usage Rates
  - Set in accordance with Federal and State of Texas cost accounting guidelines.
  - Reviewed yearly by Office of Research's Office of Grants and Contracting Administration and adjusted as needed.
  - Rates may change annually.
  - Training and service work are charged including instrument use and staff assistance.
  - Unassisted instrument use is charged including instrument use.
  - Available on the MRF website and by request from MRF staff
- Billing
  - Invoicing of equipment usage
    - Fees are invoiced by FOM at the end of a user's session.
    - Fee Adjustments
      - Requests must be made prior to the last day of the month.
      - Contact MRF staff to request adjustments.
  - Invoices are billed by the calendar month.
    - Invoicing closes on the last day of the month.
    - Billing occurs the first week of the following month.
    - For internal users bills are directly charged to invoiced COAs.
    - For external users requests for payment are sent to the users.
  - If there is a billing question or issue, please contact MRF staff.
- FOM will automatically log users in at the start of their reservation, however it is the user's responsibility to log off at the end of the reservation.
- Types of invoiced charges
  - Usage charges are assessed in FOM for the greater of
    - The minimum use time: 30 minutes in general.
    - The recorded instrument usage time as determined by FOM.
    - The physical instrument usage time as determined by staff and/or instrument logs.
  - Cancellation charges: Failing to cancel a reservation within a set period before the start of the reservation, will result in a cancellation fee.
    - Cancellation Fee = the minimum use time charge
  - No-Show charges: Failing to show up for an active reservation will result in a no-show fee.
    - No-Show fee = Reserved time + Forget-Logoff time

## COMPUTERS

- Software
  - No software is to be run or installed without proper approval.
  - Software that may be run on instrument computers is limited to that which is the user interface (instrument control) and supplemental software such as is used for x-ray analysis and orientation imaging.
- Browser use is limited to access of the FOM website for reserving and logging out of sessions.
- Flash drives (memory sticks) are to be used with UNT networked computers.
  - not to be used with instrument computers.
- Computers in instrument rooms are for exclusive and sole purpose of microscopy –
  - no web browsing, email access or other use permitted except for transfer of instrument data or directly applicable to instrument operation.
- Computers in data analysis rooms are for exclusive and sole purpose of data analysis –
  - no web browsing, email access or other use permitted unless directly applicable to data analysis.

## DATA STORAGE AND RETRIEVAL

- Local instrument file servers are available for many MRF instruments that provide backed up data storage and data retrieval.
  - It is expected that users will retrieve their data immediately following their instrument session.
  - Data will be erased from the file server on a routine basis to ensure ample storage capacity for all users.
- Data is to be stored on local instrument file servers and accessed from local UNT computers next to the instrument PCs.
- Instrument PCs are for temporary data storage.
  - Files left on them may be deleted periodically without warning.
  - Acquired images and data must be transferred to the local instrument file servers.
- MRF is not responsible for maintenance or retention of research data.
- Images are data.
  - Images should be saved in a lossless format (NOT .JPG).
    - Use .TIF, .DM3, or TIA formats, preferably as 16-bit images.
  - It is expected that all MRF users will abide by ethical guidelines in the handling of images and other data.

## ACKNOWLEDGING MRF

- When publishing with data collected and/or analyzed using MRF resources include an acknowledgement to MRF, the NFCR and/or the MDCL such as: “Electron microscopy was performed at the Materials Research Facility (MRF) located in The University of North Texas, Denton, Texas, USA.”