

Policies for the Arctica TEM

Updated 11/29/21

[General CCMR policies](#)

Facility Contacts:

Mariena Silvestry Ramos, ms3289@cornell.edu

Always contact the manager with any issues during your session. Prompt notification of any issues will decrease instrument downtime. Preferred contact method: text or call for issues while using the instrument, email at other times.

Facility manager labor is billed hourly at the [current facility rates](#) for training, instrument operation, and other service work.

New Users:

- New facility users must [request a FOM](#) account for instrument booking and billing
- The microscope room is accessed using your Cornell ID. Users who have completed instrument training, [filled out the access request form](#), and provided a CULearn screenshot showing completion of required courses are granted full access. Untrained users can be granted daytime access (for joining a trained users' session) at manager discretion if they complete online safety training.
 - Anyone without card access must be accompanied at all times by a trained user. Do not lend your ID card to others to access the microscope room.
- Users should bring their own samples to the training session. If you are new to cryo-EM, you will first learn from Mariena to operate the Vitrobot and likely the BioTwin TEM for screening before booking an Arctica session.
- Training should be scheduled by emailing the manager. A manager will book your first session but further sessions must be booked by the user in FOM.
- A user's first four sessions (three after the training) should be booked for weekdays so that the manager is around to answer questions.
- Usually users can operate the scope independently after 1-2 training sessions and load samples after the third; depending on user comfort level, experience with other microscopes, and manager discretion.

Lab Rules:

- Users must wear proper lab attire: closed-toed shoes, long pants, covered shoulders.
- No sample preparation should be done in any microscope room. All freezing/staining/drying should be done in the prep lab.
- Wear gloves when handling cassettes, clip rings, and anything that goes in the microscope (or use tweezers).

- Do not remove any CCMR items (dewars, tweezers, etc.) from the facility. If you are moving grids/nitrogen/etc between labs, return items to their original lab when you're done.
- Leave the lab cleaner than you found it: dispose of all trash and take all your items with you at the end of your session.
- Return clipped grids and grid boxes to the microscope room when no longer needed. This will lower our consumables costs and help keep the hourly rate low.

Reservations:

- Instrument reservations are made using the [FOM](#) software.
- The manager will reserve a user's first training session. After the first training session, booking scope time is the user's responsibility.
- If you need the manager's help with your session - loading, aligning, etc - send an email when you book your session to verify their availability.
- Bookings must be made by the user intending to use the microscope. Contact the manager to switch sessions in FOM if you've arranged to trade days with someone. FOM will not allow you to log in if someone else has the scope reserved.
- Users may make two reservations, up to 24 hours per reservation, in an upcoming 3 week period
- Users should be prepared to utilize their entire reservation (or have a back-up user) - if you consistently book more time than you use you may be charged for the reserved time at the manager's discretion
 - If you expect to finish early, **before 7 PM**, contact a manager so we can email the list in case someone else can use the time
- The next available day at the end of the three-week window opens each day at 9 AM.
- If time is available within the next 24 hours it becomes available to any user (even those with two sessions booked) - contact the manager to book in this situation.
- Maintenance, visits from service engineers, and troubleshooting take precedence over user sessions. If the scope goes down the manager will rebook your session to the next available day (usually at the end of the three-week window). The rebooked session does count towards the 2-session limit.
- For special circumstances requiring booking out of the three-week window (visiting collaborators, longer experiments, etc) contact the manager.
- If you require any adjustment to the time billed in FOM (forgot to log out, microscope issue caused failure of data collection) you should notify the manager by email within 48 hours.
- When scope demand is high, one 24-hour period each three weeks will be set aside as flex time. This is for urgent or unforeseen needs for microscope time and can be booked by contacting a manager. Please provide the reason a regular reservation would not be appropriate. If no one needs the time it will be used for maintenance or released 48 hours prior to its start.

Cancellations and No-Shows:

These rules apply to all instruments in the CCMR electron microscopy facility.

- Users who do not show up to their scheduled session will be charged the full cost.
- Cancellations should be made more than 24 hours in advance. If reservations are cancelled with less notice, the full reservation will be charged unless another user takes the time slot.
- Cancellations for illness or emergency will not be charged but you should contact the manager as soon as possible so the time can be made available to other users. Please stay home if you are sick and keep the lab germ-free.
- **New:** If you finish a planned overnight session before **7 PM**, contact a manager so we can let other users know the time is available.

Computing and Data Transfer:

- The microscope generates up to 1 TB of data per session. Users should come to the microscope with a plan to transfer data to their own computer.
- We provide storage for 60 days but its safety is never guaranteed - you should transfer to your own storage as soon as possible. Data is automatically deleted after 60 days.
- Options for data transfer include: pushing data via ssh, copying to a user-supplied hard drive (internal and external drives both work), or - for small amounts of data - uploads to cloud storage of your choosing through the browser. Ask the manager if you have any questions or think a different method would work better for you.
- There is a 4-GPU computer for **on-the-fly** processing available in the Arctica room. The user currently on the microscope has priority, and can kill any jobs/close any open sessions if they need the computer. This computer can only be accessed from the Arctica room. You should not expect to fully process your dataset using this machine.

Acknowledging CCMR:

Any publication including data from this microscope must acknowledge the CCMR grant:

“This work made use of the Cornell Center for Materials Research Shared Facilities which are supported through the NSF MRSEC program (DMR-1719875).”

More information and suggested working is available online [here](#).