

Electron Microscopy User Agreement

- 1. Training and certification for independent operation.** Users are required to receive training from STS staff before operating any instrument, and are not allowed to use an instrument independently until certified to do so by STS staff. Only STS staff are authorized to decide when a user has demonstrated a satisfactory level of proficiency to be certified to operate an instrument independently. Routine users may be authorized to work independently during normal business hours. At the discretion of STS staff, particularly experienced users may be granted after-hours access privileges.
 - Demonstration of proficiency on the Tescan scanning electron microscope (SEM) requires a minimum of two training sessions covering basic theory and operational procedures. Often more than two training sessions are required.
 - Training on the JEOL field-emission SEM must be preceded by training on the Tescan SEM.
 - Use of specialized modes such as energy-dispersive spectrometers (EDS), scanning transmission (STEM), cathodoluminescence (CL) or variable-pressure (VP) requires additional training. Users are not permitted to operate any SEM in a mode for which they have not been trained and approved.
- 2. Signing up for instrument time.** Once trained and certified as being qualified to work independently, a user may use the Facility Online Manager (FOM) to reserve instrument time, subject to the following restrictions:
 - Reservations can be made up to 30 days in advance
 - Users can have a maximum of four reservations on FOM for upcoming use of an SEM
 - Users are limited to a maximum of eight total sessions in any 30 day period.
 - Each reservation is limited to a maximum of four hours.
 - Exceptions to these restrictions may be granted on a case-by-case basis. Restrictions do not apply to instructors reserving time for courses or to staff who reserve time for training other users.
- 3. Cancellation policy.** Reservations must be cancelled no later than 24 hours in advance. After this, a cancellation is considered late.
 - After two late cancellations users will receive a warning and their supervisor will be notified.
 - A third late cancellation will result in suspension of all SEM privileges pending a meeting between the user and STS staff.
 - More than three late cancellations may result in permanent loss of SEM privileges.
 - Late cancellations will be forgiven if the user is able to find another qualified user to make productive use their originally scheduled time.
- 4. Requesting staff assistance.** Users who have been certified to work independently may still require assistance from time to time. If you anticipate needing assistance, indicate “SciTech staff assistance needed” when signing up in FOM to ensure staff are available. If staff are not available, you will be notified and your session may be rescheduled for a different time. Always seek support from STS staff if you are uncertain how to use a piece of equipment or how to perform a particular operation.
- 5. Failure to show up or make full and productive use of a scheduled session.** Spot checks and examinations of instrument logs and FOM records are routinely performed to ensure users are showing up for scheduled sessions on time and making full and productive use of their scheduled time. Failure to show up ready to begin work within 10 minutes of the scheduled start time is considered both an absence and a late cancellation and the reserved session may be re-assigned.
 - One failure to show up will result in a warning be issued to the user and their supervisor.
 - Two failures to show up will result in suspension of all SEM privileges pending a meeting between the user and STS staff.

- More than two failures may result in permanent loss of SEM privileges.
 - Consistent underuse of reserved time may result in a warning and eventual loss of SEM privileges.
- 6. Long gaps between instrument use.** If a significant amount of time has elapsed since a user last operated an instrument, they must demonstrate continued proficiency and may be required to receive refresher training.
 - If more than four months have passed since the last use, users must select “SciTech staff assistance needed” when reserving time in FOM in order to receive a refresher training at the start of their session.
 - If more than twelve months have passed since the last use, users must select “SciTech staff assistance needed” when reserving time in FOM and the entire session will be devoted to training.
 - 7. Equipment problems.** On occasion, SEMs, computers or related equipment may not working properly. Users should notify STS staff as soon as possible if they find instrumentation that is malfunctioning. Users should not attempt to repair malfunctioning equipment themselves unless expressly permitted by STS staff. STS staff must also be informed if any equipment is damaged during use. STS contact information is posted in SEM labs.
 - 8. Data storage.** SEM and EDS computers are equipped with data storage drives meant for temporary use. SciTech staff periodically review images and other data for quality control and to assess issues that might arise with the instruments. User data files will be deleted from SEM computers periodically, and SEM computers will not serve as data servers or repositories. Therefore users are responsible for archiving their own data. Each SEM has a specific configuration of computers, including one networked computer, and at least one computer that is isolated from the WWU network to prevent Windows updates, which can disrupt instrument function. Consequently, non-networked computers are susceptible to malware.
 - Never connect a thumb drive or any external storage device to a non-networked computer. STS staff will show users how to transfer data from non-networked computers to networked computers.
 - Users should transfer their data promptly, preferably at the end of session.
 - One user may not interrupt another user to get their data, and will need to wait until an open time to transfer their data.
 - 9. Materials.** STS provides SEM coating supplies for all users and supplies consumables for small projects, including trials.
 - Consumables for ongoing projects should be provided and paid for by project PIs.
 - Special consumables (e.g., specialized TEM grids) should be provided by project PIs
 - Diamond ultramicrotomy knives are considered consumables by SciTech.
 - 10. Priorities of Use.** EM facilities support instruction, research and external users.
 - Priority is generally give first to classes, then research, followed by external users.
 - Course instructors should schedule classes well in advance to ensure staff and instrument availability.
 - Every effort is made to accommodate user needs and respect scheduled time, but for occasional unforeseen or emergency circumstances a user’s scheduled time may need to be changed.
 - 11. Keys and lab access.** Coded key boxes are available allow STS-approved users access the SEM labs. Codes will be changed periodically.
 - Key codes will be made available to STS-approved users individually.
 - Key codes are for approved users only and should never be shared with anyone else.
 - When using a key, users should access the key, unlock the door, and immediately return the key to the wall box. Never take the key into the room with you nor leave it in the door.
 - Users should make certain the lab door is closed and locked when leaving the lab.
 - Users are responsible for the actions of any other individuals who join them in the lab.



Scientific Technical Services

12. **EDS software.** The AZtec software used to analyze Oxford EDS data runs on Windows computers and is available to all users. Users can have the software installed on their lab computers by contacting their systems administrator who can then contact STS or ATUS for installation.
- Users are encouraged to work with the software outside of lab to become better familiar with the software.
 - EDS data analysis should be performed offline, not during SEM sessions.

By signing below you agree to the terms of this user agreement.

Name (printed)

W# (WWU users only)

Signature

Date