Rules & Regulations for Thermionic SEM/FE-SEM

FESEMs are restricted to post-graduates and research staff only. Undergraduate users have only access to the thermionic SEMs.

Please see end of document for offences and penalties.

Thermionic JEOL SEM 5410, 5500LV, 6360

- Undergraduate users can only use from 8am to 6pm within office hours.

- After-office hour access to thermionic SEMs: Post-graduates and research staff users must have 10 hrs of usage experience before they have access to after-office hour usage. A brief will be conducted before after office hours access is granted.

FESEM 6340F & 7600F:

After-office hours access criteria for FESEM 6340F & Upgrade to FESEM 7600F office hours access.

1. Pre-requisite: User must have at least 5 hrs of hands-on experience during office hours. Users who have prior SEM experience before training, can request for upgrade after 3 hours.

2. For upgrade, user will request for an assessment.
   a. User must be able to operate the FESEM according to what was taught during training; check the settings required; demonstrate correct method of focusing; and able to perform alignment within one minute.
   b. If user fails this assessment, user must accumulate another 5 hrs, before the next assessment.

After-office hours access criteria for FESEM 7600F

User must accumulate a total of 20 hrs of hands-on experience on JEOL 7600F during office hour.
**FESEM 7800F:**

Eligibility criteria for FESEM 7800F training

- Must Accumulate a total of 10 hrs of hands-on experience on JEOL 7600F during office hour.

After-office hours access criteria for FESEM 7800F

- Must Accumulate a total of 10 hrs of hands-on experience on JEOL 7800F during office hour.
- Direct training on 7800F applicable for those who want to use only EBSD.

**Special Requests**

1) FACTS can help user to block-book FESEM, if they have the intention to do in-depth analytical work. Examples of analytical work include EBSD etc.

2) Normal Charges apply for special requests.

**EBSD:**

Eligibility criteria for FESEM 7800F EBSD training

- User must have a sample ready for EBSD training.

- User should provide a description of the EBSD runs to be performed, including type of material, sample form factor, area to be scan and run type to be provided.

- If user is not trained on the FESEM 7800F yet, FESEM 7800F training will be conducted first, before EBSD training

- User must fulfill 3 hours of FESEM 7800F usage before going for EBSD training.

**Penalties for All Thermionic SEM/FESEM Users**

1. Users must bear the full responsibility of the instrument for the session they have booked. If user allow unauthorized users to operate the instrument during the session that he/she has booked, penalties be implemented as follows:
1\textsuperscript{st} time
i. User will be suspended from using all instruments in FACTS.
ii. On the following month, user will be downgraded to day-access for that particular instrument; reassessment will be given before upgrading again.

2\textsuperscript{nd} Time
i. User will be suspended from using all instruments in FACTS.
ii. In the following month, user must apply for retraining with full training cost before access is granted again. Training is subjected to availability.
3rd Time

i. User will be suspended from using all instruments in FACTS

ii. On the following month, users must apply for retraining for that cluster of instruments (either SEM cluster; FESEM cluster; XRD cluster 1+2; TEM cluster), with full training costs.

2. In the case of sample holder dropping into main chamber, or user cause FESEM down-time in some other ways – user will be barred for one month and may need to retrain on that particular instrument. Retraining is subjected to date availability and will be chargeable.

3. All users must submit endorsed incident report within 1 working day after the incident. Otherwise, user's access to the instruments will be suspended indefinitely until the incident report is submitted and the indicated time of access removal will take effect from the time of submission.

For Users who have not booked and used TSEM/FESEM for a long period of time

1. If users have fulfilled the entire criterion stated above but are unable to use the TSEM/FESEM frequently after that, their access might be changed back to office hours usage until he is certified to be able to use the TSEM/FESEM proficiently.

2. The FOM will remove the access of the user who have not used the TSEM/FESEM for a year. In such event, user have to be re-trained and training cost is fully chargeable.

Incidents / Offences in breach of Safety

Any incident or offences which are in breach of all prevailing safety regulations, will be referred to MSE HSE and the user's respective PI for further follow up action.