

Thin Film XRD Policies and Regulations ver. 1 (last updated 2 13 2024)

The MSE fee-for-service (FFS) is a multi-user facility that provides services to UCR faculty, staff and students.

Instrumentation use and all services provided by MSE FFS are subject to recharge fees.

Access

1. Access to specific MSE FFS instruments and facilities is granted by the facility manager.
2. Facility staff provides services and assistance to users. Users may request to utilize the facility staff expertise for operation of instruments, sample preparation, data acquisition and interpretation.
3. Users can get direct access to operate MSE FFS instrumentation and equipment by themselves after going through the established training procedures.
4. Use of instruments and equipment is contingent upon the competency and responsibility of the user and is at the discretion of the facility manager, who has authority to deny or revoke privileges.
5. Users are required to provide an active recharge account and authorized by the titular principal investigator (PI) of the account before services are rendered.
6. Registered users are those who are authorized to use MSE FFS instruments and equipment and have on file with MSE FFS the user's FAU form signed by the PI.
7. Registered users are required to complete training modules specific to the facility or instrument before starting work.
8. Regular registered users have access to MSE FFS during regular working hours and when staff personnel are present.

Scheduling, Reservation, and Recording

1. All services and instruments are accessible by advanced appointment on first-come-first-serve basis.
2. An online web-based reservation system should be used for scheduling by registered users, who have the relevant access privileges.

3. Minimum reservation time on any instrument is a 1/2 hour. There is no limit on the length of reservation. A maximum continuous reservation time may be imposed if the demand becomes significant.
4. Starting time for each session is the booking time on the FACES system.
5. Your usage will be billed based on your FACES reservations.
6. Not recording a session within one hour of concluding the use is subject to 2x the hourly rate penalty charge per incident for each hour not recorded.
7. If users are found in violation of the scheduling procedure twice within a 3-month period, their access will be revoked for up to 6 months.

Cancellation

1. Cancellation of appointment less than 12 hours before the starting time is subject to penalty fee equivalent to 2 hours of the specific service rate.
2. Cancellation of appointment is permitted in case of instrument or facility is under maintenance.

Training

1. Training is provided on a one-on-one basis by the facility manager.
2. Users are granted access to operate the instruments after successfully demonstrating safe and correct operation of instruments.
3. Trained users are NOT allowed to train other users unless explicitly approved by facility manager.
4. Violation of this rule will result in suspension of the users account up to 3 weeks.

Visitors and Safety Training

1. Authorized users are not allowed to bring unauthorized visitors into the lab if usage of instruments are expected. Contact the facility manager first if a tour is requested.
2. EH&S requires all users and visitors to complete the following safety modules before entering the lab:
 - a. Laboratory Safety Fundamentals
 - b. Hazardous Waste Management

- c. Radiation Safety For Users of Radiation Producing Machines
- d. Compressed Gas Safety

Camera on premises

1. Cameras will be present in all lab spaces to help enforce facility policies and regulations.
2. Camera footage will be used to identify unauthorized users and/or unauthorized usage of instruments.
3. Camera footage will be used to identify if users are not following facility policies and regulations.

Photo on record

1. All authorized users will be expected to provide a photo to keep on record.
2. The photos will be used to help distinguish between authorized users from unauthorized users.

Consumables

1. Users are provided gloves, kim wipes, paper towels, weighing paper, air, and solvents to prepare and clean the sample holders and preparation benches as necessary. Any abuse found will be subjected to penalties and revoking of access indefinitely.
2. Users are expected to wipe surfaces down after use to maintain a clean working area.
3. Users need to return all used items back to their original storage space.

Waste Management

1. All samples must be collected by the user and disposed of properly in their own labs.
2. Any broken glassware needs to be disposed of in the “Broken Glass” container.
3. Any sharps such as razor blades needs to be disposed of in the red “Sharps” container.

Data Storage

1. Electronic user files and data stored on MSE FFS computers are kept indefinitely from the date of creation.
2. Users will be notified if files are to be deleted due to space constraints and have 1 week upon notice to transfer all files on to their personal storage devices.

Instrument Problems

1. Any problems, malfunction, damage, or substandard instrument performance should be reported immediately to the facility staff and recorded on the sign-in sheet.
2. During regular hours, contact the facility manager:
 - Perry Cheung
 - pcheung@enr.ucr.edu
 - MSE 311
 - (951) 827 – 3378
3. For after-hours problems, send email to facility manager and include cell phone number.
4. Users may be suspended and charged for damages caused by **UNAUTHORIZED** attempted service, negligence, or mishandling of instruments.

Charges

1. A campus approved user fee structure is used to charge for all services.
2. Thin Film XRD time is charged at increments of 1/2 hour.
3. A penalty fee of 2x hourly rate per incident may be charged for violation of any lab rules, plus the cost of repair/replacement of any damaged part/system.

Payment

1. PIs are charged through the UCR recharge system.

Safety

1. Every lab is equipped with the following safety items:

- a. First-Aid Kit
- b. Injuries & Medical Treatment flip chart
- c. Minor Spill Kit

Each lab has its own unique hazards, and users need to be aware of them all regardless of the instrument they are actively using.

Hazards	MSE 150	MSE 250	MSE 309
Compressed Gases	Air Nitrogen (N ₂) Argon (Ar) Oxygen (O ₂)	Air Nitrogen (N ₂) Argon (Ar) 5% H ₂ 95% N ₂	Air Nitrogen (N ₂) Argon (Ar)
Flammables	Isopropyl Alcohol (IPA) Acetone Ethanol	Isopropyl Alcohol (IPA) Acetone 5% H ₂ SO ₄ solution	Isopropyl Alcohol (IPA) Acetone
High Temperatures	Tube Furnaces Muffle Furnaces	TGA/DSC	
Pinch Point	Instron Grinder/Polisher		
Sharp Blade	Diamond Saw		
High Voltage	Muffle Furnaces		Probe Station

Medical Emergencies

1. Check the scene to see that it is safe, and that you and the victim are not in danger.
2. From a campus phone call 911 or 9-911 (or ask someone to call 911) to request medical assistance; state the type of medical emergency it appears to be (cut, head injury, heart attack, etc.). Dial (951) 827-5222 to reach the UCR Police Department.
3. You (or the caller) should be able to provide the dispatcher the location, the type of injury or illness, if the victim is conscious or unconscious, and if an ambulance is needed.
4. Get the office/lab First Aid Kit and use needed supplies as directed or to the level of your first aid training.
5. Do not move the victim if unsure about head/neck injury.
6. Retrieve and use any other appropriate and available emergency medical equipment (e.g., automatic external defibrillator (AED))
7. Remain calm and reassure the victim while waiting for emergency personnel.
8. Report an injury (no matter how trivial it may seem) to:
 - Principle Investigator (P.I.) or Supervisor.
 - Workman's Comp Coordinator: Jenny Chen, 2-4654.
 - MSE LSO: Perry Cheung, 2-3378.
9. The injured person will need to complete the appropriate paperwork concerning any injury sustained while working on campus for MSE. It is imperative that you contact the department within 24 hours of sustaining the injury to preserve your rights to receive worker's compensation benefits if medically necessary. If the form cannot be filled out due to seriousness of injury, the injured person's supervisor will report the accident/illness.

Fires

1. Alert others nearby of the condition
2. Activate the building fire alarm
3. Call 911 to report any fire or smoke condition, if it is safe and possible to do so
4. Quickly leave the building when the fire alarm sounds or evacuation is initiated by emergency personnel
5. If working with high heat, open flame or a hazardous experiment or procedure, complete safety shutdown procedures if it is safe to do so, and then evacuate the building
6. Quickly take personal items or other important materials with you if it is safe to do so. You may not be returning for some time
7. Close doors as you leave
8. Stay to the right of hallways and stairs; do not use elevators
9. Assist people with disabilities if needed
10. Avoid any smoke-filled area if possible; if you are in a smoke-filled area, stay low to the floor and crawl under smoke to an exit
11. If your clothing catches fire: Stop, Drop, and Roll to extinguish flames
12. Follow evacuation routes directly to building's Emergency Assembly Area (EAA)
13. Notify emergency staff at the Emergency Assembly Area that you have evacuated safely
14. Remain in the Emergency Assembly Area until directed otherwise
15. Never try to reenter a building until cleared to do so by UCR officials or emergency responders

Broken Glass

1. Brush up any broken glass with the provided dustpan and brush and dispose in the "Broken Glass" bin
2. Inform the facility manager of broken glassware

Earthquake – During Shaking

1. Remember to duck, cover and hold
2. Duck or drop to the ground
3. Cover yourself by getting under a sturdy desk, table, between rows of auditorium seats, or against an interior wall
4. Protect your head and neck with your arms
5. Stay clear of windows, hanging objects, mirrors, or shelves where objects may fall
6. Hold on to the furniture that covers you
7. Protect your head and neck until the shaking stops

Earthquake - After Shaking Stops

1. Be prepared for aftershocks
2. Do not run outside or immediately evacuate as falling debris can cause major injuries
3. Quickly gather personal items and critical work or research that needs to be saved
4. If working with high heat, open flame, or a hazardous experiment or procedure, complete safety shutdown procedures if it is safe to do so, and then evacuate the building
5. Follow evacuation routes directly to building's Emergency Assembly Area (EAA); do not attempt to use an elevator for evacuation
6. Assist evacuating people with disabilities if they need help
7. Check in with emergency staff at the Emergency Assembly Area and notify them of injured people, hazards or damages observed
8. Stay at the Emergency Assembly Area and follow directions of emergency response personnel

Hazardous Material Skin contact: External exposure (splash)

1. Call 911 and ask for assistance from co-workers if available
2. Start shower/eye wash
3. Remove contaminated clothing, if appropriate
4. Wash for at least 15 minutes
5. Seek additional assistance as necessary

Hazardous Material Inhalation

1. Leave the area and go to an area with fresh air
2. If you have shortness of breath or trouble breathing, call 911 for help

Hazardous Material Ingestion

1. Call 911 for help
2. Call the National Capital Poison Center (800) 222-1222 for poison emergencies.

Hazardous Material Spills

1. A minor spill kit is available in the lab
2. If you have been trained and have the proper materials, contain or clean up spill and call EH&S at (951) 827-5528
3. If you have not been trained or cannot contain the spill, call 911 for help
4. In any case, remember to contact the facility manager