

Cell culture Training SOP

Who can request training?

- A. A new user
- B. Dependent user
- C. Independent user who has not used facility for long time and forgot handling the facility (did not use the facility for more than a year)-Booster Training

User Levels and Description

Dependent users: Users with a 'Day time access' provided for the facility and the FT will perform the Cell culture activity for them.

Independent users: Users with 'Any time access' capable of using the facility without facility owner assistance. User however, may contact the facility owner in case of critical issues.

Resource Manager/Facility technologist: Facility technologist responsible for supervision, training, fumigation, equipment calibration and maintenance, troubleshooting issues, having expertise in using the facility as well as improving the facility capabilities.

A. Training procedure for *A new User*

1. Get biometric access for MNCF

To become MNCF user one must get the biometric access to enter the facility

To get the biometric access to the facility please click the below link and follow the instructions. Please select "New Account" and fill in all the required details and submit.

[Biometric access](#)

2. Get FOM access -*To access the MNCF Cell culture only not for Facility training.*

Please follow the detailed instruction given below to get your FOM account to access the tools

- Please register to the facility accounts using your IISc email ID. – [CeNSE, Indian Institute of Science, India – FOM – Welcome \(iisc.ac.in\)](#) after creating an account, enter the research title and account number (your supervisor's project debit head).
- Please go through the user agreement form, [MNCF User Agreement-2023.pdf](#) , fill in the details and submit at mncf.cense@iisc.ac.in
- Please go through [MNCF BIO-WING USER AND SAFETY ORIENTATION](#)
- Please clear four safety tests:
 - MNCF safety test: <https://forms.office.com/r/HzCiF6KmHZ>
 - OLSEH safety test : <https://olseh.iisc.ac.in/>

NOTE: Clear OLSEH General safety, Biological safety, Laser Safety, Gas and Cryogenic safety

Once all the above steps are completed, email to mncf.cense@iisc.ac.in (copying your supervisor) so that your FOM account can be activated to use the characterization facility.

3. After getting the Biometric and FOM access, please apply for respective tools access (*not tool training*) by logging into your FOM account, please follow the below steps for the same.

[FOM login](#)

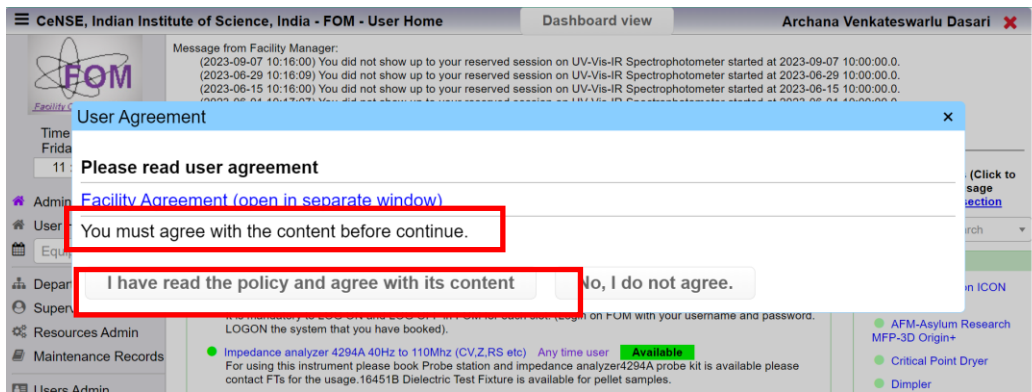
After login into your FOM account click *CeNSE-MNCF* to apply for tool access

The screenshot shows the 'CeNSE, Indian Institute of Science, India - FOM - User Home' dashboard. The user is 'Archana Venkateswarlu Dasari'. The dashboard includes a sidebar with links like 'Admin Home', 'User Home', 'Equipment sch...', 'Departments', 'Supervisors', 'Resources Admin', 'Maintenance Records', 'Users Admin', and 'Email List'. The main content area has a 'Message from Facility Manager' section with several messages about missed sessions. Below this are 'Authorized Resources' and 'Available Resources' sections. The 'Available Resources' section on the right has a red box around the '+ CeNSE- MNCF' button.

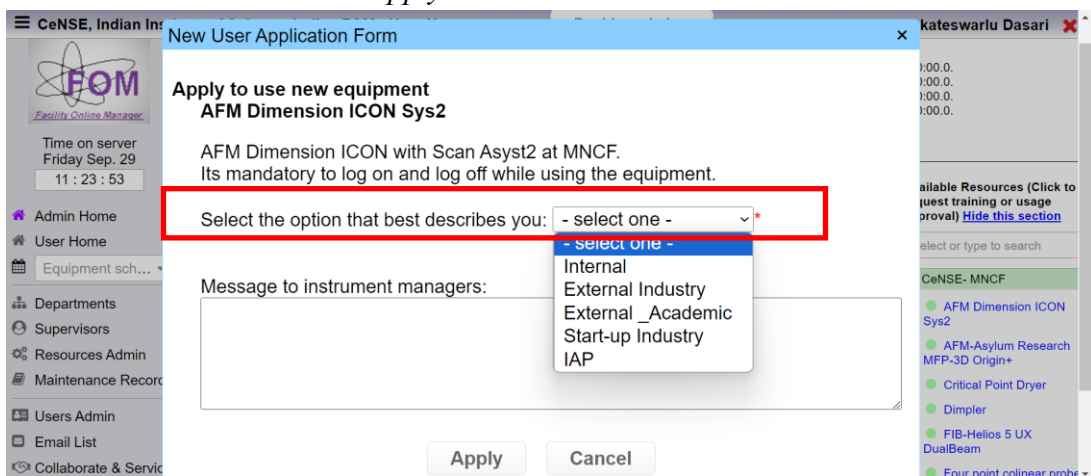
Select the desired tool/instrument

This screenshot shows the same dashboard as the previous one, but with the 'Available Resources' section expanded. The 'AFM Dimension ICON' button is highlighted with a red box. Other resources listed include 'AFM-Asylum Research MFP-3D Origin+', 'Critical Point Dryer', 'Dimpler', 'FIB-Helios 5 UX DualBeam', and 'Four point colinear probe'.

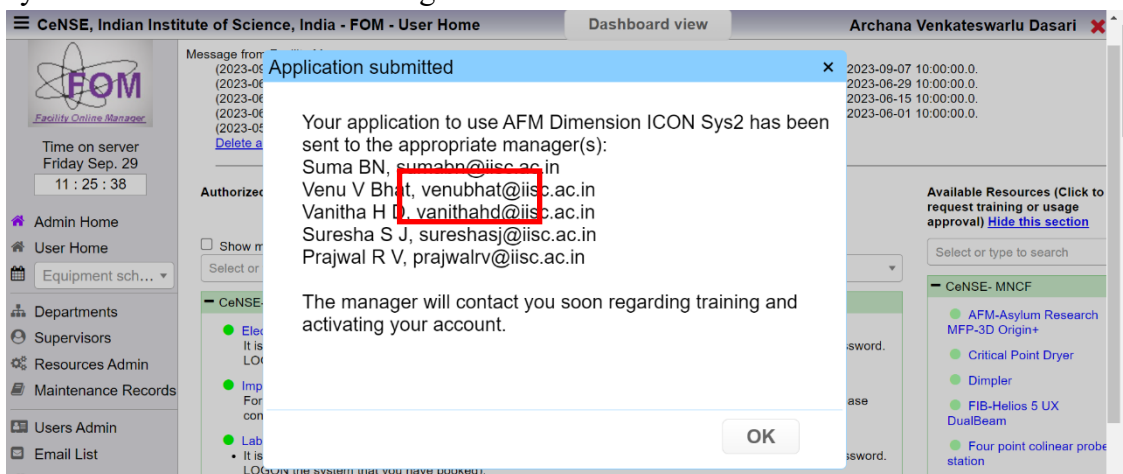
Please read the Facility Agreement before proceeding and then click *I have read the policy and agree with its content.*



Select the *Internal* option from the drop down menu and enter your message in the comment box and click *Apply*



After successful completion of the application the tool owner will be intimated about your request and you will receive the acknowledgement.



4. Apply for Tool Training in MNCF website, please see the below link for the same
[MNCF Tool Training](#)

- Apply for the Cell culture training in MNCF Bio-wing.
- Your training request email will be sent to the respective facility technologist for training approval
- A confirmation email will be sent to all users who have applied for the training from respective facility in charge with the training scheduled details
- Please refer to the Safety orientation and respective tool training SOP, materials/documents in the respective user groups before appearing for the tool training sessions
- Users are charged for the Cell Culture facility training
- All users must undergo Cell culture facility training, two practice slots and drive test to obtain independent access
- User has to perform minimum two practice slots covering all the operations explained during training session
- Independent access is provided only if performance is satisfactory during the drive test. Drive test will be both oral and hand-on demonstration. Failing in either of them will not be eligible for independent access
- Drive test should be given within 21 days of the training provided otherwise users have to reappear for the training session with charges
- Slot transfer is not allowed unless approved by FT
- Independent access to the Cell culture facility can be revoked if any unauthorized activity is observed in the facility.

B. Procedure for A Dependent User

- **For dependent slots (excluding request of cell lines)**

3 Dependent slots will be given.

Book the FOM slots on respective dedicated days for dependent users.

- **To request for cell lines:**

Fill the cell line request form in MNCF website [Cell line request form](#)

FOM slot will be booked by respective FT, date and time of collection for the cells will be informed by the FT.

- **For Autoclaving and Decontamination (if required)**

FT assistance available on Mon (11-1pm), Tue (12-1pm), Wed (12-1pm)

NOTE: Autoclaving without FT assistance will not be allowed.

C. Training procedure for An Independent User-Booster training

Please refer section A.4

D. Introduction of New cell line into the facility

When users send an enquiry email regarding Introduction of new cell line into the facility, the respective FT will share the 'New Cell Line Form' via email. Kindly complete the form, follow the instructions provided, and send the filled form to COO, MNCF for approval.

1. Training Calendar

- A.** Training will be conducted on first and third Wednesdays (10-11:30AM) every month. If the dedicated training days fall on a holiday, the training will be rescheduled accordingly. Individual training will be provided if requested, depending on Facility owner availability.
- B.** Training will be completed within 15days of submitting the Cell Culture training form.

FT assistance for Dependent users practices slots:

1. Bindhu V (bindhuv.cense@vendor.iisc.ac.in)

Available – Tuesday and Thursday (2-5 pm)

2. Sinchana R (sinchana.cense@vendor.iisc.ac.in)

Available – Tuesday and Thursday (2-5 pm)

- C. Timings for Independent users during office hours/daytime:** Mon(12-5pm), Tue(10-2pm), Wed(12-5pm), Thu (10-1 pm), Friday (10-5pm) and after office hours (Night hours).

Timings for dependent users: Tue (2-5pm), Thu (2-5pm)

D. Facility Calendar

Calendar for Cell culture Facility					
Time&Day	Monday	Tuesday	Wednesday	Thursday	Friday
10am - 11am	Cells revival	Independent slots	Training	Independent slots	Independent slots
11am - 12pm	Autoclaving		Autoclaving	Independent slots	
12pm - 1 pm	Independent slots	Autoclaving	Autoclaving		External slot
1pm - 2 pm					
2pm - 3 pm	Independent slots	Practice slots	Independent slots	Practice slots	Independent slots
3pm - 4 pm					
4pm - 5pm					

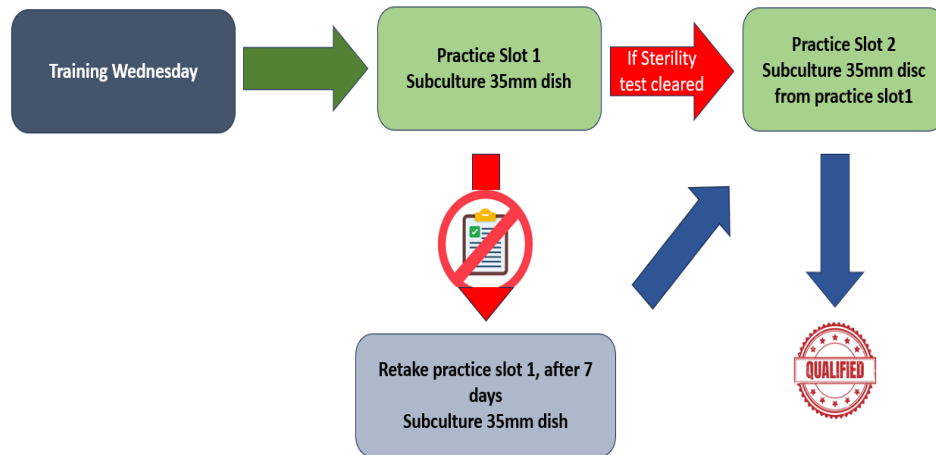
Figure 1 Cell Culture Calendar

2. Course Content for Cell Culture facility training:

- Cell culture training slot will be conducted for 1.5hrs.
- Training will include General safety protocols to access the facility such as:
 - Wearing PPE (Hairnet, facemask, apron, shoe covers,)
 - Disposing PPE and Biohazard waste in respective labelled bins.
- Descriptive of the equipment available inside the facility.
- SOP to use BSL2, CO2 Incubator, Centrifuge, Phase contrast inverted microscope, Water bath.
- Procedure for Subculturing (Cell revival and Cryopreservation if required)

- f. Dos and Don'ts
- g. Emergency shut down procedure.

Syllabus for Practice slot and drive test:



Syllabus for Drive test

1. Drive test for trained users has to be given within 21 days of the training after completing 2 practice slots to get independent access. If not, the users would have to attend the training a second time and undergo the same process of the training cycle.
2. The drive test will include an oral assessment and a practical evaluation covering PPE usage, subculturing of cell culture dishes, sterile handling of equipment and facility, and proper disposal of biohazardous materials
3. Users who fail their drive test can re-take both hands-on and oral tests after 7 calendar days.
4. **Independent users who have lost their access due to inactivity or other reasons**

OR

Expert users who wish to obtain independent access without going through a training/practice slot session

can give a Drive Test (Oral & Written test) directly without going through the training and practice slots. However, failing the drive test will require the user to book additional practice slots and re-take the drive test after 7 calendar days. Only two attempts allowed for a drive test. If the user fails both attempts, it is mandatory to go through re-training session.

3. Facility Reservation Protocols

Cell culture facility handling protocol

Cell culture facility is one among the MNCF and all the protocols of MNCF for accessing any tool will also apply to this tool as well. Along with this, there are specific protocols concerning Cell culture facility are listed below, all are requested to kindly adhere to the mentioned protocols .

1. When reserving the FOM slot, always include information regarding the name of the cell line and quantity required in the user comments and select the required

consumables which would be required for your assays.

2. “Dependent user” can request three dependent slots while informing the Facility owner at least 24 hours prior. After that, one must undergo training and become an independent user of the facility
3. A user can reserve three slots per week as per the FOM calendar in the SOP.
4. FOM reservation will open one week in advance for any tool.
5. Users must apply on the MNCF website for training [Bio-wing Training form](#)
6. After the training two practice slots must be taken and followed by a drive test to get independent access
7. Users must mandatorily book the slots for using the facility and login and log off the FOM slot on time
8. Users must remove the biohazard waste and discard them appropriately in the respective labelled bins after the slot without fail
9. Logbook entry is mandatory
10. All the used accessories, facility-related things must be kept in their respective place before leaving the Bio-wing.
11. All instruments must be turned off except CO₂ incubator before leaving the facility.
12. Users are expected to inform the FT before making any changes in the facility, providing protocol of the assays to be performed and introduction of new cell lines with prior approval only they can proceed with their activity.
13. Introduction of any new chemicals, dyes inside the facility must be approved by the respective FT.
14. Cell line maintaining, subculturing, assays performing are the user's responsibility only, FT will not take any sterility of cell line responsibility.
15. Users should strictly follow the facility handling protocols that were taught in the training
16. Any violations in the above-said protocols are unacceptable and will attract respective penalty points based on the severity as stated in the [MNCF User Agreement](#)