



I-STEM PORTAL OPERATOR'S HANDBOOK

Your complete guide to efficient research facility management on Indian Science, Technology and Engineering facilities Map







TABLE OF CONTENTS

1. Message from the National Coordinator and COO	001
2. Executive Summary	002
3. Quick Start Guide (Visual Summary)	003
4. About I-STEM	004
4.1. <u>Vision</u>	004
4.2 Mission	
4.3 <u>Strategic Objectives</u>	004
5. <u>Institutional Setup & Roles</u>	004
5.1 Institution Registration on I-STEM Portal	006
5.2 <u>Step-by-Step Role Creation on I-STEM Portal</u>	008
6. Equipment Management	022
6.1. Enlisting of Equipment	022
6.2 <u>Updating Equipment Usage Rate</u>	026
6.3 <u>Updating Equipment Profile</u>	028
6.4 <u>Maintaining Equipment Calendar</u>	031
6.5 <u>Customized Service Request Form (CSRF)</u>	032
6.6 <u>Assign/Unassign Operators to Equipment</u>	033
7. <u>Facility Booking Record (FBR) Lifecycle</u>	036
7.1. FBR Status: Pending	037
7.2. FBR Status: Slot Allocated	039
7.3. FBR Status: Executed	041
7.4. <u>FBR Status: Rejected</u>	043
7.5. <u>FBR Status: Cancelled</u>	045
8. Payment & Compliance	046
8.1 <u>Platform Role</u>	046
8.2 Objective of Update	047
8.3 Key Updates and Recommendations	047
8.4 Expected Outcomes	047
8.5 <u>Implementation and Support</u>	047
9. <u>Issue Handling & Customer Support</u>	
9.1 <u>Support Ticketing System (Freshdesk)</u>	048
9.2 <u>Service Level Agreement (SLA) Timelines</u>	048
9.3 <u>Support Channels</u>	048
10. <u>Public User/ Researcher Guide</u>	049
10.1 <u>User Registration</u>	049
10.2 <u>Login as a User</u>	051
10.3 Equipment Search and Equipment Slot Booking	051
10.4 FBR Status: Pending	060
10.5 FBR Status: Slot Allocation	062
10.6 FBR Status: Executed	064
10.7 FBR Status: Rejected	065
10.8 FBR Status: Cancelled	066





11. <u>Orientation & Learning Resources</u>	068
11.1 <u>Available Resources</u>	068
11.2 Quick FAQs	068
12. <u>Challenges & Best Practices</u>	069
12.1 <u>Challenges</u>	069
12.2 Best Practices	069
13. API Integration with Institutional Equipment Booking Systems - SOP	070
13.1 Purpose	070
13.2 <u>Scope</u>	070
13.3 <u>Policy</u>	070
13.4 <u>Procedure</u>	070
13.5 Expected Outcome	071
14. <u>Future Enhancements & Roadmap</u>	072
15. <u>Disclaimer</u>	072
15.1 <u>Platform Role</u>	072
15.2 <u>Financial Responsibility</u>	072
15.3 <u>User and Operator Coordination</u>	072
15.4 Resource Facilitation and Visibility	072
15.5 <u>Platform Charges</u>	072
16. Annexure A	073
17. Annexure B	075
18. Glossary B	077







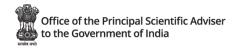
The I-STEM Operator Handbook is more than a guide—it is a cornerstone of India's mission to democratize access to scientific infrastructure and accelerate innovation across our research ecosystem. Every procedure described here reflects our collective effort to make national resources visible, accessible, and optimally utilized.

Through the I-STEM platform, we are building a connected network of institutions where knowledge and facilities are shared seamlessly. This transformation relies on the professionalism of our operators, coordinators, and institutional custodians—individuals who translate policy into measurable impact. Your dedication ensures that every publicly funded instrument contributes to discovery and collaboration. By following the standards and workflows in this handbook, you uphold transparency, accountability, and excellence—the values that define I-STEM's contribution to Atmanirbhar Bharat and global scientific leadership.

Together, let us continue advancing an ecosystem where technology and teamwork empower innovation at every level.



Dr. Harilal Bhaskar National Coordinator & COO, I-STEM National Portal Office of the Principal Scientific Adviser, Government of India





2. EXECUTIVE SUMMARY

Purpose and Scope

The I-STEM Operator Handbook (Version 1.0, October 2025) serves as a unified guide for managing research facilities, equipment, and institutional roles on the Indian Science, Technology, and Engineering facilities Map (I-STEM) national portal. It establishes standardized workflows and responsibilities to ensure efficiency, transparency, and accountability in the management of publicly funded R&D infrastructure.

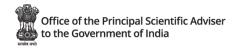
Core Objectives

- Standardization: Define uniform operational processes across all registered institutions.
- Transparency & Traceability: Provide real-time visibility of equipment usage and booking records through the FBR system.
- **Resource Optimization:** Maximize utilization of high-value research assets and promote equitable access.
- **Empowerment:** Equip researchers and operators with tools and governance frameworks that foster collaboration and innovation.
- **Digital Transformation:** Drive automation through upgraded portal capabilities, mobile access, and API-based integrations.

Intended Audience

Applicable to all key roles within the I-STEM ecosystem:

- Institute Heads (IN)
- Institute Representatives (IR)
- Department Representatives (DP)
- Faculty In-charges (FI)
- Facility Coordinators (FC)
- Equipment Operators / Technologists (OP)
- Public Users / Researchers (PU)





3. QUICK START GUIDE (VISUAL SUMMARY)

Purpose:

This handbook serves as a comprehensive reference guide for operating, managing, and navigating the I-STEM Portal. It is designed for all user roles, including Institute Heads (IN), Institute Representatives (IR), Department Representatives (DP), Faculty In-charges (FI), Facility Coordinators (FC), Equipment Operators (OP), and Public Users/Researchers (PU).

How to use:



Setup departments facilities, equipment and custodian accounts including operator.



Allocate the slot, execute
Facility Booking Record
(FBR*), and provide
feedback.



Register, search equipment, book the equipment slot, and provide feedback.

Facility Booking Record (FBR) is a unique 10-digit number generated when a user places an equipment slot booking request.

Core Workflow (All Roles):







4. ABOUT I-STEM

The Indian Science, Technology, and Engineering facilities Map (I-STEM) is a national initiative supported by the Office of the Principal Scientific Adviser, Government of India. It aims to democratize access to publicly funded R&D equipment, foster collaboration, and accelerate India's journey toward becoming a global scientific leader.

4.1. Vision

To establish India as a global leader in equitable scientific innovation by democratizing access to advanced research infrastructure and fostering a dynamic R&D ecosystem that seamlessly connects academia, industry, and grassroots innovators.

4.2 Mission

To transform India's scientific landscape through a unified digital platform that promotes transparency, inclusivity, and accountability while ensuring the optimal utilization of publicly funded research facilities—driving self-reliance (Atmanirbhar Bharat) and strengthening India's global innovation footprint.

4.3 Strategic Objectives

4.3.1 Universal Access & Resource Optimization

- Double the number of publicly funded R&D equipment listed on I-STEM by 2026.
- Ensure at least one functional research facility within 250 km in 100+ districts by 2026.

4.3.2. Accountability-Driven Excellence

- Maintain 80%+ booking completion rates.
- Ensure response times under 48 hours for Gold-tier institutions by 2026.

4.3.3 Industry-Startup Empowerment

- Allocate at least 30% of lab time to external users (startups/MSMEs).
- Double industry participation in bookings by 2026.

4.3.4 User-Centric Digital Transformation

Achieve 95% user satisfaction through seamless booking workflows and dedicated support.

5. INSTITUTIONAL SETUP & ROLES

Institutional Role Flow









>











Institute Heads (IN)

Institute Representatives (IR)

Department Representatives (DP)

Faculty In-charges (FI)

Facility Coordinators (FC)

Equipment Operators (OP)





Roles defined in the I-STEM Portal:

Role	Definition					
IN	Institute Head					
IR	Institute Representative					
DP	Department Representative					
FI	Faculty In-Charge					
FC	Faculty Coordinator					
ОР	Operator / Technologist					
PU	Public User / Researcher					

Roles and Responsibilities

Action	IN	IR	DP	FI	FC	ОР
Update Institution Profile and Digital Signature & Logo Upload	✓	√	X	X	X	X
Creation of Department & Department Representative account	√	√	X	X	X	X
Creation of Faculty In-charge account & Facility	✓	✓	✓	X	X	X
Creation of Facility Coordinator account	✓	√	√	√	X	X
Creation of Operator account	✓	✓	✓	✓	✓	X
Equipment Upload	✓	✓	✓	√	✓	X
Equipment Profile Update	✓	✓	√	√	✓	X
Update Equipment Usage Rate	✓	✓	✓	✓	✓	✓
Operator assignment/Un-assignment to Equipment	✓	✓	✓	✓	✓	X
Status of Equipment (Up/Down) Update	✓	✓	✓	✓	✓	✓
Action on FBR if its status is Pending/Slot Allocated/Executed/Rejected	√	√	✓	√	✓	√
Feedback	√	√	√	√	✓	√





5.1 Institution Registration on I-STEM Portal

(This section is for institutions that are not yet registered on the I-STEM Portal.)

Any institution with publicly funded research equipment costing Rs. 20 Lakh and above must be registered, and the equipment must be listed on the I-STEM portal. Public users can request time slots on this equipment for their R&D work, on a payment basis.

An institution may also register on the I-STEM portal if it has research equipment, even if not funded by a government agency. Such institutions can generate revenue by sharing their equipment.

To register the institution:

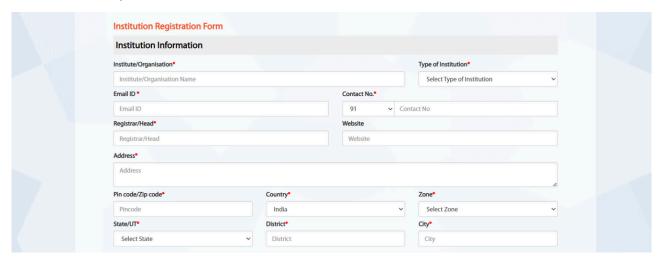
Step 1: Visit the I-STEM portal at www.istem.gov.in, and select the **Register** link at the top-right of the Home page.



Step 2: Select the Institution/Resources Registration link.



Step 3: Fill the Institution Information, and provide the Head of the institution (Registrar, Director, Vice-Chancellor, Principal, etc.) Email ID.

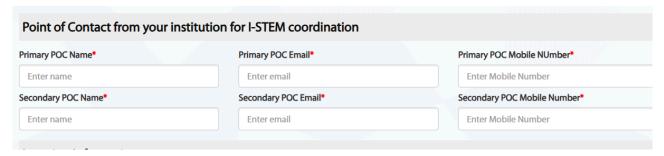






After approval of the institution's registration request by the I-STEM Nodal Centre, the Institute Head (IN) will receive the login credentials to that Email ID.

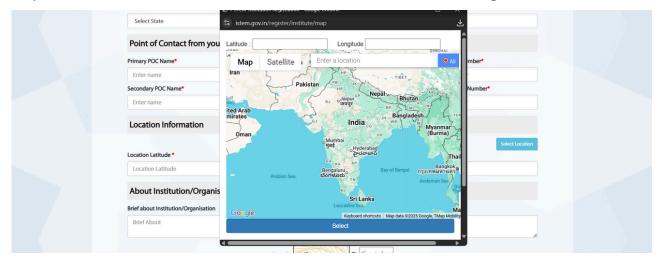
Step 4: Assign Point of Contact (POC) and provide their Name, Email ID, and Mobile Number. No account will be created for the POC, and login credentials will not be shared with them.



Step 5: In the Location Information section, click **Select Location**.

Location Information		
		Select Location
Location Latitude *	Location Longitude *	
Location Latitude	Location Longitude	

Step 6: Enter the institution name, and then click **Select**. The Latitude and Longitude will be auto-filled.



Step 7: Enter the Captcha and click Submit.



Note: The Institution Registration request will be reviewed by the I-STEM Nodal Centre, and necessary action will be taken. After approval, the Institute Head (IN) will receive the login credentials to their registered Email ID.





5.2 Step-by-Step Role Creation on I-STEM Portal

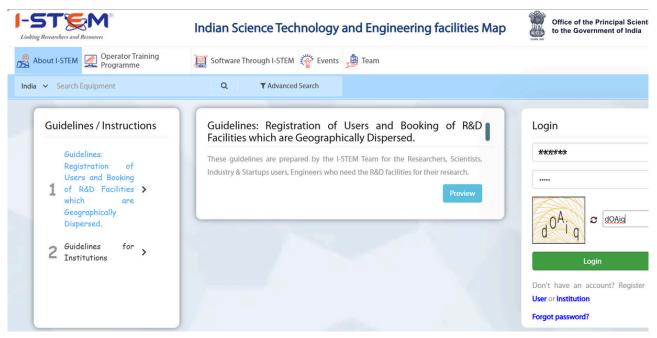
5.2.1 Institute Head (IN)

- Typically assigned during institution registration and not created manually.
- The IN is the head of the institution (Registrar, Director, Vice-Chancellor, Principal, etc.).
- Next Steps: IN logs in first and authorizes other roles (IR).

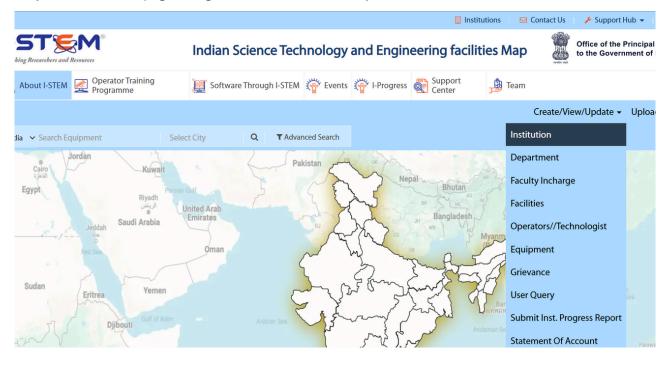
5.2.2. Institute Representative (IR)

To create an Institute Representative (IR) account:

Step 1: Login to the I-STEM portal using IN account.



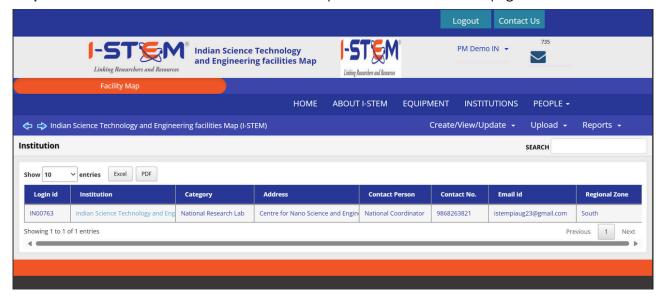
Step 2: On the home page, navigate to the Create/View/Update menu and select Institution.



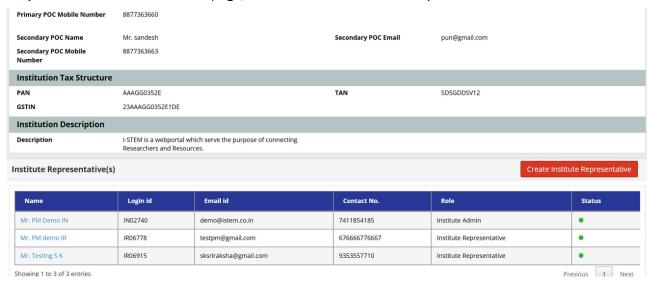




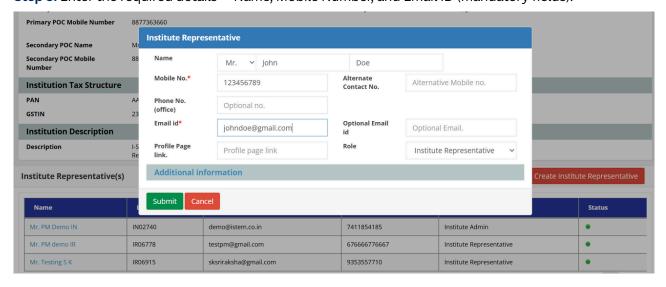
Step 3: Select the Institution Name in the table to open the Institution Details page.



Step 4: On the Institution Details page, select the Create Institute Representative button.



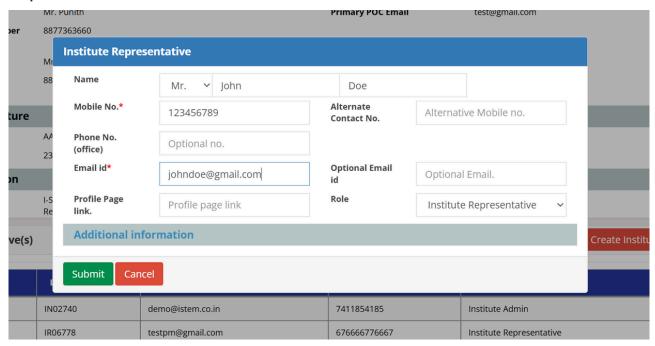
Step 5: Enter the required details — Name, Mobile Number, and Email ID (mandatory fields).







Step 6: Select the Submit button.



Institute Representative account will be created, and login credentials will be sent to the registered Email ID.

5.2.3 Department Creation

The department must be created before creating the Department Representative account. To create a Department

Step 1: Visit the I-STEM portal at www.istem.gov.in.

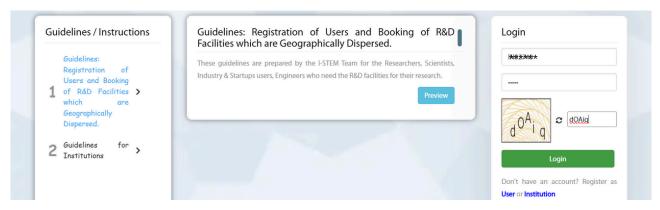


Step 2: Select the Login link at the top-right of the Home page.





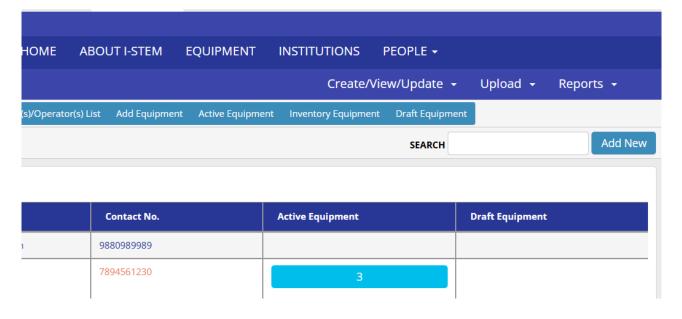
Step 3: Login to the I-STEM portal using IN/IR account.



Step 4: From the home page, navigate to the Create/View/Update menu and select Department.



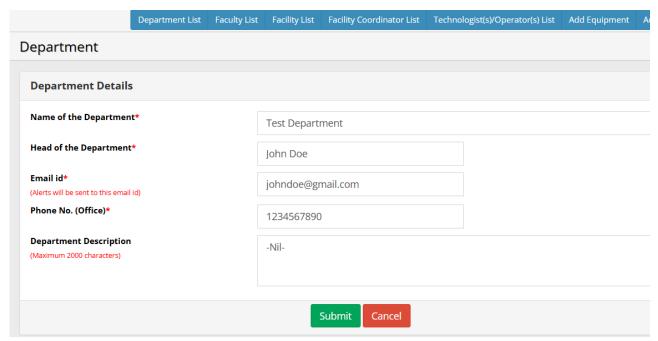
Step 5: On the department page, select Add New.







Step 6: Enter the Department Details and click Submit.



The department will be created and added to the Department List. No login credentials will be generated for this entry.

5.2.4 Department Representative (DP)

To create a Department Representative (DP) account:

Step 1: Login to the I-STEM portal using IN/IR account.



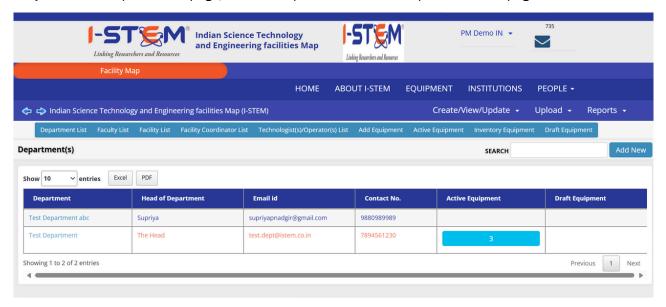
Step 2: From the home page, navigate to the **Create/View/Update** menu and select **Department**. You will be redirected to the department page.



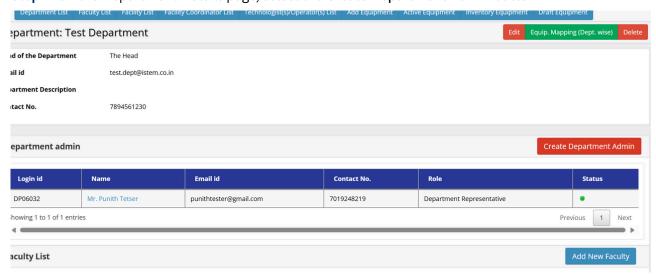




Step 3: On the Departments page, select a Department Name to open its details page.



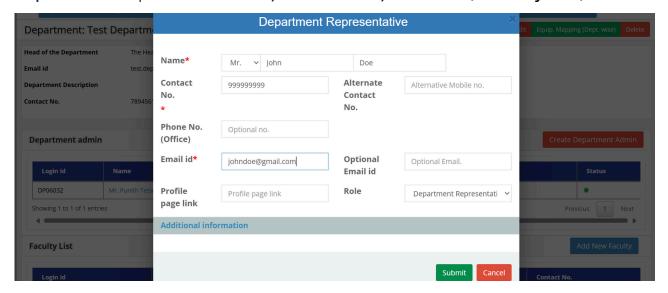
Step 4: On the Department Details page, select the Create Department Admin button.



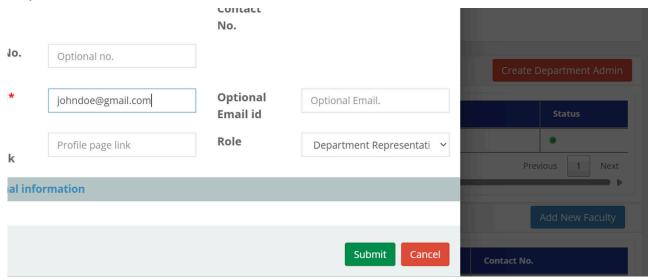




Step 5: Enter the required details - Name, Contact Number, and Email ID (mandatory fields).



Step 6: Select the Submit button.



Department Representative account will be created, and login credentials will be sent to the registered Email ID.

5.2.5. Faculty In-Charge (FI)

To create a Faculty In-Charge (FI) account:

Step 1: Login to the I-STEM portal using IN/IR/DP account.



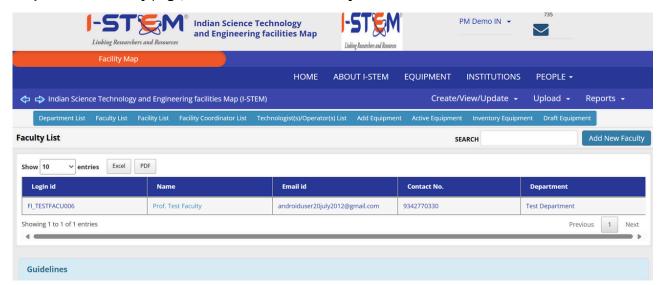




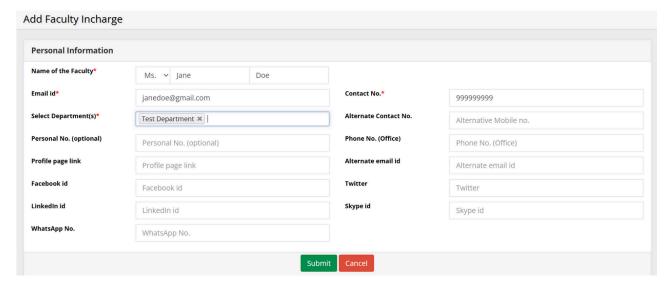
Step 2: From the home page, navigate to the **Create/View/Update** menu and select **Faculty In-Charge**. You will be redirected to the Faculty page.



Step 3: On the Faculty page, select the Add New Faculty button.



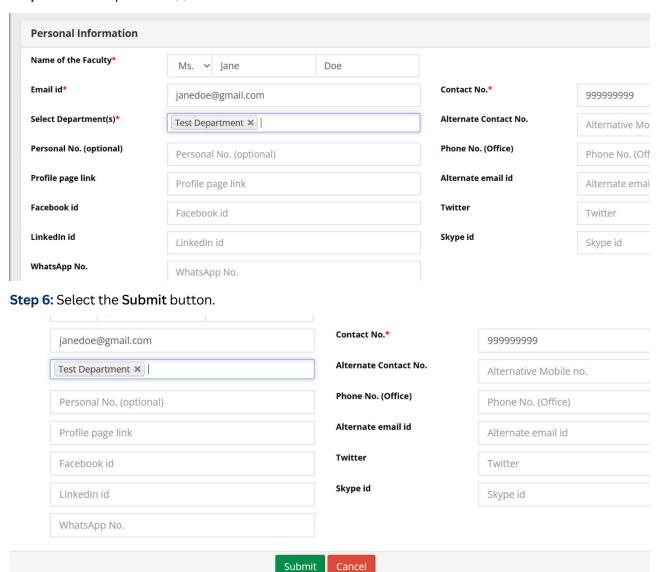
Step 4: Complete all mandatory details, including Name, Email ID, and Contact Number.







Step 5: Select Department(s).



Faculty In-Charge account will be created and Login credentials will be sent to the registered Email ID.

5.2.6 Facility Creation

The Facility must be created before creating the Facility Coordinator (FC) Account.

Step 1: Visit the I-STEM portal at www.istem.gov.in.



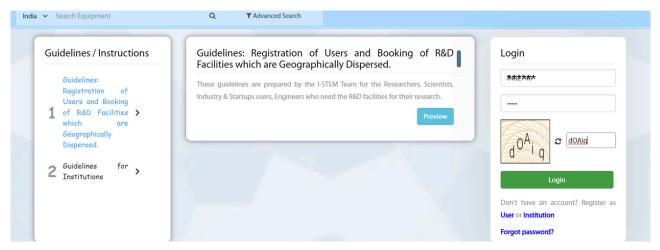




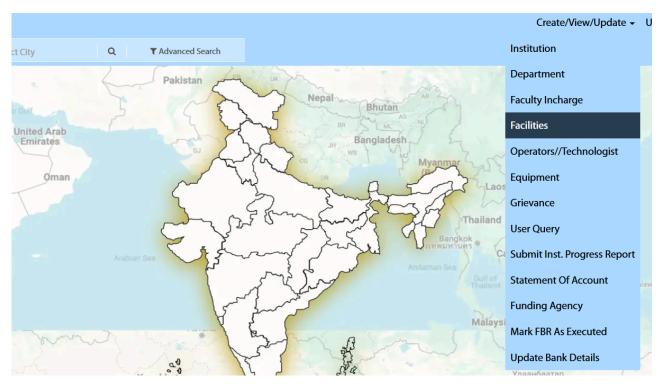
Step 2: Select the Login link at the top-right of the Home page.



Step 3: Login to the I-STEM portal using IN/IR account.



Step 4: From the home page, navigate to the **Create/View/Update** menu and select **Facilities** to navigate to the **Facilities page**



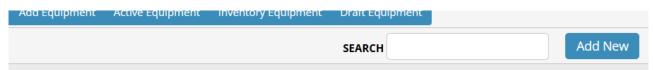




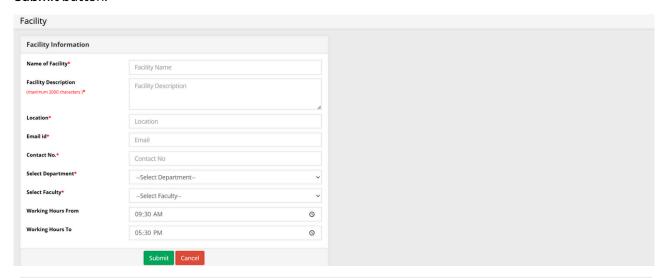
Step 5: In the third-level menu, click Facility List

Department List Faculty List Facility List Facility Coordinator List Technologist(s)/0

Step 6: Select Add New.



Step 7: Enter the **Facility Information** (mandatory fields are marked with a red asterisk *), and click the **Submit** button.



Note: DP can create a Facility by following steps

Login ---> Create/View/Update ---> Faculty Incharge ---> Select the Faculty Incharge name --->

Create New Facility ---> Enter Facility information and Submit.

The facility will be created and added to the facility List. No login credentials will be generated for this entry.

5.2.7. Facility Coordinator (FC)

To create a Facility Coordinator (FC) account:

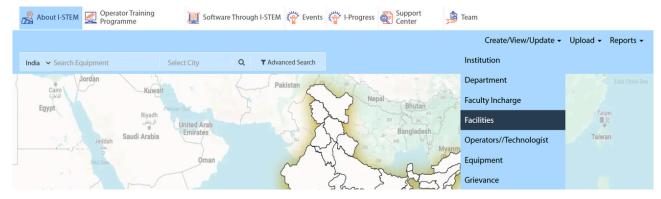
Step 1: Login to the I-STEM portal using IN/IR/DP/FI account.







Step 2: From the home page, navigate to the Create/View/Update menu and select Facilities.



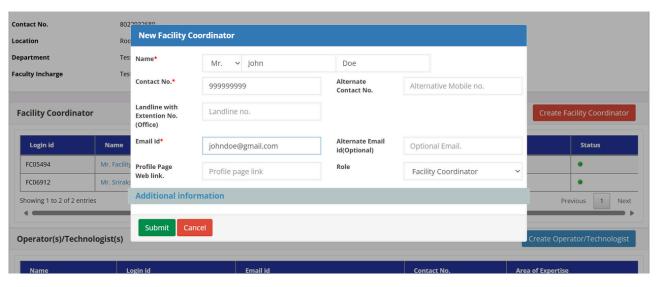
Step 3: You will be redirected to the Facilities page. Select the Facility Name.



Step 4: Select the **Create Facility Coordinator** button.



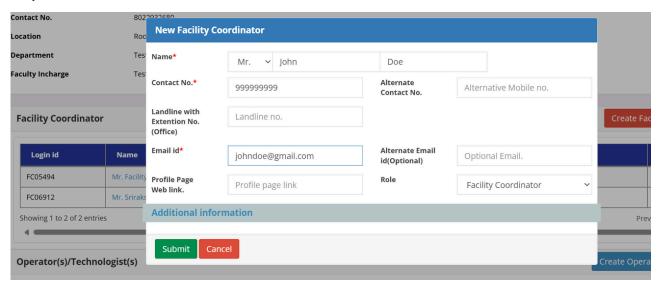
Step 5: Fill in at least the mandatory details: Name, Mobile No., and Email Id.







Step 6: Select the Submit button.

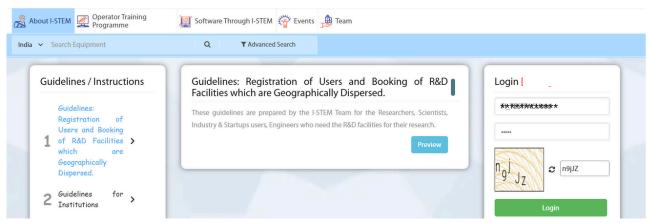


A Facility Coordinator account will be created, and login credentials will be sent to the registered Email Id.

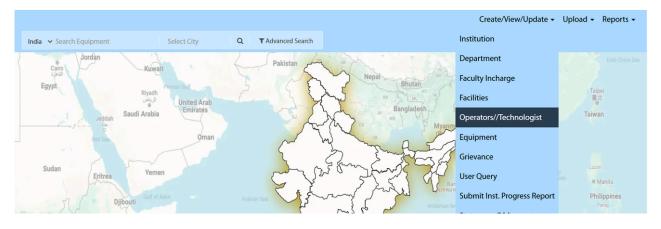
5.2.8. Operator / Technologist (OP)

To create an Operator (OP) account:

Step 1: Login to the I-STEM portal using IN/IR/DP/FI/FC account.



Step 2: From the home page, navigate to the **Create/View/Update** menu and select **Operators/Technologists**. You will be redirected to the Operators page.



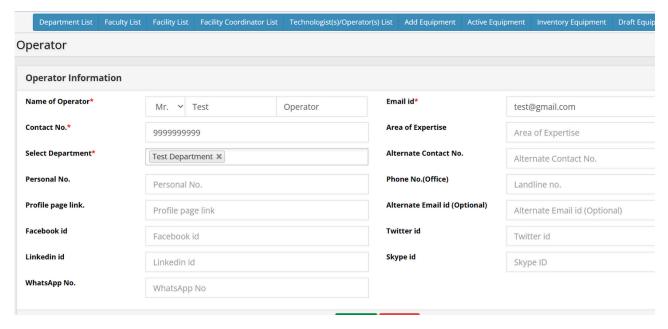




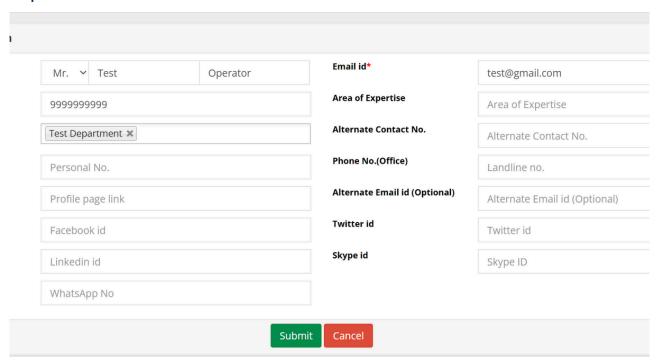
Step 3: Select the Add New button.



Step 4: Fill in the **Operator Information** (mandatory fields are marked with a red asterisk *).



Step 5: Select the Submit button.



An **Equipment Operator** account will be created, and login credentials will be sent to the registered Email Id.





6. EQUIPMENT MANAGEMENT

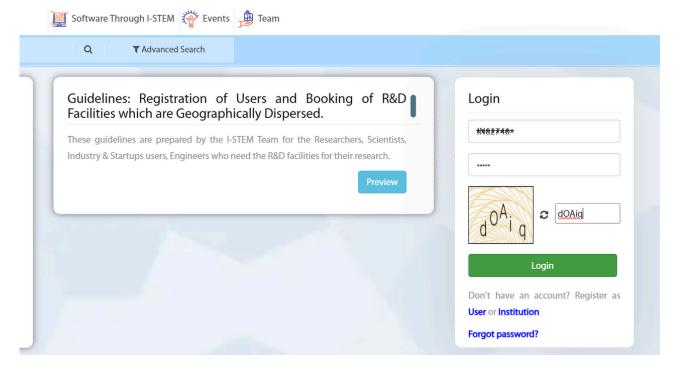
All equipment funded by a government agency(ies) and costing Rs. 20 lakh or more must be listed on the I-STEM portal. Public users can request time slots on such equipment for their R&D activities on a payment basis. Equipment not funded by a government agency can also be listed on the I-STEM portal, enabling institutions to generate revenue by sharing access to it.

6.1. Enlisting of Equipment

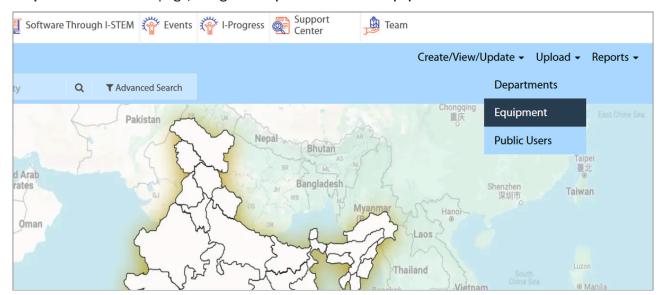
Equipment can be listed by all institutional custodians except the Equipment Operator. Listings can be added individually or through a bulk upload process.

6.1.1 Adding Individual Equipment

Step 1: Login to the I-STEM portal using IN/IR/DP/FI/FC account.



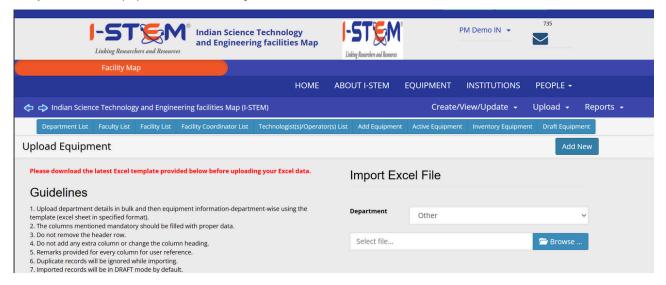
Step 2: From the home page, navigate to **Upload** and select **Equipment**.



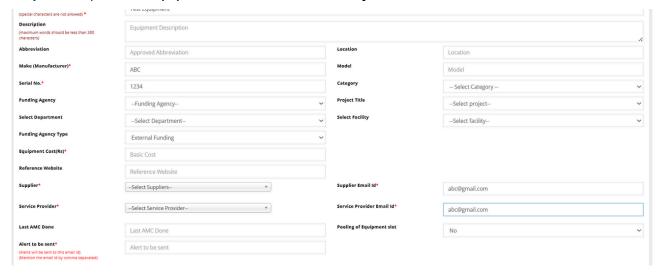




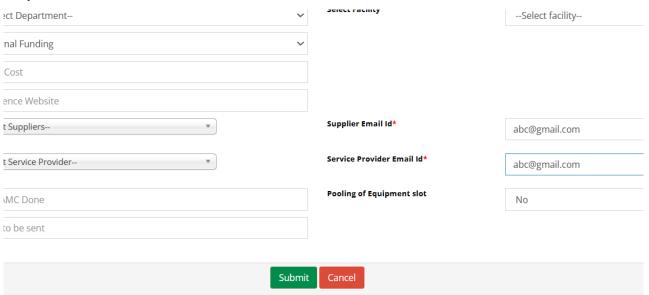
Step 3: To add equipment individually, click Add New.



Step 4: Complete the Equipment Information (mandatory fields are marked with a red asterisk *).



Step 5: Select the **Submit** button.



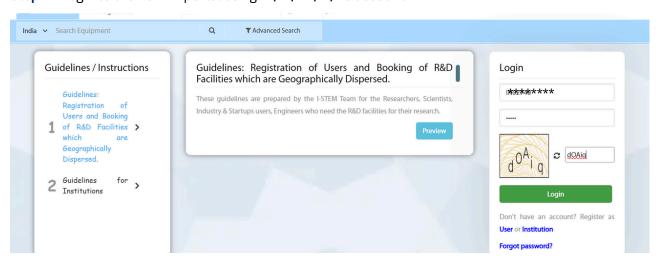




Note: The equipment will be uploaded as **Under Review** and appear under the **Draft Equipment** section in the third-level menu.

6.1.2 Bulk Upload Using Excel

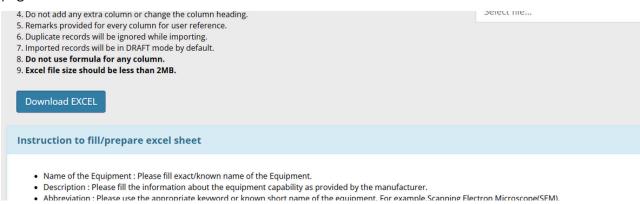
Step 1: Login to the I-STEM portal using IN/IR/DP/FI/FC account.



Step 2: On the Home page, navigate to **Upload**, and select **Equipment**.



Step 3: To add multiple equipment items using bulk upload, select **Download Excel** on the **Equipment** page.

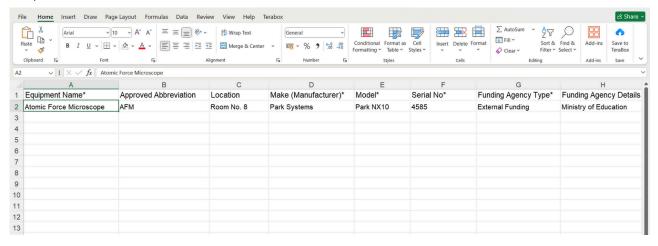




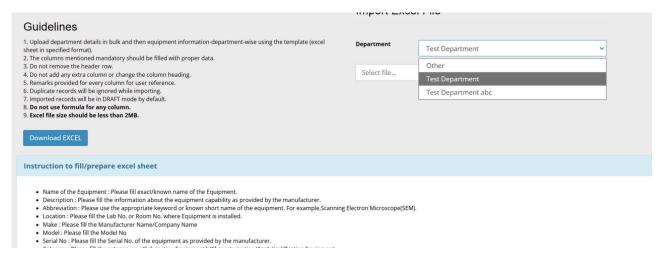


Step 4: Fill in the required details in the downloaded Excel.

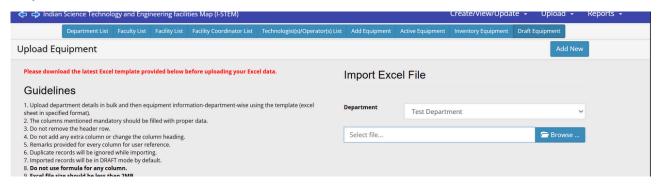
(sample data)



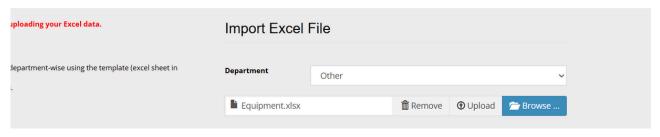
Step 5: Select the appropriate **Department** from the drop-down list.



Step 6: Click **Browse** to choose the file.



Step 7: Click Upload.







Note: The equipment will be uploaded as Under Review and appear under the **Draft Equipment** section in the third-level menu.

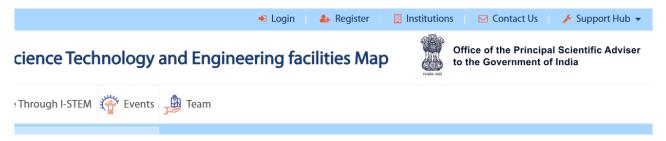
- The I-STEM Nodal Centre will review and approve the equipment. Once approved, the equipment will move to the **Active Equipment section** in the third-level menu.
- Only Active Equipment will appear in the Equipment Search Results and be available for Equipment Slot Booking.

6.2 Updating Equipment Usage Rate

Step 1: Visit the I-STEM portal at www.istem.gov.in.



Step 2: Select the Login link at the top-right of the Home page.



Step 3: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.







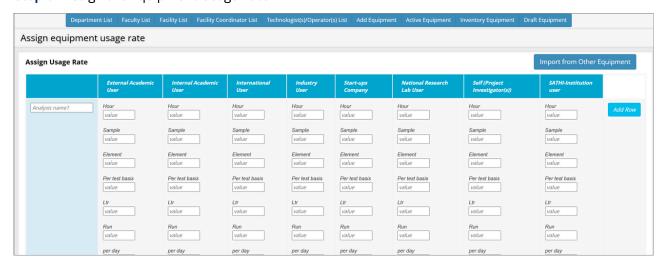
Step 4 : From the home page, navigate to the **Create/View/Update** menu and select **Equipment** to access the **Equipment – Approved** page.



Step 5: Select the **Assign Usage Rate** link under the Actions column.



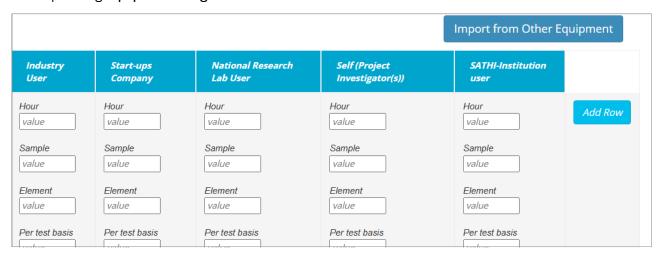
Step 6: Assign the Equipment Usage Rate.



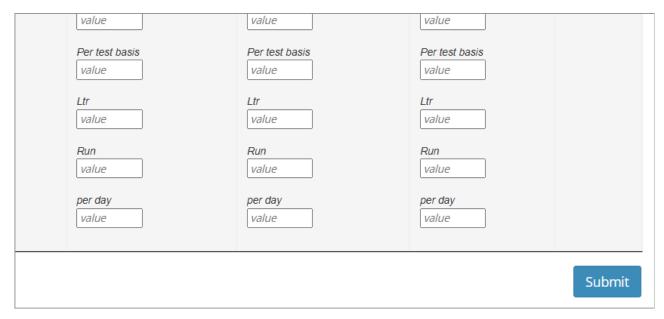




Step 7: If multiple **Analysis Types** apply, select **Add Row** to include each type, and assign the corresponding **Equipment Usage Rate**.



Step 8: Select Submit. The Equipment Usage Rate will be updated accordingly.



6.3 Updating Equipment Profile

Step 1: Visit the I-STEM portal at www.istem.gov.in.



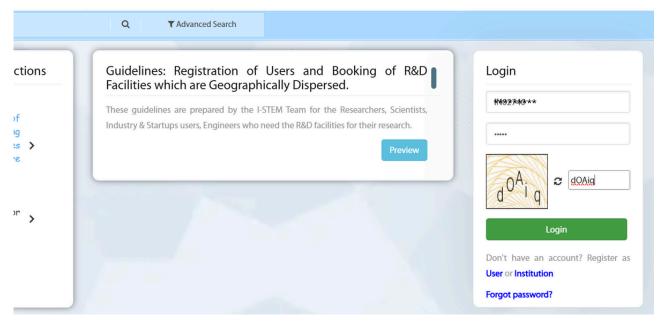




Step 2: Select the Login link at the top-right of the Home page.



Step 3: Login to the I-STEM portal using IN/IR/DP/FI/FC account.



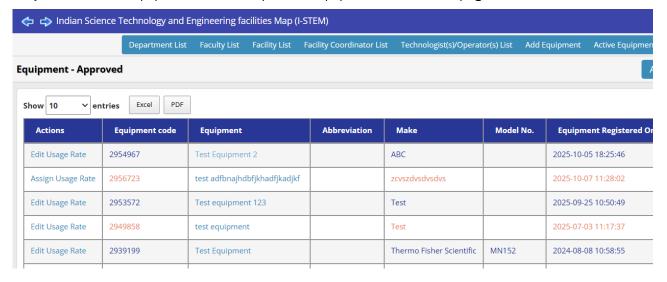
Step 4 : From the home page, navigate to the **Create/View/Update** menu and select **Equipment** to open the Equipment – Approved page.



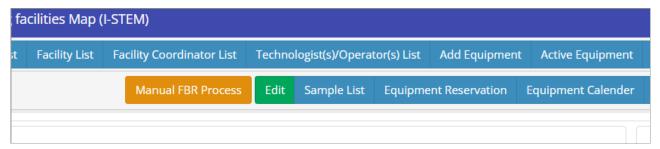




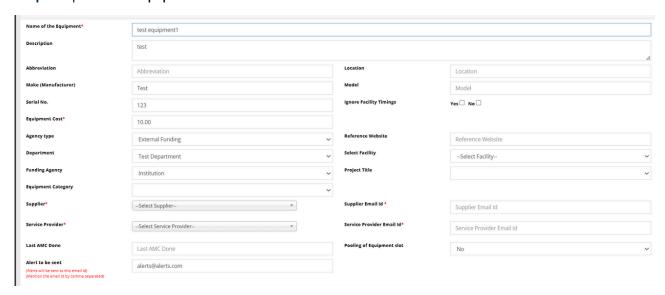
Step 5: Select the Equipment Name to open the Equipment Information page.



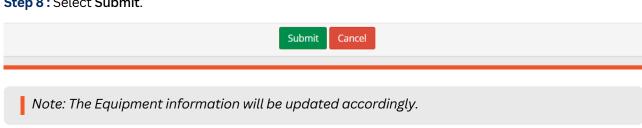
Step 6: Select Edit.



Step 7: Update the **Equipment Information** as needed.



Step 8: Select Submit.







6.4 Maintaining Equipment Calendar

Institute custodian may block particular slots/full day for maintenance, calibration, etc. User may not be allowed to book those slot(s).

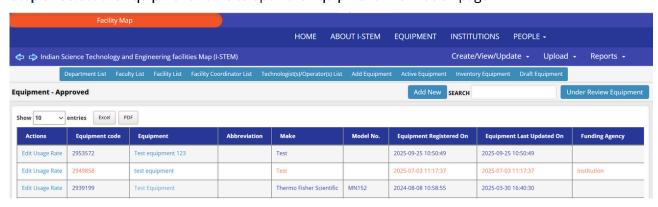
Step 1: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.



Step 2 : On the home page, navigate to the **Create/View/Update** menu and select Equipment. This will go to the **Equipment – Approved** page.



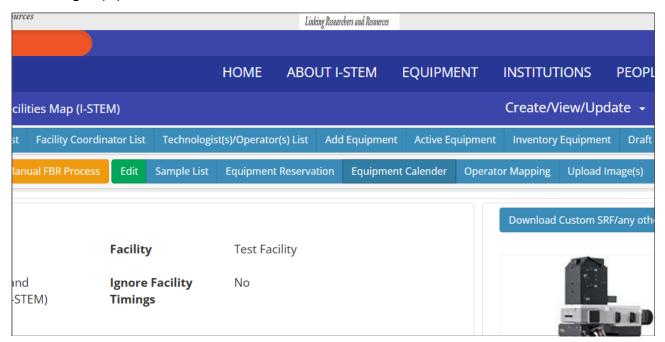
Step 3: Select the Equipment Name to open the Equipment Information page.







Step 4: From the third-level menu bar, select **Equipment Calendar**. On the **Calendar** page, you can view and manage equipment schedules.



To block the equipment for a specific time:

- Click on the desired date.
- Select the required time slots.
- Provide a reason.
- Click Submit.

To block the equipment for an entire day:

- Choose Full Day Blocking.
- Enter the reason.
- Click Submit.

Note: During the blocked period, public users will not be able to place booking requests.

6.5 Customized Service Request Form (CSRF)

Purpose:

The Customized Service Request Form (CSRF) collects detailed information about a user's specimens and other relevant parameters prior to testing or measurement with specific equipment. This process ensures accuracy and efficiency in testing.

Note: The Customized Service Request Form (CSRF) is required only when additional details are necessary for testing or measurement with specific equipment.

Procedure:

1. CSRF Upload: After adding the equipment, the **Institute Custodian** can upload the CSRF to the I-STEM Portal. The CSRF format may vary depending on the equipment, as no standard format is defined; it is determined by the Institute Custodian.





Below is the sample CSRF format

Analysis Details										
User category * No. of samples * Research Area										
Type of analysis *										
Excitation spe	ectrum E	mission sp	ectrum	Li	fetime L	Quantum Y	Yield EE	M		
Sample Description *										
Sl.No Sample	Tve	pe of Analysis	÷		Excitation	Emission	Excitation and			
ID Emis		Quantum Yield	EEM	Lifetime (TCSPC)	Wavelength for QY/Emissio n analysis	Wavelength For TCSPC/Emission range for QY ²	emission range for EEM±	Sample specification/ any other specifications		
1										
3										
4										
5										
7										
8										
Kindly note the fo	llowing while s	ubmittin	ig the sai	mples*:						
1. For QY measurements of liquid samples keep absorbance 0.1 at excitation wavelength. An absorption wavelength to the blue side of absorption maximum is preferred. Kindly provide the blank solution also.										
 Submitted samples will be discarded after communicating the reports. If the remnant samples are required, the same should be intimated during sample submission. 										
	3. Sample amount required:-									
(a) Solid: 40-50mg										
(b) Liquid: 4ml										
Acknowledgment Details*										

2. CSRF Submission: When required, users must download, complete, and submit the CSRF while booking the equipment slot.

6.6 Assign/Unassign Operators to Equipment

Step 1: Login to the I-STEM portal using IN/IR/DP/FI/FC account.







Step 2: On the home page, navigate to the **Create/View/Update** menu and select **Equipment**. This will go to the **Equipment – Approved** page.



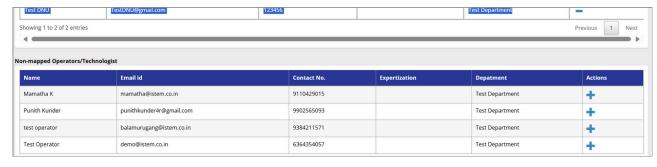
Step 3: Select the Equipment Name to open the Equipment Information page.



Step 4: From the third-level menu bar, select **Operator Mapping**.



Step 5: Click the "+" icon to assign an operator under the Non-mapped Operators/Technologist section.







Click the "-" icon to unassign an operator in mapped Operators/Technologist section.



Only the assigned operator(s) will receive email notifications for equipment slot bookings and will have permission to allocate, reschedule, reject, and execute the requests.

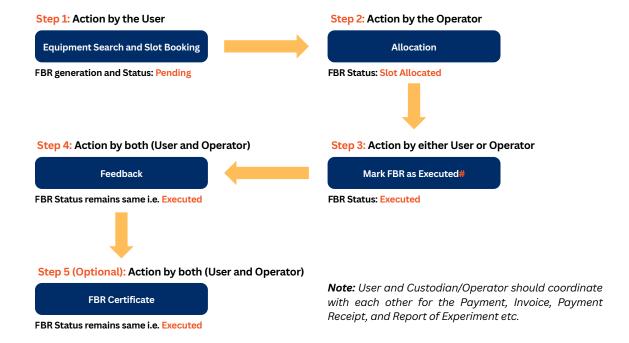
I-STEM Portal Roles - Glossary

Role	Short Definition	Key Responsibilities
Institute Head (IN)	Highest-level authority of the institution on I-STEM.	Authorize IRs and oversee analytics.
Institute Representative (IR)	Main administrator appointed by the IN to manage institution operations. Primary Point of contact.	Update institute details, create departments, facilities, and custodian accounts.
Department Representative (DP)	Department-level administrator managing facilities and bookings.	Manage departmental facilities, approve departmental bookings, assist in creating FI accounts, ensure data accuracy.
Faculty In-Charge (FI)	Faculty member overseeing specific facilities within a department.	Create and manage facilities, assign Facility Coordinators, update equipment details and monitor facility usage.
Facility Coordinator (FC)	Operational manager of a facility.	Assign Operators to equipment, manage facility operations, update equipment calendar, handle user queries.
Operator / Technologist (OP)	Hands-on custodian responsible for executing bookings and operating equipment.	Allocate/Reject/Execute FBR, perform experiments/tests, manage equipment calendar, handle user queries.





7. FACILITY BOOKING RECORD (FBR*) LIFECYCLE



^{*} Facility Booking Record (FBR) is a unique 10-digit number generated when a user places an equipment slot booking request.

Step-by-Step Process:

Step No.	Action By	Action	FBR- Status Update
1	Public User	Submit an equipment slot booking request	Pending
2	Custodian/Operator	Allocate the slot to the user	Slot Allocated
3	Either Public User or Custodian/Operator	Mark the booking request as completed (FBR Executed)	FBR Executed
4	Public User	Download the FBR certificate	FBR Executed
5	Both Public User and Custodian/Operator	Provide feedback to improve the process	FBR Executed

Note: Custodian/Operator and User should coordinate with each other for Payment, Invoice, Payment Receipt, and Experiment Report (result of the work) if any.

[#] Mark FBR as Executed option will be available after the FBR exceeds the allocated for date.





7.1. FBR Status: Pending

Action: Allocate, Reject

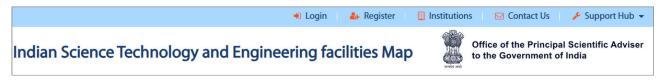
When a user submits an equipment slot booking request, a Facility Booking Request (FBR) is generated with the status set to Pending. At this stage, the Operator can either allocate or reject the request.

Steps to take action on a Pending FBR:

Step 1: Visit the I-STEM portal.



Step 2: Select the Login link at the top-right.



Step 3: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.



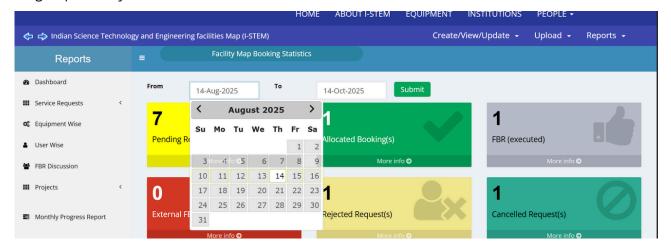
Step 4: On the home page, navigate to the **Reports** menu and select **Dashboard**.



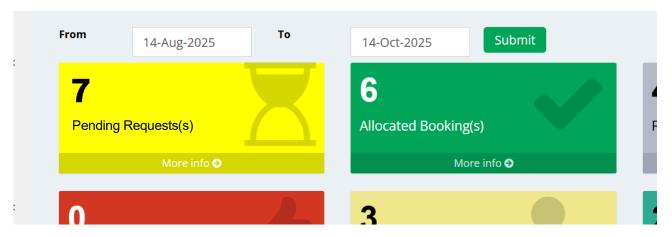




Step 5: By default, last one month data is displayed. To view other records, select the desired date range (up to one year) and choose **Submit**.



Step 6: Select More Info under Pending Request(s).



Step 7: Find the required FBR and select Action.



Step 8: Choose either Allocate or Reject.







To Allocate a Slot:

- Step 1: Select Allocate. A pop-up window will appear.
- Step 2: Verify Personal Information and Preferred Booking Details.
- **Step 3:** (Optional) Modify the **User Type** or adjust the **booking date/time**. The **Estimated Grand Total** will update automatically.
- Step 4: Select Allocate to confirm the booking.

To Reject a Slot:

- Step 1: Select Reject. A pop-up window will appear.
- Step 2: Select a reason from the dropdown.
- Step 3: Select Reject to confirm.

Note: A Rejected FBR can be reopened by rescheduling. A Cancelled FBR (cancelled by the user) cannot be reopened.

7.2. FBR Status: Slot Allocated

Action: Reschedule, Mark FBR as Executed, or Reject

If the FBR status is **Slot Allocated**, the Operator can choose to **Reschedule**, **Mark FBR as Executed**, or **Reject** the booking.

Steps to take action:

Step 1: Visit the I-STEM portal.



Step 2: Select the **Login** link at the top-right of the **Home** page.







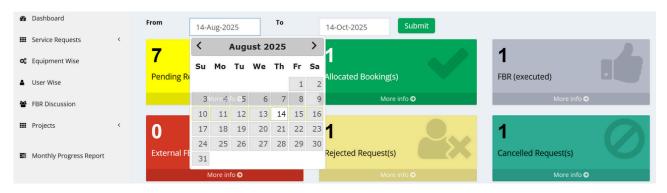
Step 3: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.



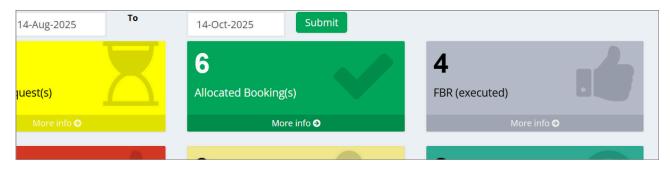
Step 4: On the home page, navigate to the **Reports** menu and select **Dashboard**.



Step 5: By default, last one month data is displayed. Set the desired date range (upto one year) and select **Submit.**



Step 6: Select More Info under Allocated Booking(s).



Step 7: Search for the required **FBR** and select **Action**.

From Date of Confirmation	To Date of Confirmation	Remarks	Allocated by	Manual FBR Entry	Actions
9-Sep-2025 10:00	09-Sep-2025 14:00	Test remarks	IN02740	Manual FBR Entry	B
3-Oct-2025 09:00	13-Oct-2025 10:00		IN02740	Manual FBR Entry	(
)-Aug-2025 09:00	30-Aug-2025 10:00		SB00777	Manual FBR Entry	3
-Sep-2025 16:15	11-Sep-2025 17:15		OP_TESTOPER003	Manual FBR Entry	3
	I-Sep-2025 10:00 I-Oct-2025 09:00 I-Aug-2025 09:00	-Sep-2025 10:00 09-Sep-2025 14:00 J-Oct-2025 09:00 13-Oct-2025 10:00 J-Aug-2025 09:00 30-Aug-2025 10:00	-Sep-2025 10:00 09-Sep-2025 14:00 Test remarks 3-Oct-2025 09:00 13-Oct-2025 10:00 30-Aug-2025 09:00 30-Aug-2025 10:00	IN02740 I-Oct-2025 09:00 09-Sep-2025 14:00 Test remarks IN02740 IN02740 IN02740 IN02740 IN02740 IN02777	1-Sep-2025 10:00 09-Sep-2025 14:00 Test remarks IN02740 Manual FBR Entry 1-Oct-2025 09:00 13-Oct-2025 10:00 IN02740 Manual FBR Entry 1-Aug-2025 09:00 30-Aug-2025 10:00 SB00777 Manual FBR Entry

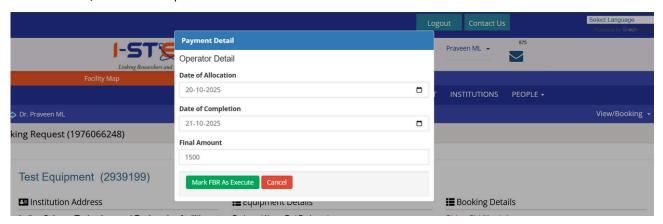




Step 8: Choose one of the following options: Reschedule, Mark FBR as Executed, or Reject.

Mark FBR As Executed Reschedule Reject

Step 9: Click **Mark FBR as Executed** button available on top right, on the pop-up page provide the Date of Allocation, Date of Completion and Final Amount(in Rs.) and then click **Mark FBR as Executed** button.



Note: The Mark FBR as Executed action can be performed by either the Public User or the Operator. This option becomes available from the allocated date and remains accessible until the execution is completed.

7.3. FBR Status: Executed

Action: Submit Feedback, Download FBR Certificate

Once an FBR is marked as Executed, feedback can be submitted once by any Custodian, including the Operator. The FBR Certificate can also be downloaded at this stage.

Steps to take action:

Step 1: Visit the I-STEM portal.



Step 2: Select the Login link at the top-right.







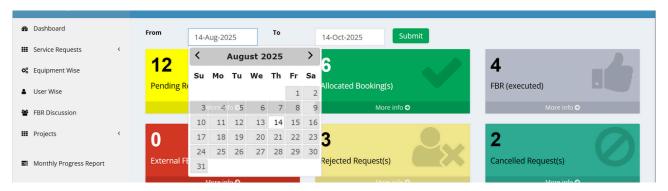
Step 3: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.



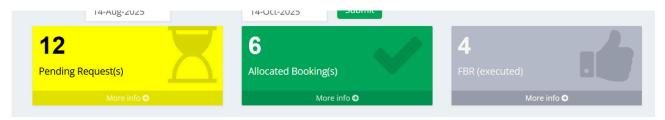
Step 4: On the home page, navigate to the Reports menu and select Dashboard.



Step 5: By default, last one month data is displayed. Set the desired date range (upto one year) and select **Submit**.



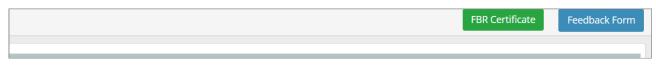
Step 6: Select More Info under FBR (Executed).

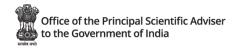


Step 7: Locate the required FBR and select Action.



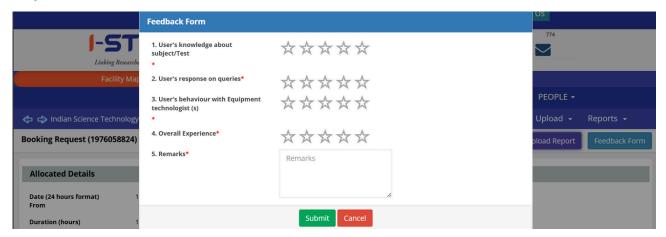
Step 8: Select Feedback Form.



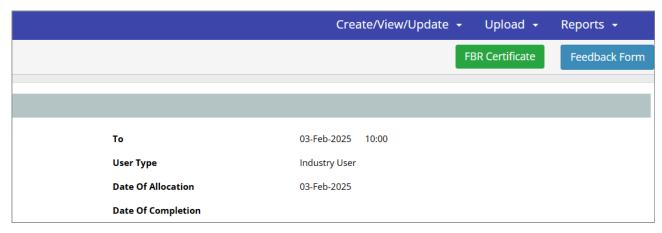




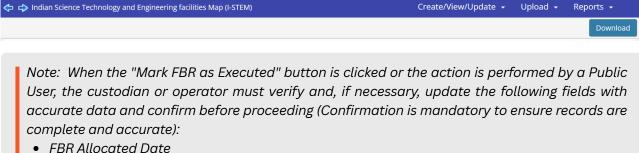
Step 9: Submit the feedback.



Step 10: Select FBR Certificate to view the certificate.



Step 11: Select **Download** to save the certificate as a PDF file.



- FBR Executed Date
- **Grand Total Amount**

7.4. FBR Status: Rejected

Action: Reschedule

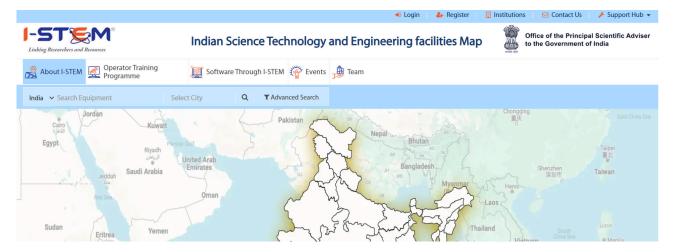
If a booking is rejected by the Operator, the FBR status changes to Rejected. Rejected FBRs can be rescheduled by the Operator.

Steps to take action:

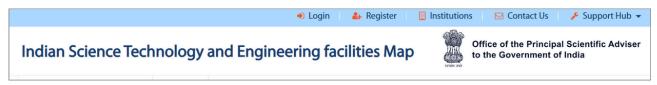
Step 1: Visit the I-STEM portal.







Step 2: Select the Login link at the top-right of the Home page.



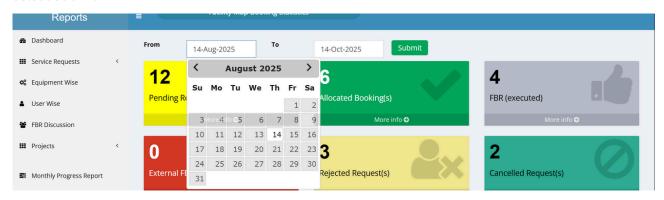
Step 3: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.



Step 4: On the home page, navigate to the **Reports** menu and select **Dashboard**.



Step 5: By default, last one month data is displayed. Set the desired date range (upto one year) and select Submit.







Step 6: Select More Info under Rejected Request(s).



Step 7: Locate the required FBR and select Action.

Date of Equip Reservation	Remarks	Reason for rejection	Date of rejection	From Date of Confirmation	To Date of Confirmation	edit
09-Jul-2025		This booking request is not feasible	06-Aug-2025			B
14-Aug-2025		Not feasible.	11-Sep-2025			Ø
24-Sep-2025		Operator Unavailability	23-Sep-2025			Ø
~	~			V	~	~

Step 8: Select Reschedule.



Note: A Rejected FBR can be reopened by rescheduling. A Cancelled FBR (cancelled by the user) cannot be reopened.

Step 9: Proceed with slot allocation.

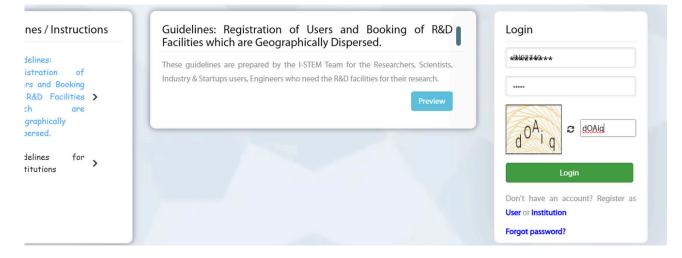
7.5. FBR Status: Cancelled

If a user cancels a booking request before allocation, the FBR status is updated to Cancelled.

Note: Cancelled FBRs cannot be reopened or acted upon by the user or any custodian.

To view Cancelled FBRs:

Step 1: Login to the I-STEM portal using IN/IR/DP/FI/FC/OP account.



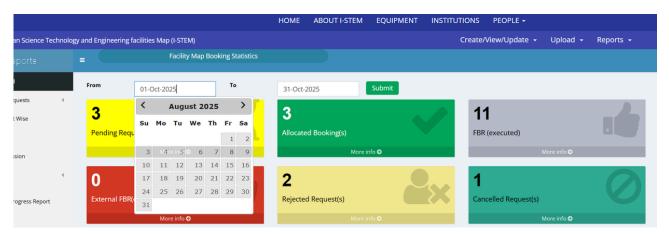




Step 2: On the home page, navigate to the Reports menu and select Dashboard



Step 3: By default, last one month data is displayed. Set the desired date range (upto one year) and select **Submit.**



Step 4: Click More Info under Cancelled Request(s).



8. PAYMENT & COMPLIANCE

8.1 Platform Role

I-STEM functions solely as a facilitation platform and does not act as a service provider. Its primary role is to enable access to research infrastructure and resources. The platform does not handle payments or financial transactions on behalf of institutions.





8.2 Objective of Update

To strengthen the I-STEM ecosystem and ensure full compliance with GST, TDS, and other statutory financial regulations, the payment and invoice management process has been revised. These updates clarify responsibilities, enhance institutional accountability, and promote efficient, compliant financial operations.

8.3 Key Updates and Recommendations

1. Facilitation-Focused Platform:

I-STEM will continue to operate solely as a **facilitation platform**. All payments and invoicing will be managed directly by the **host institutions**, ensuring they retain full financial control.

2. Institutional Ownership:

Institutions will manage **invoicing**, **GST/TDS compliance**, and all financial documentation independently, while I-STEM will continue to facilitate **resource sharing** and **collaborative access**.

3. Future-Ready Automation:

A new administrative panel will give institutions full control over equipment profiles and management processes. For institutions with their own portals, API integration will enable automated workflows to streamline operations.

4. Enhanced Visibility and Collaboration:

I-STEM will continue to enhance equipment visibility, facilitate connections among researchers, startups, and industry partners, and optimize utilization and revenue opportunities.

5. Upcoming Portal and Mobile Application:

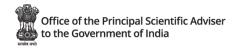
The upgraded I-STEM portal and mobile application, scheduled for deployment in 2026, will provide improved flexibility, efficiency, and scalability, ensuring a seamless experience for both institutions and users.

8.4 Expected Outcomes

- Simplified operational workflows for institutions.
- Strengthened institutional control and accountability.
- Enhanced compliance with statutory financial regulations.
- Improved user experience for researchers and operators.
- Sustained support from I-STEM while financial responsibility remains with institutions.

8.5 Implementation and Support

I-STEM will continue to provide guidance, documentation, and support to all partner institutions during this transition, ensuring smooth adoption of the updated processes and the continued advancement of the national research infrastructure ecosystem.





9. ISSUE HANDLING & CUSTOMER SUPPORT

Efficient issue resolution and timely support are essential for the seamless operation of the I-STEM portal. To ensure effective assistance, I-STEM utilizes a dedicated ticketing system (Freshdesk) and offers multiple support channels to address user needs at all levels.

9.1 Support Ticketing System (Freshdesk)

- All issues—whether technical (such as login problems or booking and slot allocation errors) or operational—must be reported through the I-STEM Freshdesk system.
- Each ticket is assigned a **unique reference number** to ensure proper tracking, accountability, and timely resolution.
- Users are advised to provide **complete details**, including screenshots or relevant documents, to enable faster and more accurate support.

9.2 Service Level Agreement (SLA) Timelines

To ensure predictable and reliable support, I-STEM follows the following resolution timelines:

- Critical Issues (1-2 working day): Portal inaccessibility, booking or slot allocation errors affecting users, or any urgent issue that prevents access to key portal functionalities.
- Normal Issues (3–5 working days): Requests such as role creation, profile updates, calendar corrections, and other non-critical operational matters.

9.3 Support Channels

Users may contact I-STEM support through the following channels:

- Toll-Free Helpline (1800 425 3281): Available during working hours for immediate assistance and quick clarifications.
- Email Support (<u>support@istem.co.in</u>): For detailed queries requiring attachments such as screenshots.
- Support Ticketing System (Freshdesk): The preferred channel for structured issue logging, tracking, resolution, and escalations.





10. PUBLIC USER/ RESEARCHER GUIDE

Public Users:

Researchers, scientists, and faculty members from science, technology, and engineering disciplines who require research equipment for their R&D activities. They can register on the I-STEM portal and submit requests to book listed equipment.



10.1 User Registration

Steps to register as a user on the I-STEM portal

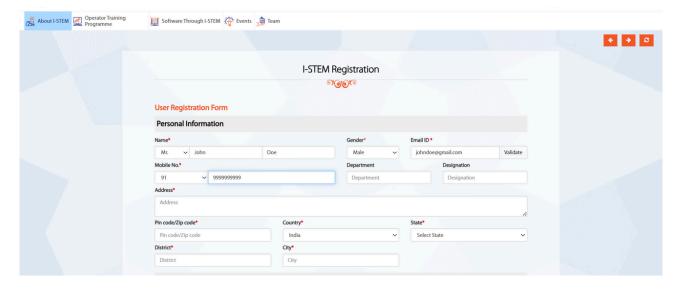
Step 1: Visit I-STEM portal at www.istem.gov.in and select the **Register** link at the top-right of the Home page.



Step 2: Select Researcher/User Registration.



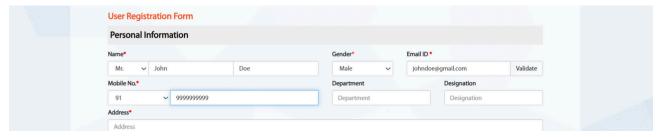
Step 3: Fill in all mandatory fields (marked with *).



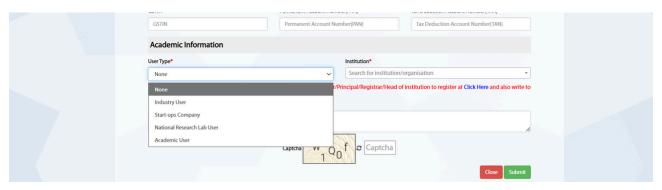




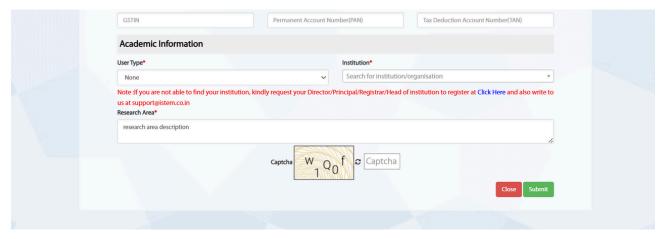
Step 4: Validate your Email ID and Mobile Number using the OTP.



Step 5: Under Academic Information, select your **User Type** and **Institution**. If your institution is not listed, choose **Other**.



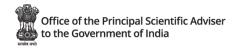
Step 6: Provide Research Area details.



Step 7: Enter the CAPTCHA (case-sensitive) and select Submit.



Users will receive their login credentials via email once the registration request is approved by the I-STEM Nodal Centre. Approval typically takes one working day.





10.2 Login as a User

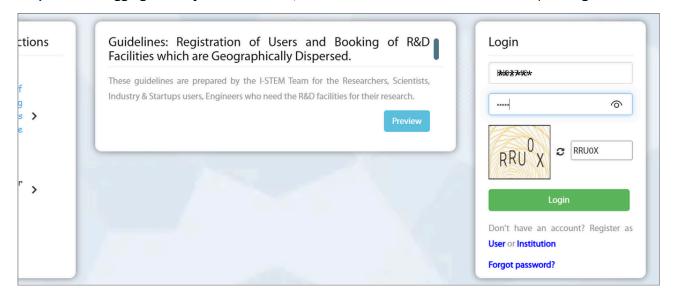
Step 1: Visit the I-STEM portal at www.istem.gov.in.



Step 2: Select the Login link at the top-right of the Home page.



Step 3: When logging in with your credentials, enter the CAPTCHA value in the corresponding field.



10.3 Equipment Search and Equipment Slot Booking

10.3.1 User Prerequisites

- Only registered users are permitted to book equipment slots.
- Ensure the user profile is complete and the account is approved by the I-STEM Nodal Centre (i.e., the user can successfully log in to the I-STEM portal).

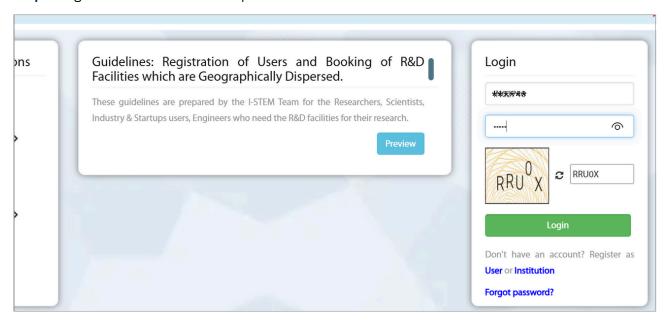




10.3.2 Equipment Search

Equipment can be searched with or without logging in to the I-STEM portal. However, to book an equipment slot, the user must be logged in.

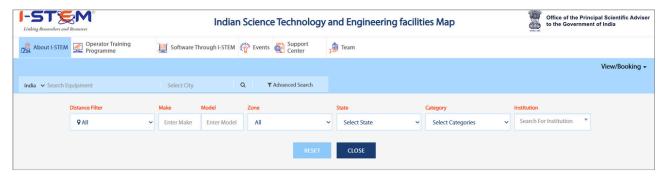
Step 1: Log in as a user to the I-STEM portal.



Step 2: Enter the **Equipment Name** or approved abbreviation (for example, AFM) in the **Search Equipment** field located at the top-left of the **Home** page.



Step 3: Users may use the Advance Search option to refine the search.



Step 4: Enter the CAPTCHA value (case-sensitive).







Step 5: The search results will appear on the left side, displaying the **Equipment Name**, **Host Institute Name**, and **Aerial Distance** (if location access is enabled).



Step 6: The search results will also be displayed on the map with corresponding location markers.



10.3.3 Reviewing Searched Equipment Details

Step 1: After searching for the equipment, select the Equipment Name displayed in the search results.



Step 2: The Equipment Details page displays the equipment information along with its **Health Status (Up or Down)**. A **green bar** indicates the equipment is *Up* and available for slot reservations, while a **red bar** indicates the equipment is *Down* and unavailable for booking.

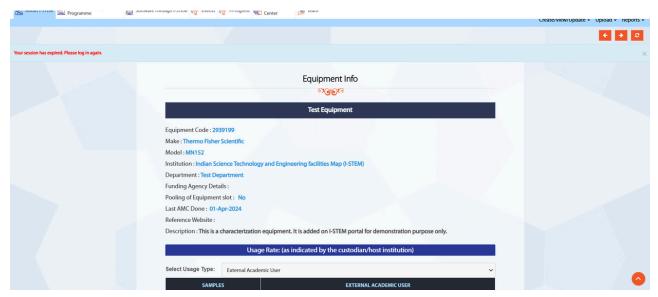




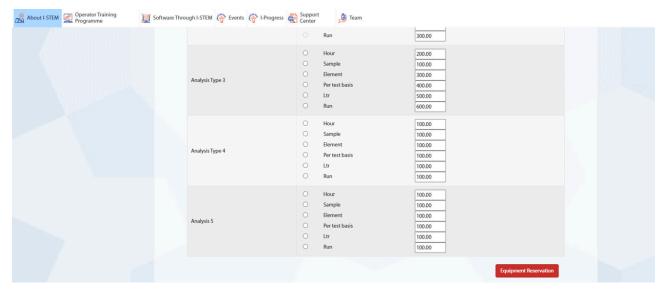
Select View More on the right side under the equipment details.



Step 3: You will be redirected to the Equipment Info page.



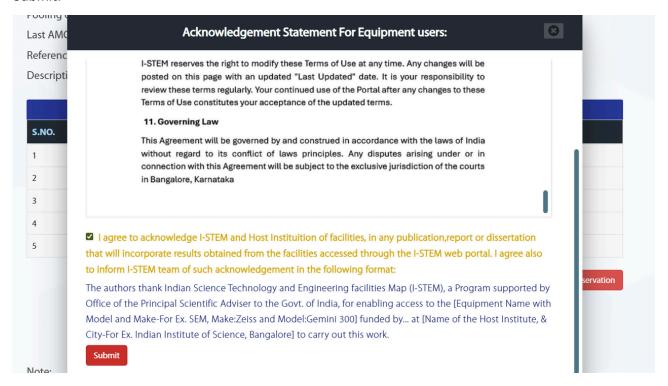
Step 4: Select the appropriate **Usage Rate** for the required Analysis Type, and then choose **Equipment Reservation**. Ensure that the User Type in your profile is up to date.





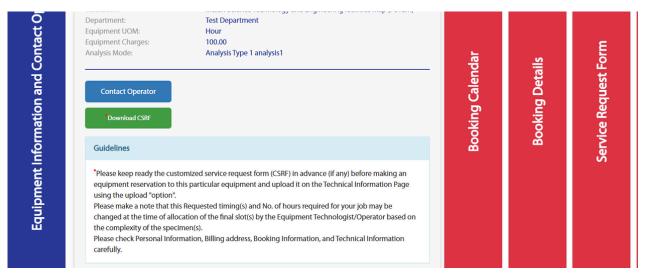


Step 5: Carefully review the **Booking Terms and Conditions**, acknowledge your agreement, and select Submit.



10.3.4 Equipment Information and Contact Operator

Step 1: If available, select the **Download CSRF** button to download the **Customized Service Request Form (CSRF)**. Complete the CSRF document as it will need to be uploaded at a later stage. The **Download CSRF** button appears only if the operator has uploaded the CSRF document for that equipment.



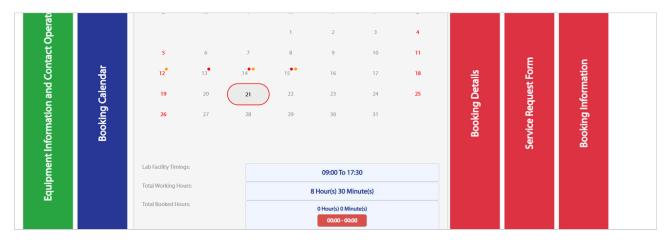
Step 2: Select the Next button.





10.3.5 Booking Calendar

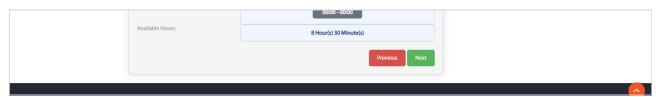
Step 1: In the Booking Calendar section, select the desired date.



Step 2: After selecting a date in the Booking Calendar, the user can view the Lab Facility Timing, Total Working Hours, Total Booked Hours, Total Pending Request Hours in Queue, Total Blocked Hours, and Available Hours.

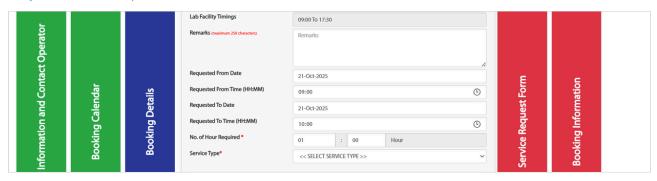


Step 3: Select the Next button.



10.3.6 Booking Details

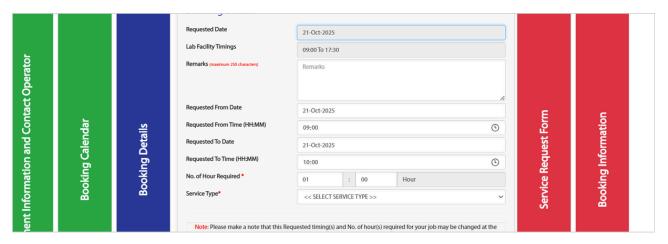
Step 1: Enter the required information in the Remarks field.



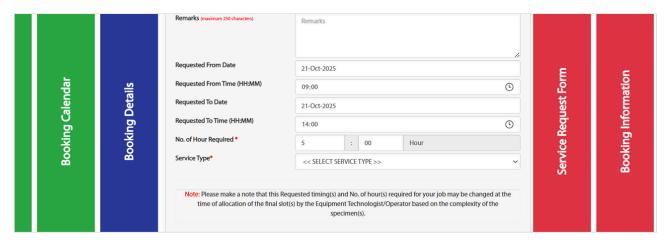




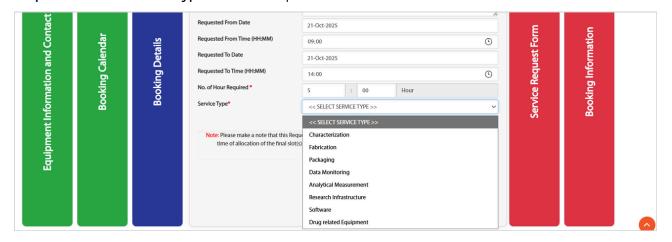
Step 2: Select the Preferred Date and Time.



Step 3: Specify the tentative number of hours required.



Step 4: Select the **Service Type** from the drop-down list.



Step 5: Select the Next button.

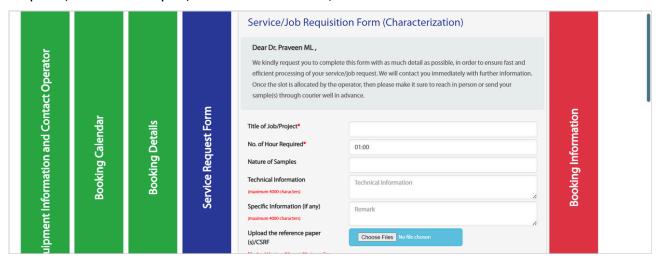




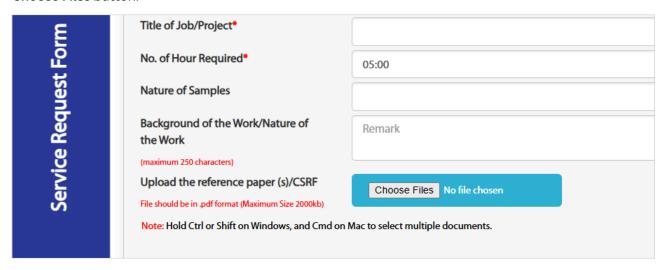


10.3.7 Service Request Form

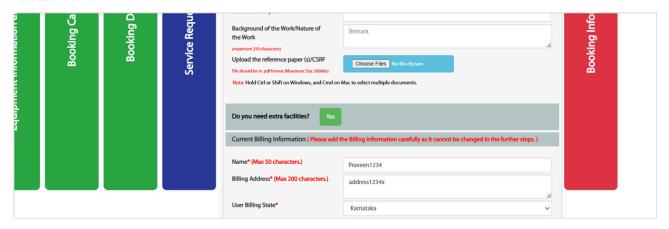
Step 1: In this section, provide the required details such as **Title of Job/Project**, **Number of Hours Required**, **Nature of Samples**, **Technical Information**, and other relevant information.



Step 2: Upload the reference paper(s) or other relevant documents, such as the **CSRF**, by selecting the **Choose Files** button.



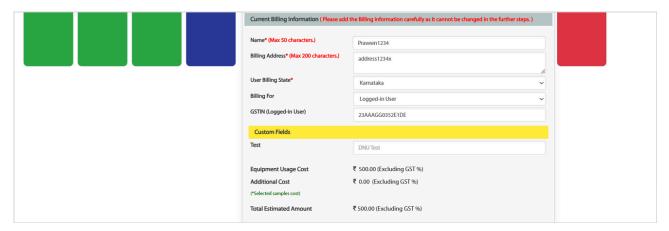
Step 3: If additional facilities are required, select **Yes**. If the institute has added any samples for the equipment, they will be displayed here. These samples may include **consumables**, **accessories**, or other related items.







Step 4: Enter the **Current Billing Information** carefully, as it cannot be modified in later steps. This information is required by the **Institute Custodian** for invoice generation.

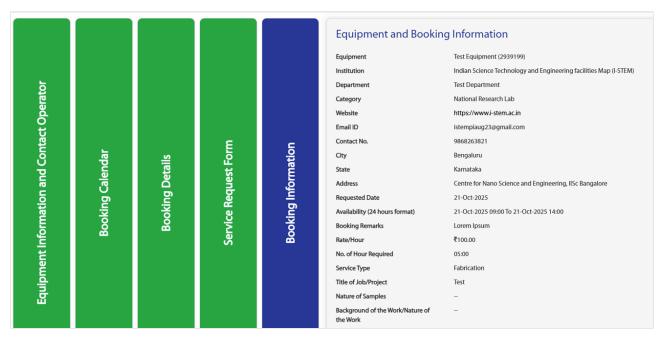


Step 5: Select the Next button.

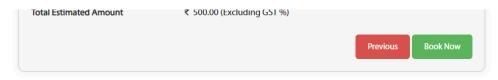


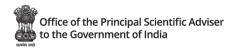
10.3.8 Equipment and Booking Information

Step 1: Verify the details provided in the Equipment and Booking Information sections.



Step 2: Select the Book Now button.







Note: User can see assigned operator details (Name, Email ID, and Mobile Number) on all FBR detailed pages.

When a user successfully submits a equipment slot booking request via the I-STEM portal, a unique 10-digit Facility Booking Record (FBR) number is generated. This number will be shared with the user and operators through email, and the user will also receive the same information through text message on their registered Mobile Number. Initially, FBR status will be in Pending status.

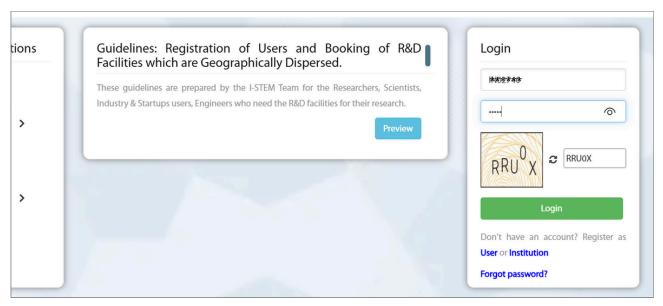
10.4 FBR Status: Pending

Action: Reschedule, Cancel

The user can reschedule or cancel an equipment slot booking request while the FBR status is Pending.

- If the user reschedules, the FBR status remains Pending.
- If the user cancels, the FBR status changes to Cancelled.

Step 1: Log in to the I-STEM Portal.



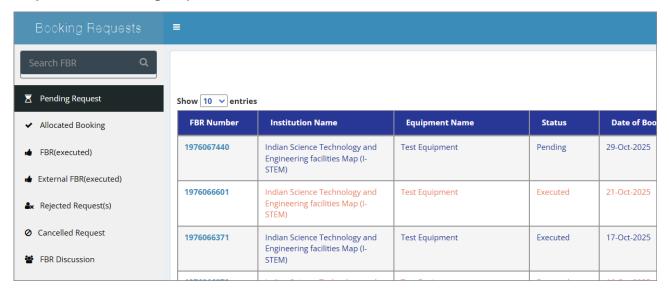
Step 2: Navigate to View/Booking and select Booking Requests.



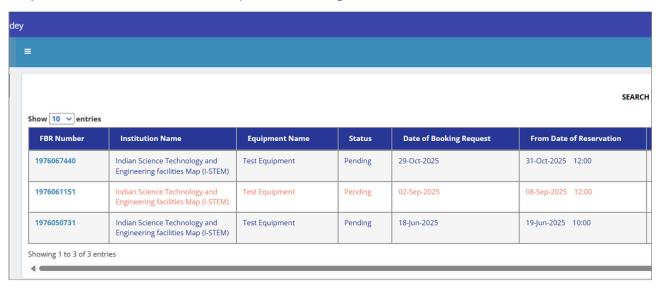




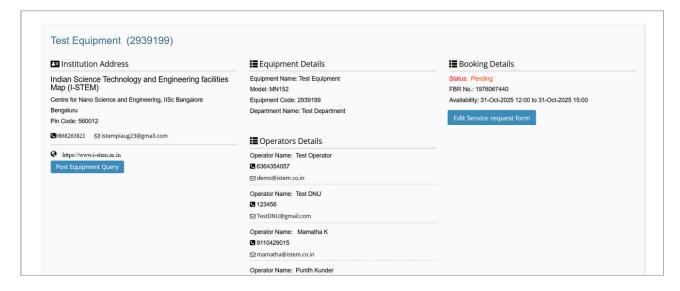
Step 3: Select Pending Requests from the left-side menu.

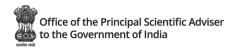


Step 4: Select the FBR Number to open the Booking Details section.



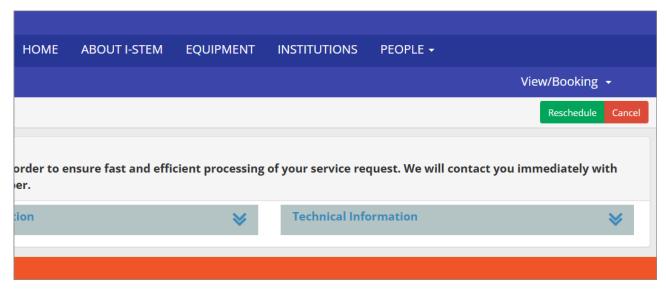
Step 5: Select Edit service request form button under the Booking Details section.







Step 6: To modify the slot, click the **Reschedule** or **Cancel** button as applicable.

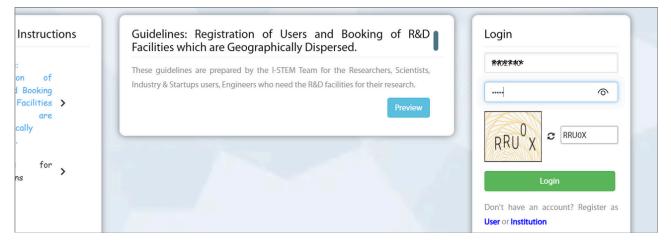


Note: Once an FBR is Cancelled, no further action can be taken by either the user or the operator.

10.5 FBR Status: Slot Allocation

Action: Mark FBR as Executed

Step 1: Log in to the I-STEM Portal.



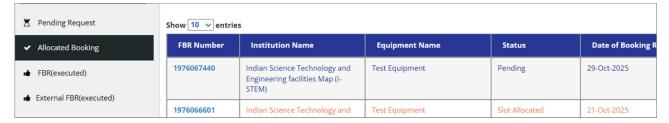
Step 2: Navigate to **View/Booking** and select **Booking Requests**.







Step 3: Select Allocated Booking from the left-side menu.



Step 4: Select the FBR Number to open the Booking Details section.

FBR Number	Institution Name	Equipment Name	Status	Date of booking request	Date of Equip Reservation	From Date of Confirmation
1976066601 Clic	k for more details Technology and Engineering facilities Map (I-STEM)	Test Equipment	Slot Allocated	21-Oct-2025	22-Oct-2025	24-Oct-2025 10:00
1976060544	Indian Science	Test Equipment	Slot	28-Aug-2025	09-Sep-2025	09-Sep-2025 10:00

Note: The Mark FBR as Executed button becomes available from the Slot Allocated date onward.
It can be selected by either the User or the Operator.

Step 5: Select Mark FBR as Executed button under the Booking Details section.



Step 6 : Enter the Date of Allocation, Date of Completion, and Final Amount, then select **Mark FBR** as **Executed**.



Note: Once the Mark FBR as Executed button is selected, the FBR status is updated to Executed.





10.6 FBR Status: Executed

Action: Submit Feedback, Download FBR Certificate

Step 1: Log in to the I-STEM Portal.



Step 2: Navigate to View/Booking and select Booking Requests.



Step 3: Select FBR (executed) in the left-side menu.



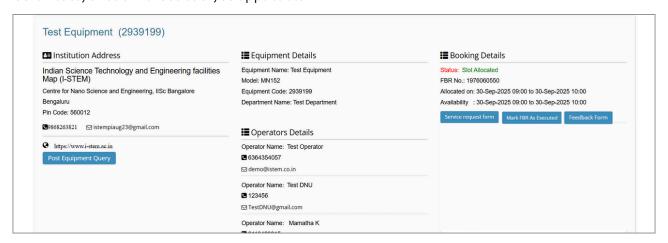
Step 4: Select the FBR Number to open the Booking Details section.

FBR Number	Institution Name	Equipment Name	Status	Date of booking request	Date of Equip Reservation	Fre
1976066601 Cli	ck for more details Technology and Engineering facilities Map (I-STEM)	Test Equipment	Slot Allocated	21-Oct-2025	22-Oct-2025	24-
1976060544	Indian Science Technology and Engineering facilities Map (I-STEM)	Test Equipment	Slot Allocated	28-Aug-2025	09-Sep-2025	09-5





Step 5: Navigate to the **Booking Details** section and select the **Service Request Form**, FBR Certificate, or Feedback Form button to view booking information, view/download the FBR Certificate, or submit feedback, as applicable.



10.7 FBR Status: Rejected

Action: Submit Feedback

Step 1: Log in to the I-STEM Portal.



Step 2: Navigate to View/Booking and select Booking Requests.



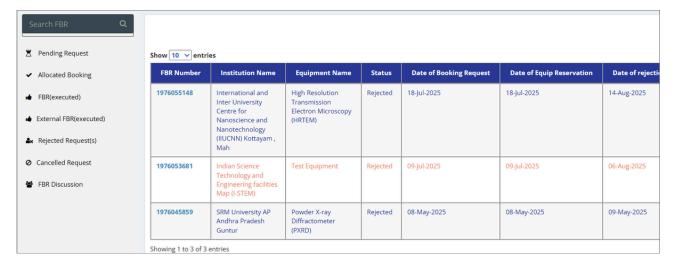
Step 3: Select Rejected Request(s) in the left-side menu.

✓ Allocated Booking	FBR Number	Institution Name	Equipment Name	Status	Date of Booking Request	From Date of Reservation
◆ FBR(executed)	1976067440	Indian Science Technology and Engineering facilities Map (I- STEM)	Test Equipment	Pending	29-Oct-2025	31-Oct-2025 12:00
■ Rejected Request(s) ■ Rejected Request(s)	1976066601	Indian Science Technology and Engineering facilities Map (I- STEM)	Test Equipment	Executed	21-Oct-2025	22-Oct-2025 10:00
	1976066371	Indian Science Technology and Engineering facilities Map (I-	Test Equipment	Executed	17-Oct-2025	20-Oct-2025 11:00

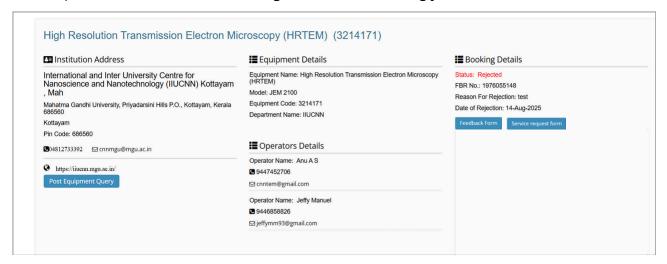




Step 4: Select the FBR Number to open the Booking Details section.



Step 5 : Navigate to the Booking Details section and select the **Feedback Form** or **Service request form** to provide feedback or view booking information accordingly.



10.8 FBR Status: Cancelled

 $Note: \ Cancelled \ FBRs \ cannot \ be \ reopened \ or \ acted \ upon \ by \ the \ user \ or \ any \ custodian.$

To view Cancelled FBRs:

Step 1: Log in to the I-STEM Portal.







Step 2: Navigate to View/Booking and select Booking Requests.



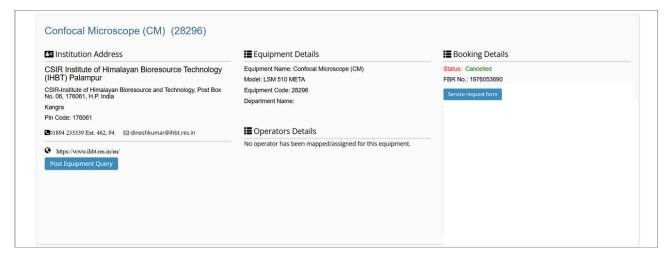
Step 3: Select Cancelled Request(s) in the left-side menu.



Step 4: Select the FBR Number to open the Booking Details section.



Step 5: Navigate to the **Booking Details** section and select the **Service request form** to view the booking information.







11. ORIENTATION & LEARNING RESOURCES

I-STEM provides multiple structured learning and orientation resources to help institutions, operators, and researchers effectively use the portal.

11.1 Available Resources

YouTube Playlist

(Step-by-step video walkthroughs covering registration, booking, role creation, equipment upload, and operator workflows.

Scan the QR code or visit <u>tinyurl.com/ISTEMyoutube</u> to watch I-STEM YouTube videos



I-STEM Stakeholder Kit

Includes SOPs, training decks, FAQs, and templates for internal circulation.

Scan the QR code or visit <u>tinyurl.com/ISTEMstakeholderkit</u> to access SOPs and training materials



Onboarding Support Calls

Dedicated sessions for newly registered institutions to accelerate their setup.

Certification Program (Planned 2026)

Optional role-based certification for operators, coordinators, and administrators.

11.2 Quick FAQs

Q1. What if the operator cannot allocate a slot immediately?

If a slot cannot be allocated immediately, the operator should inform the user by providing a tentative date, so that the user can plan accordingly.

Q2. Who manages payments and invoices?

Host institutions handle payments, invoicing, and GST/TDS compliance.

Q3. What if equipment downtime occurs suddenly?

Immediately block the affected slots in the Equipment Calendar and provide the reason for downtime. When equipment status is set to Down, users cannot book slots for that equipment.





Q4. How should I encourage feedback?

After execution, remind users to submit feedback via the portal. Emphasize that feedback strengthens national reporting and improves service quality.

Scan the QR code or visit <u>tinyurl.com/ISTEMFAQ</u> to access our full list of Frequently Asked Questions (FAQs)



12. CHALLENGES & BEST PRACTICES

The I-STEM team is committed to continuous improvement and innovation. Key enhancements on the roadmap include:

12.1 Challenges

- Delayed Updates: Equipment status or usage details may not always be updated promptly, leading to confusion for users.
- Resource Gaps: Lack of dedicated operators for all equipment can put excessive workload on custodians.
- Inconsistent Rates: Failure to standardize or regularly review usage rates may cause disputes or dissatisfaction among users.
- Incomplete Profiles: Outdated or missing equipment information may hinder effective utilization and discourage bookings.
- Communication Issues: Vague or missing reasons for booking rejection can create frustration and reduce user trust.

12.2 Best Practices

- Equipment Status(Up/Down): Ensure that the equipment status is always updated to reflect its current availability and functionality, so users have accurate information before booking.
- Operator Assigned to Equipment: Each piece of equipment should have a designated operator responsible for overseeing its operation, maintenance, and user support.
- Equipment Usage Rate Assigned: Clearly define and update the usage rate for equipment to maintain transparency and avoid discrepancies during billing.
- Equipment Profile Updated: Keep the equipment profile updated with technical details, specifications, and operational guidelines to help users make informed decisions.
- Reason for Rejection: Always provide a clear and valid reason when rejecting a booking request to maintain transparency and improve the user experience.
- **Custodian Responsibility:** If no specific operator is assigned to equipment, the designated custodian must take responsibility for monitoring, upkeep, and coordination.





13. API INTEGRATION WITH INSTITUTIONAL EQUIPMENT BOOKING SYSTEMS - SOP

13.1 Purpose

To establish the procedure for integrating institutional equipment booking systems with the I-STEM National Portal, ensuring seamless operations, data accuracy, and efficient equipment utilization across all participating institutions.

13.2 Scope

This SOP applies to all institutions registered with I-STEM that operate independent equipment booking or management systems and intend to integrate them with the I-STEM National Portal through the Application Programming Interface (API).

13.3 Policy

I-STEM supports institutional autonomy while enabling national-level synchronization. Each institution retains full control over its internal systems, with the integration designed to enhance, not replace, existing platforms.

13.4 Procedure

1. Integration Readiness

- I-STEM provides a standardized API framework for integration with institutional booking systems.
- Institutions must ensure their internal systems comply with the technical specifications provided by the I-STEM technical team.

2. API Configuration and Testing

- The institution's technical team shall coordinate with I-STEM's technical support team to configure and test the API connection.
- Test data will be jointly validated to ensure accuracy, synchronization, and optimal performance.

3. Data Synchronization

- Once integrated, booking data will be synchronized in real time between the institutional platform and the I-STEM portal.
- This integration eliminates duplicate data entry and ensures that all equipment availability and booking information remain current and consistent.

4. Operational Responsibility

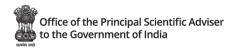
- Institutions are responsible for maintaining their internal systems, managing access permissions, and ensuring data security in compliance with institutional and I-STEM policies.
- I-STEM will provide ongoing technical assistance and version updates to maintain interoperability.

5. User Experience

• The integrated system allows researchers and administrators to experience a seamless booking process with real-time visibility into equipment schedules and availability.

6. Support and Escalation

• For any clarification, configuration support, or troubleshooting during or after integration, institutions may contact the I-STEM Support Team at the toll-free number 1800 425 3281.





• Support requests will be logged, tracked, and resolved in accordance with I-STEM's service standards.

13.5 Expected Outcome

Successful implementation of the API integration will result in:

- Streamlined equipment booking operations.
- Real-time synchronization between institutional and national systems.
- Enhanced user satisfaction and transparency.
- Strengthened collaboration within the I-STEM ecosystem.





14. FUTURE ENHANCEMENTS & ROADMAP

The I-STEM ecosystem brings diverse institutions, users, and workflows together. Some common challenges and recommended practices include:

2026-27 Roadmap

- Mobile-First Experience Launch of I-STEM Mobile App for Android & iOS.
- AI-Powered Chatbot Support Instant query resolution with guided workflows.
- Advanced Analytics Custom report builder, predictive demand forecasting, and AI-based utilization recommendations.
- Researcher Collaboration Hub Networking feature connecting researchers with similar interests.
- Operator Training Simulator Virtual environment for operator onboarding and skill upgradation.
- Accessibility Enhancements WCAG-compliant design for inclusive usability.
- Equipment Health Monitoring IoT integration for predictive maintenance and uptime tracking.

15. DISCLAIMER

15.1 Platform Role:

The I-STEM National Portal functions exclusively as a facilitation platform and does not operate as a service provider. Its principal purpose is to enable access to research infrastructure and resources. The portal does not engage in handling payments or financial transactions.

15.2 Financial Responsibility:

All financial matters—including payments, invoicing, and compliance with GST, TDS, or other statutory requirements—are to be managed independently by the host institutions. This arrangement ensures that institutions maintain full control and accountability over their financial operations.

15.3 User and Operator Coordination:

Users and operators are expected to coordinate directly with one another regarding payments, invoicing, and the reporting of experiment results. The I-STEM platform does not participate in or supervise these transactions.

15.4 Resource Facilitation and Visibility:

I-STEM will continue to enhance the visibility of available equipment, foster connections among researchers, startups, and industry partners, and support the optimization of utilization and revenue opportunities for host institutions.

15.5 Platform Charges:

The I-STEM portal is offered entirely free of charge to both institutions and users.





ANNEXURE A

Changelog (Updated Every 6 Months)

- Sep 2025 (v1.0): Initial release of the Comprehensive User & Operations Handbook.
- Mar 2026 (Planned v1.1): Addition of mobile app workflows, updated compliance guidelines, and new FAQ set.

Glossary

- FBR (Facility Booking Record): Unique 10-digit booking identifier.
- CSRF (Customized Service Request Form): Form for researchers to specify experiment requirements.
- IN, IR, DP, FI, FC, OP: Defined for institutional roles as follows, Institute Head (IN), Institute Representative (IR), Department Representative (DP), Faculty In-charge (FI), Facility Coordinator (FC), Operator (OP)
- PU: Defined for Public User/Researcher account.

Contact Sheet

• Support Portal (Freshdesk): I-STEM Freshdesk Support

• Toll Free No.: 1800 425 3281

• Email Id: support@istem.co.in

Scan the QR to access the support portal







ANNEXURE B

Operational Guidelines for Excellence

These guidelines have been prepared to establish standardized best practices for institutional custodians managing research facilities on the I-STEM Portal. They aim to ensure efficiency, transparency, accountability, and optimal utilization of publicly funded R&D equipment, in alignment with India's National Research Infrastructure Policy and the Atmanirbhar Bharat vision. By adhering to these guidelines, institutions can contribute significantly to equitable, sustainable, and innovation-driven research across the country.

Key Custodian Roles and Responsibilities

The following hierarchy ensures clarity in roles, accountability, and operational excellence:

- Institute Head (IN): Registers on the I-STEM Portal, creates custodian accounts, and validates Institutional information quarterly.
- Institute Representative (IR): Creates departments, facilities, and custodian accounts, ensures hierarchy integrity.
- **Department Representative (DP):** Oversees facilities and custodians within the department, reviews inactive equipment.
- Faculty In-charge (FI): Supervises facilities, validates operator-equipment mappings, and ensures maintenance scheduling.
- Facility Coordinator (FC): Coordinates bookings, maintenance, and preventive calibration events, maintains booking completion logs.
- Equipment Operator (OP): Operates, maintains, and executes approved booking requests.

Each role must achieve measurable KPIs such as 95% mapping accuracy, 95% booking completion, and 3-day average response time.

Institutional Setup

- Register on I-STEM portal via www.istem.gov.in.
- Appoint both a Point of Contact (POC) and Backup POC.
- Maintain up-to-date institutional details and establish departments, facilities, and custodian accounts within a top-down hierarchical framework.
- All custodian hierarchies (IN → IR → DP → FI → FC → OP) must be updated quarterly.
- Inactive accounts should be marked "Inactive" (not deleted) to retain audit continuity. Passwords must be rotated every 90 days.
- Institute Heads must conduct an annual data and access audit to ensure compliance and security.

Equipment Management

- All publicly funded equipment costing ₹20 lakh or above must be uploaded to the I-STEM Portal.
- Institutions must maintain updated details on operational status (Up/Down) and AMC information.
- Usage rates must be transparent and publicly displayed.
- Operators should be mapped accurately to each equipment.





Equipment Management

- Institutions should adopt the "Active Equipment First" approach, giving priority to uploading only
 operational instruments instead of uploading all items indiscriminately.
- Proactively block slots for maintenance activities (if any) or for any institutional requirements.
- Encourage the submission of Annual Maintenance Contract (AMC) information.

Facility Booking Record (FBR) Workflow

- All booking requests must be acted upon (Allocate/Reject) within three working days.
- Inaction beyond seven days will trigger auto-escalation to the I-STEM Nodal Centre.
- Rejected bookings must include a reason for audit transparency.
- Always maintain an FBR execution rate of 80% or higher.
- Coordinate directly with users for payments and scheduling/rescheduling of booking slots.

Maintenance and Calibration

- Preventive maintenance and calibration schedules must be pre-approved by the Faculty In-charge and recorded digitally on the portal.
- Equipment under maintenance should be auto-removed from public search until reactivated.
- Each maintenance event must include vendor name, date, and calibration certificate upload.

Quality, Transparency, and Accountability

- Institutions must display usage rates, policies, and equipment availability publicly.
- Each equipment's last calibration date, operator name, and status should be visible to users.
- Financial transactions must be managed end-to-end through approved channels only.
- The institute must manage all financial transactions end-to-end related to bookings.
- Share experiment results directly with users in a user-friendly report format that facilitates easy data analysis.

Data and Record Management

- Institutions must back up all booking and equipment data monthly (cloud or secure offline).
- Faculty In-charges must review operator assignments quarterly.
- FBR records must be retained for a minimum of three years.

User Support and Communication

Support services must be accessible via:

- Toll-Free: 1800 425 3281
- Email: <u>support@istem.co.in</u>
- Ticketing System: https://istem.freshdesk.com/support/home

All support tickets must be acknowledged within one working day and resolved within three working days. Feedback forms linked to FBR should be used to measure user satisfaction.

Awareness and Capacity Building

- Institutional custodians should actively use the I-STEM Stakeholder Kit and YouTube resources.
- Participation in I-STEM webinars and training programs for Operators and Custodians is mandatory.
- Institutions with ≥ 95% KPI compliance will receive annual "Best Custodian" recognition.





Key Performance Indicators (KPIs) for Institutions

• Equipment Listing Accuracy: ≥ 95%

• FBR Completion Rate: ≥ 80%

• Response Time: < 3 working days

• User Satisfaction: ≥ 95%

• External User Utilization: ≥ 30%

• Inactive Equipment Rate: < 10

All KPIs will be auto-evaluated monthly through the I-STEM dashboard.

Conclusion

The consistent implementation of these Best Practice Guidelines will ensure operational excellence, transparency, and institutional accountability across India's R&D ecosystem.

By adopting these practices, institutions can strengthen their contribution to the I-STEM vision—enhancing collaboration, optimizing public investment, and advancing India's scientific self-reliance and innovation capacity.





GLOSSARY 2.0

Term	Expanded Form
AMC	Annual Maintenance Contract
API	Application Programming Interface
KPI	Key Performance Indicator
DSC	Digital Signature Certificate
ERP	Enterprise Resource Planning System
FBR	Facility Booking Record
CSRF	Customized Service Request Form
IN	Institute Head
IR	Institute Representative
DP	Department Representative
FI	Faculty In-charge
FC	Facility Coordinator
OP	Operator / Technologist
PU	Public User / Researcher
SLA	Service Level Agreement
Uptime	Equipment Available Time
Down Time	Equipment Non-Operational Time
Usage Rate	Cost Per Hour / Session
Blocked Slot	Reserved Time (Non-Bookable)



Contact Us

- <u>www.istem.gov.in</u>
- <u>www.psa.gov.in/i-stem</u>
- support@istem.co.in
- 1800-425-3281
- 🖄 Partnerships & Collaborations: marketing@istem.co.in

















