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1. Introduction

The Indian Science, Technology, and Engineering facilities Map (I-STEM) is an interactive web portal designed to accelerate scientific progress in India. This initiative, conceived and supported by the Office of the Principal Scientific Adviser to the Government of India, creates a centralized platform for sharing publicly funded R&D equipment and facilities across various institutions throughout the country.

2. Institution Registration

An Institution which has Research Equipment funded by government funding agency(ies) needs to be registered on I-STEM portal and list those Equipment. These Equipment slot(s) may be requested by Public User for their R&D work on payment basis.

An Institution may register on I-STEM portal which has Research Equipment even not funded by government funding agency(ies). They may generate the revenue by sharing the equipment.

To receive the online payment for Equipment Usage Charge, institution needs to share the ECS Form with I-STEM. ECS Form format may be downloaded on Institution Registration page. I-STEM is using BillDesk Payment Gateway for smooth online transactions.

Sharing ECS Form is not mandatory. Institution may receive offline payment for Equipment Usage Charge.

To register an institution on I-STEM portal:

- Visit on I-STEM portal www.istem.gov.in.
- Click on "Register" link which is available on top right on the homepage.
- Click on Institution/Resources Registration link on the register page.
- On Institution Registration page, all the mandatory fields are marked with a red asterisk (*)
- Select the Institution Invoice Type from drop-down. This selected option will be by default selected on Slot allocation Page. Operator may change the Invoice Type at the time of Slot allocation.
- Invoice Type "Regular" indicates invoice generated by I-STEM System, and Invoice Type "Provisional" indicates institution custodian may upload the invoice which is generated by institution for a booking request.
- Under the Location Information section, click on "Select Location" button, Enter the institution name in the field, and then click on "Select" button. Location Latitude, and Location Longitude values will be filled.
- Fill in the Captcha and then click on "Submit" button.
- Institute Head will receive the login credentials on the registered email id once Institution Registration request is approved by I-STEM Nodal Centre.

3. Create Institute Representative account

Institute Representative will be the Point of Contact for I-STEM Team member. Institute Head may nominate any one as an Institute Representative. S/he may be faculty member, technologist, admin etc.

Institute Head and Institute Representative will have access to all the departments. They may create Department, Facility and custodian accounts (like Department Representative, Faculty In-charge,

Faculty Coordinator, and Equipment Operator), list the Equipment, Update Equipment Profile, Update Equipment Usage Rate and map the Equipment with Operator on I-STEM portal. They may see the equipment slot booking requests and various reports.

On I-STEM portal there may be one or multiple Institute Representative(s) account can be created under an institution.

To create an Institute Representative account:

- Visit on I-STEM portal www.istem.gov.in.
- Click on "Login" link which is available on top right on the homepage.
- Login as an Institute Head.
- On the home page, navigate to the **Create/View/Update** menu and select **Institution**.
- Click on Institution Name in the table, it will redirect on institute detail page.
- On the institute detail page, click on **Create Institute Representative** button.
- Fill in mandatory fields at the minimum like Name, Mobile No., and Email Id and then click on **Submit** button.
- Institute Representative account will be created, and login credentials will be sent to registered Email id.

4. Create a Department and Department Representative account

4.1. Create a Department

Under the institute there may be various department, centre, section, branch which may be created as a Department on I-STEM portal. Institute Head and Institute Representative may create the Department.

To create a Department:

- Visit on I-STEM portal www.istem.gov.in.
- Click on "Login" link which is available on top right on the homepage.
- Login as an Institute Head or Institute Representative.
- On the home page, navigate to the **Create/View/Update** menu and select **Department**.
- On the department page, click on **Add New** button, fill in the Department Details, and then click on **Submit** button.
- Department will be created and it will be added under the department list.

4.2. Create a Department Representative account

Department Representative may be nominated by Head of Department. S/he may be faculty member, technologist, admin etc.

Department Representative will have access of their own Department only.

Department Representative may create Facility, custodian accounts (like Faculty In-charge, Faculty Coordinator, and Equipment Operator), list the Equipment, Update Equipment Profile, Update Equipment Usage Rate and map the Equipment with Operator on I-STEM portal. S/he may see the equipment slot booking requests.

Once Department is created, then Department Representative account needs to be created. For a department, there may be one or multiple Department Representative(s). This account may be created using Institute Head or Institute Representative.

To create Department Representative account:

- Visit on I-STEM portal www.istem.gov.in.
- Click on **Login** link which is available on right top on the homepage.
- Login as an Institute Head or Institute Representative.
- On the home page, navigate to the **Create/View/Update** menu and select **Department**. It will redirect to department page.
- On the department page, Click on **Department Name**. It will redirect to department detail page.
- On the department detail page, click on **Create Department Admin** button, fill at least mandatory fields like Name, Mobile No., and Email Id and then click on **Submit** button.
- Department Representative account will be created and login credentials will be sent to registered Email Id.

5. Create a Faculty In-charge account, Facility, and Facility Coordinator account

Faculty In-charge account and Facility may be created by using Institute Head, Institute Representative or Department Representative account.

5.1. Create a Faculty In-charge account

- Visit on I-STEM portal www.istem.gov.in.
- Click on **Login** link which is available on top right on the homepage.
- Login as an Institute Head, Institute Representative or Department Representative.
- On the home page, navigate to the **Create/View/Update** menu and select **Faculty Incharge**. It will redirect to Faculty page.
- On the Faculty page, click on **Add New Faculty** button, fill at least mandatory details like Name, Email Id, Contact No. and select Department(s).
- Click on **Submit** button.
- Faculty In-charge account will be created, and login credentials will be sent to registered Email Id.

5.2. Create a Facility

Once Faculty In-charge account is created then Facility may be created under the Faculty In-charge. Facility may be created by using Institute Head, Institute Representative or Department Representative account.

To create Facility:

- Visit on I-STEM portal www.istem.gov.in.
- Click on **Login** link which is available on top right on the homepage.
- Login as an Institute Head, Institute Representative or Department Representative.
- On the home page, navigate to the **Create/View/Update** menu and select **Facilities**. It will redirect to Facilities page.

- Click on Facility List option in the third level menu bar, and then click on **Add New** button. Provide the Facility Information, mandatory fields are marked with a red asterisk (*).
- Click on **Submit** button.
- Facility will be created and will be added under the Facility list.

5.3. Create a Facility Coordinator account

Facility Coordinator account may be created by using Institute Head, Institute Representative, Department Representative or Faculty In-charge account.

To create Facility Coordinator account:

- Visit on I-STEM portal www.istem.gov.in.
- Click on **Login** link which is available on top right on the homepage.
- Login as an Institute Head, Institute Representative, Department Representative or Faculty In-charge.
- On the home page, navigate to the **Create/View/Update** menu and select **Facilities**. It will redirect to Facilities page, click on Facility Name.
- Click on **Create Facility Coordinator** button, fill at least mandatory details like Name, Mobile No., and Email Id and then click on **Submit** button.
- Facility Coordinator account will be created and login credentials will be sent to registered Email Id.

6. Create an Equipment Operator/Technologist account

Equipment Operator/Technologist can update the Equipment Usage Rate and maintain the equipment booking calendar, approve booking requests received from Public Users, and fulfill the request (execute the job) after receiving information of payment made (if any).

Equipment Operator account may be created by Institute Head, Institute Representative, Department Representative, Faculty In-charge or Facility Coordinator.

To create Equipment Operator/Technologist account:

- Visit on I-STEM portal www.istem.gov.in.
- Click on "Login" link which is available on right top on the homepage.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge or Facility Coordinator.
- On the home page, navigate to the **Create/View/Update** menu and select **Operators/Technologist**. It will redirect to the operators page.
- Click on "Add New" button, fill the Operator Information and then click on "Submit" button. Mandatory fields are marked with a red asterisk (*).
- Equipment Operator account will be created and login credentials will be sent to registered Email Id.

7. Listing of Equipment

Equipment may be listed by all the institution's custodians except Equipment Operator. It can be added either one-by-one or bulk upload.

7.1. Equipment Upload

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge or Facility Coordinator.
- On the home page, hover cursor over **Upload** and then click on **Equipment**. It will redirect to equipment page.
- To add the equipment one-by-one click on **Add New** button, fill the Equipment Information (mandatory fields are marked with a red asterisk (*)), then click on **Submit** button. Equipment will be uploaded and will be Under Review. Under Review Equipment will be showing under **Draft Equipment** section in third level menu bar.
- To add the multiple equipment at once then Bulk Upload option may be used. To do the same, click on **Download Template** button on equipment page. Fill the downloaded excel sheet, select the **Department** from drop-down, click on **Browse** button, and then click on **Upload**. Upload option will be showing once excel sheet is selected. Once excel sheet is uploaded then Equipment will be uploaded and will be Under Review.

I-STEM Nodal Centre will review the Equipment and approve, then Equipment will be moved to **Active Equipment** section in third level menu bar. Only Active Equipment will be showing on Equipment Search Result and will be available for Equipment Slot Reservation.

Equipment which are Under Review will not be showing on Equipment Search Result and will not be available for Equipment Slot Reservation.

7.2. Equipment Profile Update

Except Equipment Operator all the institute custodians (Institute Head, Institute Representative, Department Representative, Faculty In-charge, and Facility Coordinator) may update the Equipment profile.

To update the Equipment Profile:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge or Facility Coordinator.
- On the home page, navigate to the **Create/View/Update** menu and select **Equipment**. It will redirect to Equipment - Approved page.
- Click on Equipment Name, it will redirect to Equipment Information page.
- Click on **Edit** button, update the equipment information and then click on **Submit** button.
- Equipment information will be updated accordingly.

7.3. Equipment-Operator mapping

It is essential task to map the Equipment with Operator. On I-STEM portal Equipment can be mapped with one or more Operator(s) and vice versa. Equipment-Operator mapping can be done by all the concerned custodians except Operator. Operator account should be created before mapping.

To map Equipment with Operator:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge or Facility Coordinator.
- On the home page, navigate to the **Create/View/Update** menu and select **Equipment**. It will redirect to Equipment - Approved page.
- Click on Equipment Name, it will redirect to Equipment Information page.
- Under fourth level menu bar click on "Operator Mapping", then under Non-mapped Operators/Technologist section click on + sign to allocate.
- Only mapped operator(s) will receive the email notification for the equipment slot reservation and can take the action (allocate, clarification, reject).

7.4. Equipment Usage Rate Update

All the concerned custodians including Equipment Operator may update the Equipment Usage Rate. Equipment Usage Rate depends on User Type (internal, external academic, startup, industry etc.), Unit of Measurement (per hour, per sample, per test etc.), and Analysis Type.

To update Equipment Usage Rate:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, navigate to the **Create/View/Update** menu and select **Equipment**. It will redirect to Equipment - Approved page.
- Click on **Assign Usage Rate** link under Actions column.
- Assign the Equipment Usage Rate.
- In case on multiple analysis type, click on **Add Row** button to add Analysis Type and then assign the Equipment Usage Rate.
- Click on **Submit** button.
- Equipment Usage Rate will be updated accordingly.

8. Facility Booking Record (FBR) Workflow

FBR is a 10-digit unique Facility Booking Record (FBR) number generated once a user completes an equipment reservation request.

Once FBR is generated then that time it will be in Pending status and I-STEM system sends the email notification to concerned institution custodian(s) including Operator and user. It sends Text SMS to user on registered Mobile Number.

FBR may be used to check the current status of the booking request made on available equipment. A variety of Status is defined, viz., “Pending”, “Clarification required”, “Slot allocated”, “Payment done”, “Offline Payment”, “FBR Executed”, “Cancelled”, and “Rejected”.

I-STEM system sends email notification to concerned institution custodian(s) and user When FBR status gets changed.

8.1. FBR Status: Pending

Once a user completes an equipment reservation request then FBR will be generated and that time it's status will be Pending. In this FBR status, Operator can Allocate the slot, Reject the slot or can ask for Clarification.

To take an action on Pending FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.
- Click on **More Info** link under Pending Request(s) section.
- Search the required FBR then click on Action link.
- Click on **Allocate** or **Reject** or **Clarification Required** button to take necessary action. FBR status will change accordingly.
- When FBR status gets changed, I-STEM will send email notification to all concerned institution custodians and user. User will receive the same information through text SMS also on registered Mobile Number.

To allocate the Slot:

- Once **Allocate** button is clicked, then pop-up will appear. Verify the Personal Information and Preferred Booking Details.
- Operator may change the **User Type** by selecting appropriate user type from drop-down, **Grand Total** will be calculated accordingly.
- Select the appropriate **Invoice Type (Regular/Provisional)** from **Institution Invoice Type** drop-down.
- If Invoice Type **Regular** is selected, then invoice will be generated by I-STEM system.
- If Invoice Type **Provisional** is selected, then it is mandatory to institution to generate the invoice and upload on I-STEM portal. In this case, I-STEM system will not generate an invoice and Payment Receipt.
- If the user is from the same institute (Internal Academic User) and the invoice type is set to Provisional, the amount will not be visible on the I-STEM portal. In such cases, the institute's custodian will manage both the invoice and payment receipt.

Once the Facility Booking Record (FBR) is approved, the payment will be considered offline, and no Proforma Invoice will be generated. The user will not have any payment option on the

portal. Instead, the custodian must enter the payment details and upload the payment proof, which is mandatory.

8.2. FBR Status: Clarification Required

If FBR status is Clarification Required, then Operator can Reschedule the slot, Reject the slot or can ask for Clarification.

To take an action on Clarification Required FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.
- Click on **More Info** link under Clarification (if any) section.
- Search the required FBR then click on Action link.
- Click on **Reschedule** or **Reject** or **Clarification Required** button to take necessary action. FBR status will change accordingly.
- When FBR status gets changed, I-STEM will send email notification to all concerned institution custodians and user. User will receive the same information through text SMS also on registered Mobile Number.

8.3. FBR Status: Slot Allocated

If FBR status is Slot Allocated, then Operator can Reschedule the slot, Reject the slot or can ask for Clarification.

To take an action on Slot Allocated FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.
- Click on **More Info** link under Allocated Booking(s).
- Search the required FBR then click on Action link.
- Click on **Reschedule** or **Reject** or **Clarification Required** button to take necessary action. FBR status will change accordingly.
- When FBR status gets changed, I-STEM will send email notification to all concerned institution custodians and user. User will receive the same information through text SMS also on registered Mobile Number.

8.4. FBR Status: Payment Information

Once user made online payment successfully or Payment Entry (in case of offline payment) is done by Operator, then FBR status will be changed to Payment Done.

If FBR status is Payment Done, then Operator can take any of the actions like Mark FBR as Executed, Reschedule the slot, Generate Invoice, Generate Receipt, Reject the slot.

To take an action on Payment Done FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on Submit button.
- Click on **More Info** link under Payment Information section.
- Search the required FBR then click on Action link.
- Click on **Mark FBR as Executed** or **Reschedule** or **Reject** button to take necessary action. FBR status will change accordingly. **Mark FBR as Executed** option will be available after the FBR exceeds the allocated for date.
- Click on **Generate Invoice** and **Generate Receipt** button to download the **Invoice** and **Payment Receipt** in pdf format respectively.
- When FBR status gets changed, I-STEM will send email notification to all concerned institution custodians and user. User will receive the same information through text SMS also on registered Mobile Number.

8.5. FBR Status: Offline Payment

Once slot is allocated and after that user has opted for Offline Payment then FBR status will be changed to Offline Payment.

If FBR status is Offline Payment, then Operator can download the Proforma Invoice by clicking on **Generate Service Order** button, can upload the soft copy of payment details by clicking on **Payment Entry** button, Reschedule the slot or Reject the slot.

To take an action on Offline Payment FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.
- Click on **More Info** link under Offline Payment Record section.

- Search the required FBR then click on Action link.
- Click on **Generate Service Order** button to download the Proforma Invoice in pdf format.
- Once payment details received then operator should upload the details in pdf format by clicking on **Payment Entry** button. Once Payment Entry is done, then FBR status will change to Payment Done.
- Click on **Reschedule** or **Reject** button to take necessary action. FBR status will change accordingly.
- When FBR status gets changed, I-STEM will send email notification to all concerned institution custodians and user. User will receive the same information through text SMS also on registered Mobile Number.

8.6. FBR Status: Executed

Once FBR status is Executed, then Operator can download the **FBR Certificate**, **View/Upload the Report**, can give the **Feedback** (only one time), can download the **Invoice** and **Payment Receipt**.

To take an action on Executed FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.
- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.
- Click on **More Info** link under FBR (execute) section.
- Search the required FBR then click on Action link.
- Click on **FBR Certificate** button to download the FBR Certificate in pdf format.
- Click on **View/Upload Report** button to view or upload the report.
- Click on **Feedback Form** button to give the feedback. Once feedback is provided then later it can't be changed and **Feedback Form** button will disappear.
- Click on **Generate Invoice** and **Generate Receipt** button to download the Invoice and Payment Receipt in pdf format respectively.

8.7. FBR Status: Rejected

If equipment slot reservation is rejected by Operator then FBR status will change to Rejected. If FBR status is Rejected, then Operator can Reschedule the slot.

To take an action on Rejected FBR:

- Visit on I-STEM portal www.istem.gov.in.
- Login as an Institute Head, Institute Representative, Department Representative, Faculty In-charge, Facility Coordinator or Equipment Operator.


- On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.
- Click on **More Info** link under Rejected Request(s).
- Search the required FBR then click on Action link.
- Click on **Reschedule** button to allocate the slot. FBR status will change accordingly.
- When FBR status gets changed, I-STEM will send email notification to all concerned institution custodians and user. User will receive the same information through text SMS also on registered Mobile Number.

8.8. FBR Status: Cancelled

If equipment slot reservation is cancelled by user then FBR status will change to Cancelled. If FBR status is Cancelled, then Operator can't take any action.

On the home page, hover cursor over **Reports** and then click on **Dashboard**. It will redirect to booking statistics page. By default it will show last one month data, you can see the data for specific period by selecting **Form Date** and **To Date** and then clicking on **Submit** button.

9. Raise a ticket or Contact Us

 **Need Assistance?** We've launched our new **Freshdesk Support System** for faster issue resolution and streamlined ticketing!

 **Raise a ticket here:** [I-STEM Freshdesk Support](#)

Toll Free No.: 1800 425 3281

10. Disclaimer

- I-STEM doesn't charge to the user and institution.
- I-STEM is using BillDesk Payment Gateway for smooth online transaction.
- Transaction charge may be applied by BillDesk to user or institution. This transaction charge depends on payment option (e.g. Net Banking, Credit/Debit Card, QR, UPI etc.) chosen by user at the time of payment.
- **Payments are non-refundable through the portal. Users may request rescheduling via the portal. Otherwise, the Institution will be responsible for the refund.**