

# **STUDENT PORTAL – COMPLETE DETAILED WORKFLOW**

## **2.1 Student Registration Module**

### **2.1.1 Objective**

The Student Registration module ensures that only legitimate university students can access the Internship Management System using institutional credentials.

### **2.1.2 Registration Requirements**

#### **Email Validation Rules**

- Email must end strictly with:  
@cuiatd.edu.pk
- No other domain is allowed.
- System must validate:
  - Case insensitive match
  - No whitespace
  - No subdomain misuse

#### **Password Validation Rules**

Password must:

- Minimum 8 characters
- At least:
  - One uppercase letter
  - One lowercase letter
  - One numeric digit
  - One special character (!@#\$%^&\*)

System must enforce strong password validation before submission.

### **2.1.3 Registration Data Fields**

Student must enter:

- Full Name
- Registration Number
- Semester
- CGPA (optional or verified later)
- Email
- Password

### **2.1.4 Backend Logic**

When student clicks Register:

1. Validate email domain.
2. Check if email already exists.
3. Encrypt password using secure hashing (bcrypt).
4. Generate:
  - Verification Token (random secure string)
  - Token Expiry Time (Current Time + 10 minutes)
5. Save student record as:
  - Status = Unverified
6. Send verification email with secure link.

### **2.1.5 Email Verification Workflow**

Email contains:

- Verification link with token
- Expiry message (10 minutes validity)

When student clicks:

#### **Case 1 – Within 10 Minutes**

- Token validated.
- Status updated to: Verified
- Account activated.
- Token deleted.
- Redirect to Login page.

#### **Case 2 – After 10 Minutes**

- Token expired.

- Show message:  
“Verification link expired. Please request a new verification email.”
- Option: Resend Verification.

## **2.1.6 Security Measures**

- Token stored securely.
- Token can be used only once.
- Rate limit resend requests.
- Temporary unverified accounts auto-cleaned after 24 hours (recommended).

## **2.2 First Login – Internship Approval Form**

### **2.2.1 Objective**

Student must submit internship request before accessing dashboard.

### **2.2.2 System Behavior After First Login**

When student logs in:

System checks student status:

If status = Verified AND no internship request submitted:

- Hide dashboard.
- Hide reports.
- Hide results.
- Show only Internship Approval Form.

### **2.2.3 Internship Approval Form Fields**

Student must enter:

- Internship Type (Self / University Assigned)
- Company Name (if self)
- Internship Duration
- Start Date
- End Date
- Mode (Onsite / Remote / Hybrid / Freelance)
- Description of Internship

## **2.2.4 Submission Logic**

On Submit:

- Save data.
- Status → Internship Request Submitted
- Show confirmation message:  
“Your internship form has been submitted successfully. Please wait for approval from the Internship Office.”

No redirection allowed.

## **2.3 Internship Office Approval**

### **2.3.1 If Approved**

Status → Internship Approved

Next login:

- Internship Approval Form hidden.
- Student Agreement Form displayed.

### **2.3.2 If Rejected**

Status → Internship Rejected

Student sees:

- Rejection reason.
- Option to edit and resubmit.

## **2.4 Student Agreement Form (Detailed Logic)**

### **2.4.1 Objective**

To formally register internship details after approval.

### **2.4.2 Internship Type-Based Conditional Logic**

#### **Case A – Self Arranged Internship**

Student must fill:

- Company Name
- Company Address
- Company Registration Number
- Company Scope
- Company HR Email
- Company Supervisor Name
- Company Supervisor Email
- WhatsApp Number

- Internship Duration

All fields mandatory.

System validates:

- Email format
- Required fields

Status → Agreement Submitted – Self

### **Case B – University Assigned Internship**

Student fills:

- Personal details only.
- Company fields hidden or disabled.

Status → Agreement Submitted – University Assigned

### **2.4.3 Submission Behavior**

- Save agreement.
- Lock editing.
- Show message:  
“Agreement submitted. Waiting for Internship Office approval.”

## **2.5 Agreement Approval by Internship Office**

### **2.5.1 If Approved**

Status → Agreement Approved

Student Portal unlocks:

- Dashboard
- Reports
- Results

### **2.5.2 If Rejected**

- Student sees comments.
- Can edit and resubmit.

## **2.6 Student Dashboard**

### **2.6.1 Default View**

Dashboard loads automatically after agreement approval.

Displays:

#### **Academic Information:**

- Name
- Registration Number
- Semester
- CGPA

#### **Internship Information:**

- Internship Type
- Internship Mode
- Company Name (or NA)
- Faculty Supervisor Name (or NA)
- Site Supervisor Name (or NA)
- Internship Duration
- Internship Status

### **2.6.2 Dynamic Updates**

When Internship Office assigns:

- Company
- Faculty Supervisor
- Site Supervisor

Dashboard updates automatically.

If not assigned:

Show NA.

## **2.7 Reports Section (Detailed Workflow)**

### **2.7.1 When Faculty Creates Report**

Student sees:

- Report Title
- Description
- Start Date
- Deadline Date

- Countdown Timer

### **2.7.2 Upload Rules**

- Only PDF allowed.
- File size limit (e.g., 10MB).
- Only one submission allowed.
- Before deadline → resubmit allowed.
- After deadline → upload disabled.

### **2.7.3 Status Types**

- Not Submitted
- Submitted
- Late (if uploaded after deadline allowed within grace period)
- Locked

### **2.7.4 Receipt Generation**

After submission:

System generates:

- Submission timestamp
- Downloadable receipt (optional)

## **2.8 Results Section (Final Stage)**

### **2.8.1 Visibility Condition**

Results visible only when:

Status = HOD Approved

### **2.8.2 Displayed Information**

- Internship Type
- Faculty Marks
- Site Supervisor Marks
- Internship Office Marks
- Total Marks (Out of 100)
- Grade
- Pass / Fail
- Approval Date
- HOD Name

### **2.8.3 Downloadable Documents**

Student can download:

- Final Result Sheet (Official PDF)
- Marks Breakdown Sheet
- Internship Completion Certificate

### **2.8.4 Restrictions**

- Results are read-only.
- No editing allowed.
- Archived after semester end.

# **INTERNSHIP OFFICE PORTAL COMPLETE DETAILED WORKFLOW**

## **3.1 Internship Requests Module**

### **3.1.1 Objective**

This module allows the Internship Office to review and approve initial internship requests submitted by students before allowing them to proceed to the agreement stage.

### **3.1.2 Data Source**

Students who completed:

- Email verification
- Internship Approval Form submission

Status:

Internship Request Submitted

### **3.1.3 Interface View**

Internship Office dashboard displays:

- Total Pending Requests
- Approved Requests
- Rejected Requests

Filter options:

- By Semester
- By Internship Type
- By Mode (Onsite / Remote / Freelance)
- By Date

### **3.1.4 Request Details View**

When clicking a request, show:

- Student Name
- Registration Number
- Semester
- CGPA
- Internship Type
- Company Name (if self)
- Internship Duration
- Description

- Submission Date

### **3.1.5 Decision Actions**

#### **Approve**

System logic:

- Update status → Internship Approved
- Unlock Student Agreement Form
- Log action with timestamp
- Send email notification to student

#### **Reject**

System requires:

- Mandatory rejection reason

Status → Internship Rejected

Student sees reason and can resubmit.

### **3.1.6 Security Controls**

- Only Internship Office role can access.
- All actions logged.
- Cannot approve twice.
- Cannot modify student-submitted data.

## **3.2 Student Agreement Requests Module**

### **3.2.1 Objective**

To formally validate internship agreement details before allowing internship assignment.

### **3.2.2 Data Source**

Students with status:

Agreement Submitted

### **3.2.3 View Details**

Display:

- Student Information
- Internship Type (Self / University Assigned)
- Company Details (if self)
- Company Supervisor Details (if self)
- Internship Duration
- Agreement Submission Date

### **3.2.4 Decision Logic**

#### **Approve**

Status → Agreement Approved

- Unlock Student Dashboard
- Allow assignment section access
- Log approval

#### **Reject**

- Require comment
- Status → Agreement Rejected
- Allow student to edit and resubmit

### **3.2.5 Validation**

For Self Internship:

- Company details must be present.

For University Assigned:

- Company fields ignored.

## **3.3 Company Management Module**

### **3.3.1 Objective**

To manage university MOU-based companies and their site supervisors.

### **3.3.2 Add Company**

Required Fields:

- Company Name
- Address
- Industry Scope
- Registration Number
- MOU Signed Date
- Contact Information

Validation:

- Company name must be unique.
- Registration number cannot duplicate.

Status → Active

### **3.3.3 Add Site Supervisors**

Dynamic functionality:

- Default 1 supervisor field.
- Add multiple using "+ Add Supervisor" button.

Each supervisor includes:

- Name
- Official Email
- WhatsApp Number

Validation:

- Email format check
- Unique per company

### **3.3.4 Edit & Update**

Internship Office can:

- Update company details
- Add new supervisors later
- Update supervisor info
- Deactivate company

All updates logged.

### **3.3.5 Security Rules**

- Only Internship Office can modify.
- Cannot delete company if assigned to students.
- Use soft delete if required.

## **3.4 Faculty Supervisor Management**

### **3.4.1 Objective**

To onboard faculty members into the internship supervision system.

### **3.4.2 Add Faculty Supervisor**

Required:

- Name
- Official Email
- WhatsApp Number

### **3.4.3 Email Workflow**

Upon Save:

System generates:

- Secure activation token
- Expiry time (e.g., 30 minutes)

Email contains:

- Official nomination message
- Password setup link
- Expiry notice

### **3.4.4 Activation Flow**

Supervisor clicks link:

- Sets password
- Account status → Active
- Token invalidated

### **3.4.5 Security**

- Token one-time use
- Expiry enforced
- Rate limit resend option

## **3.5 Internship Assignment Module**

### **3.5.1 Objective**

To assign companies and supervisors after agreement approval.

### **3.5.2 Assignment Rules**

Only for students with status:

Agreement Approved

### **3.5.3 Case 1 – Self Internship**

System allows:

- Assign Faculty Supervisor only

System prevents:

- Changing company
- Changing company supervisor

### **3.5.4 Case 2 – University Assigned Internship**

Internship Office must:

1. Select Company
2. Select Site Supervisor (filtered by company)
3. Select Faculty Supervisor

All three mandatory.

### **3.5.5 Email Notifications**

After assignment:

Emails sent to:

- Student
- Faculty Supervisor
- Site Supervisor

Email includes:

- Student details
- Internship duration
- Assigned roles

### **3.5.6 Status Transition**

Status → Internship Assigned

Dashboard updated automatically.

### **3.5.7 Reassignment Logic**

Allowed for:

- University Assigned students only.

Not allowed for:

- Self-arranged company details.

All reassignment logged.

### **3.6 Internship Office Evaluation Module**

#### **3.6.1 Objective**

To contribute official evaluation marks.

#### **3.6.2 Onsite / Remote Model**

Office contributes:

20 Marks

Criteria (example):

- Documentation
- Report Quality
- Compliance
- Overall Impact

#### **3.6.3 Freelancing Model**

Office contributes:

40 Marks

Criteria:

- Earnings verification
- Client rating
- Portfolio proof
- Report quality

#### **3.6.4 Deadline Logic**

Each evaluation includes:

- Start Date
- Deadline Date

Before deadline:

- Editable unlimited times

After deadline:

- Automatically locked

#### **3.6.5 Submission**

Once submitted:

- Status → Office Evaluation Submitted
- Forward to HOD queue

### **3.7 Final Review Before HOD Submission**

#### **3.7.1 Review Stage**

Internship Office can:

- Review faculty marks
- Review site supervisor marks
- Review total calculation

Cannot edit faculty or site marks directly.

#### **3.7.2 Send to HOD**

When ready:

Click:

“Forward to HOD”

System:

- Locks Office evaluation
- Status → Pending HOD Approval
- HOD notified

#### **3.7.3 Restrictions**

After forwarding:

- Internship Office cannot edit any marks.
- Only HOD can approve or return.

# HOD PORTAL COMPLETE DETAILED WORKFLOW

## 6.1 HOD Dashboard Module

### 6.1.1 Objective

The HOD Portal acts as the **final academic approval authority** in the internship lifecycle.

No internship result becomes official until approved by the Head of Department (HOD).

### 6.1.2 Dashboard Overview

Upon login, the HOD sees a structured dashboard showing:

#### Summary Statistics:

- Total Evaluations Pending Approval
- Total Approved Results
- Returned for Correction
- Internship Type Distribution:
  - Onsite
  - Remote
  - Freelance
- Supervisor-wise Pending Evaluations

### 6.1.3 Filtering & Search Options

HOD can filter evaluations by:

- Faculty Supervisor
- Internship Type (Onsite / Remote / Freelance)
- Semester
- Submission Date
- Student Registration Number
- Status:
  - Pending
  - Approved
  - Returned

#### **6.1.4 Data Integrity Rules**

- Only evaluations that are:
  - Completed by Faculty
  - Completed by Internship Office
  - Deadline locked
  - Marked as "Ready for HOD"

are visible in this dashboard.

### **6.2 Final Evaluation Review Module**

#### **6.2.1 Evaluation Listing**

Table view includes:

- Student Registration Number
- Student Name
- Internship Type
- Faculty Supervisor
- Company Name
- Total Marks (Out of 100)
- Status (Pending Approval)

#### **6.2.2 Detailed Evaluation View**

When HOD clicks a student:

System displays full academic breakdown:

##### **Student Information Section**

- Name
- Registration Number
- Semester
- CGPA
- Internship Duration
- Internship Type

##### **Internship Details**

- Company Name
- Site Supervisor (if applicable)
- Faculty Supervisor

◆ **Marks Breakdown**

For Onsite Model:

Evaluator	Max Marks	Obtained
Faculty Supervisor	40	XX
Site Supervisor	40	XX
Internship Office	20	XX
<b>Total</b>	100	XX

For Freelance Model:

Evaluator	Max Marks	Obtained
Faculty Supervisor	60	XX
Internship Office	40	XX
<b>Total</b>	100	XX

System auto-calculates total.

## Supporting Documents

HOD can:

- Download weekly reports
- Download final report PDF
- Download evaluation sheets
- View comments from faculty & office

### **6.2.3 HOD Actions**

HOD has two options:

**Approve Final Result**

OR

**Return for Correction**

### **6.2.4 Return for Correction Workflow**

If HOD selects:

“Return for Correction”

System requires:

- Mandatory remarks
- Select correction target:
  - Internship Office
  - Faculty Supervisor

Status → Returned by HOD

Internship Office unlocks evaluation (controlled override).

After correction → Resubmit to HOD.

### **6.2.5 HOD Editing Restriction**

HOD CANNOT:

- Directly edit marks
- Modify evaluator entries

This preserves academic integrity.

## **6.3 Final Approval Process**

### **6.3.1 Approval Action**

When HOD clicks:

“Approve & Finalize Result”

System performs:

1. Lock all marks permanently.
2. Generate Final Result PDF.
3. Update status → Officially Published
4. Record approval timestamp.
5. Store digital signature reference.
6. Send notification to:
  - Internship Office
  - Faculty Supervisor
  - Student

### **6.3.2 Post-Approval Restrictions**

After HOD approval:

- No mark editing allowed.
- No evaluation changes allowed.
- No reassignment allowed.
- Record becomes archived after semester close.

# **FINAL RESULT STRUCTURE DETAILED**

## **7.1 Onsite Internship Model**

Evaluation Composition:

- Faculty Supervisor → 40 Marks
- Site Supervisor → 40 Marks
- Internship Office → 20 Marks

Total → 100 Marks

## **7.2 Freelance Internship Model**

Evaluation Composition:

- Faculty Supervisor → 60 Marks
- Internship Office → 40 Marks

Total → 100 Marks

# **DOWNLOAD SYSTEM COMPLETE DOCUMENT ARCHITECTURE**

## **8.1 Role-Based Document Access**

**Student Can Download:**

- Final Result PDF
- Marks Breakdown
- Completion Certificate
- Report Submission Receipt

**Faculty Can Download:**

- Student Reports
- Evaluation Summary
- Assigned Student List

**Internship Office Can Download:**

- All Student Evaluations
- Semester Summary
- Company Assignment Report
- Supervisor Allocation Report

**HOD Can Download:**

- Supervisor-wise Evaluation Summary
- Semester Analytics Report
- Bulk Result Compilation

## **8.2 Professional PDF Structure**

Each generated PDF must include:

- University Logo
- Department Name
- Academic Semester
- Student Details
- Marks Breakdown
- Evaluator Details
- Digital Signature Area
- Watermark: “Official Academic Record”
- Unique Verification ID
- QR Code (optional enhancement)
- Timestamp of generation

## **8.3 Bulk Download Features**

Internship Office & HOD can:

- Download all results in ZIP format
- Export Excel (CSV) sheet
- Generate semester performance report
- Download grade distribution summary

# **SECURITY & CONTROL MECHANISMS FULL DETAIL**

## **9.1 Role-Based Access Control (RBAC)**

Roles:

- Student
- Site Supervisor
- Faculty Supervisor
- Internship Office
- HOD
- System Admin

Each role:

- Has defined permissions.
- Cannot access unauthorized modules.

## **9.2 Deadline Locking System**

Every evaluation includes:

- Start Date
- Deadline Date

After deadline:

- Editing disabled automatically.
- Marks locked.
- Status changed.

## **9.3 Audit Logs**

System logs:

- Who entered marks
- When marks edited
- When submitted
- When approved by HOD
- Who downloaded documents

Logs cannot be modified.

## **9.4 Token-Based Authentication**

- JWT-based authentication.
- Role verification middleware.
- Session expiration control.
- Secure password hashing.
- Rate limiting on login.

## **9.5 Secure File Handling**

- Files stored outside public directory.
- Access only through authenticated API.
- Temporary signed download URLs.
- No direct file path exposure.

## **9.6 Permanent Archival**

After semester ends:

- Results archived.
- Mark editing disabled permanently.
- Data preserved for record.
- Only view & download allowed.