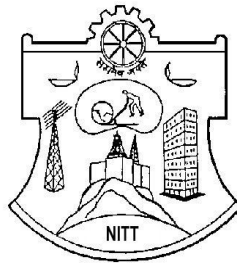


NATIONAL INSTITUTE OF TECHNOLOGY

TIRUCHIRAPPALLI – 15

Web : www.nitt.edu

Phone : 0431 - 2503353 / 2503813



TENDER DOCUMENT

Tender Notification No.: NITT/MIS/2012

Dated: **12-Dec-2012**

Name of the Component : E-Governance Solution for NIT Tiruchirappalli

Quantity Required : One



NATIONAL INSTITUTE OF TECHNOLOGY TIRUCHIRAPPALLI – 15

Tender Notification No. NITT/MIS/2012 Dt. 12-Dec-2012

NOTICE INVITING TENDER

The National Institute of Technology, Tiruchirappalli (NITT) is an autonomous body under Ministry of Human Resource Development (MHRD), Government of India, imparting Technical Education and engaged in Research Activities. It is proposed to procure/ develop/ implement for e-Governance solution for the Institute.

This Tender is issued as a request for implementation of e-Governance based automation for the identified functional requirements of **1) Academic Programmes Processing System & Academic Department Management 2) Human Resources Management and Administration of Director's Office 3) Financial Accounting, Budget, Purchase & Inventory 4) Projects & Consultancy 5) Hostel Management 6) Hospital Management 7) Estate Works & Maintenance 8) Guest House Management 9) Transport Management**

Sealed Quotations under **three cover system** are invited for the solution for the e-Governance of the Institute, subject to the Eligibility of Bidders mentioned under section 1, Terms & conditions mentioned under Section 2 and the Technical Specification mentioned under Section 3, from the reputed Original Software Developers so as to reach Registrar's office on or before scheduled date and time.

Name of the component : **E-Governance Solution for NIT Tiruchirappalli**

Quantity required : One

EMD : Rs. 2,00,000/-

Cost of the Tender Document : Rs. 1000/-

Implementation of the Module : Three months from the date of the purchase order

Important Dates:

| SI.No. | Events | Date | Venue |
|--------|--------------------------------------|------------------------|------------------|
| 1 | Release of Bid Document | 12-Dec-2012 | |
| 2 | Last Date of Submission of Tender | 3-Jan-2013 @ 2.00 pm | Registrar Office |
| 3 | Opening of Cover 1&2 (Technical Bid) | 3-Jan-2013 @ 3.00 pm | A2 Hall, NITT |
| 4 | Opening of Cover 3 (Price Bid) * | 24-Jan-2013 @ 10.00 am | A2 Hall, NITT |

* **Only Technically qualified vendors alone be opened and assessed. Other vendors bid will not be opened.**

SECTION 1 - Instruction to Bidders

1.1 Eligibility of Bidders

1. Only Original software Developer shall bid for this tender.
2. The bidder should have implemented similar E-Governance solution in at least two Universities/ Institutes / Government Departments / Undertakings / Public sector Units with value of work executed not less than 40 Lakhs in a year for the past three years. Software details and the customer contact details shall also be submitted
3. The bidder company should be in existence for at least five years as on 1-1-2013. Necessary supporting documents (PO on IT projects dated before 1.1.2013) to be attached
4. The bidder should produce documentary support that they are financially sound to carry out this project. Average annual turnover should be more than 15 crores each year in the last three years. Necessary financial documents to be attached.
5. Vendor should have organization strength of at least 150 experts including account specialists, management specialists, IT personnel, Engineer & Programmers. Necessary documents to be attached (either Attendance Register or PF statement summary submitted to the Govt.)
6. Last three years income tax clearance certificates and sales tax clearance should be produced along with the bid.
7. The bidder should produce Minimum CMM Level 3 certificate..

The bidder should produce documentary support for the above. Only those who satisfy the above eligibility criteria will be considered for further participation.

1.2 Technology Proposed & Software Platforms

- 1.2.1** The vendor is required to develop the **web-enabled** solution for this project using "Open Source" software. The developed solution should be complete with OS, Data Base Engine, Report Generator, and browser secured dynamic script management and should be platform independent in all respects. The source code developed shall be the property of the Institute and handed over to the Institute in complete with proper documentations.
- 1.2.2** The application should support an N-tier service oriented architecture wherein the application is accessible over a standard browser. Servers of the Institute computer/ Data centre will host the application and all the users will access the application over network.
- 1.2.3** The solution should support workflow automation system, documentation management, bio-metric based authentication/ security, digital signature, smart card based access control, etc.
- 1.2.4** The scope of the bid shall include the system study, design, architecture, program development, installation & implementation, training, handholding, warranty, documentation and support of an integrated information system for the application specified.

1.3 Implementation

1. Configuring the solution as per the functionality requirement of the Institute.
2. Creating the workflows and customizations to enhance the solution for the functionalities.
3. Developing interfaces with systems being implemented by NITT
4. Conducting sessions for the user acceptance of the complete solution
5. Providing functional, technical, system administration, and database administration support at all stages of implementation
6. Preparing all implementation documents such as the analysis document, functional design/ setup document, technical design document for customizations, data migration strategy document, CRP handouts, training documents, user acceptance testing documents, systems operations manuals for the end-users, etc.
7. Providing source codes of all development and customization efforts.

1.4 Training

The bidder should conduct the following training courses during the implementation go-live with support of developed instruction manual:

- a. Functional training for the Administrative Staff of NITT
- b. Technical training for the core team of NITT
- c. System Administration training for the Super-users
- d. Database administration training for the Database Administrators
- e. System Operation training for the end-users
- f. Supervisory officers training (handling workflow activities)

1.5 Integration, Security & Backup

- a. The proposed e-Governance solution should be a fully integrated system of all the modules required by the Institute.
- b. Every module shall be provided with user login & password security. No unauthorized access to modules.
- c. Facility shall be provided for System Administrator for creation of desired number of users for various modules. To different user, depending upon his level & work done by him, various privileges can be given by System Administrator. He/she can give access to specific menus & submenus to a user.
- d. The application should be scalable.
- e. The application should support un-limited number of user access.
- f. All transactions such as data entry/modification shall be stored with user ids & IP address of the machine so that accountability of user is possible.
- g. IP address based protection shall be given for more critical applications. Normally administrative activities such as payroll processing, fess collection, service record entries, students mark processing, etc., are to be performed from specific computers. To such users, IP address based protections may be provided. So such crucial transactions can be entered through specific nodes only.
- h. Well established backup & security procedures shall be defined and will be strictly followed by NIT, Trichy system staff. There shall be no chance of loss of data at any time.

1.6 Events Calendar

Tentative schedule to select a Vendor for the e-Governance solution is

| Sl. No. | Events | Date |
|---------|--|--|
| 1 | Release of Bid Document | 12 th December 2012 |
| 2 | Site Survey | 19 th , 20 th , 21 st December 2012 |
| 3 | Pre-bid Meeting | 24 th December 2012 |
| 4 | Last Date of Submission of Tender | 3 rd January 2013 @ 2.00 pm |
| 5 | Opening of Cover 1&2 (Technical Bid) | 3 rd January 2013 @ 3.00 pm |
| 6 | Assessing Eligibility of the bidder by the Committee | 7 th January 2013 through Mail. |
| 7 | Technical Presentation by Vendors before technical committee | 10 th , 11 th January 2013 |
| 8 | Qualified Technical Vendors intimation | 21 st January 2013 |
| 9 | Opening of Price Bid | 24 th January 2013 |
| 10 | Technical Committee Recommendation | 29 th January 2013 |
| 11 | Contract Award | N.I.T.T to decide |

1.6.1 Site Survey

Interested Vendors should do the system study for each one of the applications before the pre-bid vendor's meeting. Time will be provided for site visit and to contact domain people at the Institute. System specification report should be included in the technical bid based on the information provided in this Bid Document and system study. Any clarification if needed, by a written request would be discussed in the pre-bid meeting.

1.6.2 Pre-bid Meeting

Pre-bid meeting will be held on **24th December 2012 by 10.00 am** at A2 Hall, NIT, Tiruchirappalli for the purpose of reviewing the tender document and receiving questions from the vendors who intend to respond to this tender. Two representatives for each vendor will be allowed to attend the meeting. Vendor will be required to sign in to verify attendance. Vendors in their own interest should attend the pre-bid meeting since it is specifically organized for providing clarifications. Any query on the project outside of this meeting will not be entertained.

1.6.3 Tender Document Submission

The bids shall be written in English language and any information printed in any other language shall be accompanied by an English translation, in which case for the purpose of interpretation of the bid, the English translation shall govern.

Responses to this Tender document must be submitted in a sealed envelopes as per the following procedures and delivered by either post, courier, or in person before **2.00 pm on 3rd January 2013** in the Registrar Office, NIT, Tiruchirappalli. Tender Document received after the due date and time will be rejected. The Institute shall not be responsible for any postal delay and non-receipt/ non-delivery of the bids due to wrong addressee.

Sealed Cover 1 (Tender Document Cost & EMD Amount)

The Cover 1 should contain the following:

1. Cost of Tender Document Rs.**1000/-** (Rupees One thousand only) by Demand Draft (only) drawn on any scheduled nationalized bank in favour of 'The Director, NIT, Trichy' payable at Trichy.
2. EMD value of Rs.**200000/-** (Rupees Two lakh only) by Demand Draft drawn (only) on any scheduled nationalized bank in favour of 'The Director, NIT, Trichy' payable at Trichy.

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| | |
|--|--|
| Tender Notification No. NITT/MIS/2012 Dt. 12-Dec-2012 Cover 1: 2 DDs (Rs.1000 & Rs.200000) | Date of Opening 3-Jan-2013 @ 3.00 pm |
| Name of the Vendor: | |
| Seal | |

Sealed Cover 2 (Technical Bid)

Cover 2 should contain the following in the order mentioned below:

1. Technical Brochure of the E-Governance solution
2. Detailed technical specification
3. Income Tax PAN number of the bidder and its details
4. Warranty period offered for the tendered item to be specified. If the warranty period is not conforming to the schedule of requirements given in section 3 of the document, the bid is liable to be treated as non-responsive and rejected.
5. Acceptance of Institute's Terms and Conditions
6. Contract Form as per Section 5 & Details of the Vendor as per Section 6
7. If the prices are revealed in cover 1 & 2, the offer will be summarily rejected.
8. Copies of customer details with value for the past seven years of similar E-Governance solution in at least two Universities / Institutes / Government Departments / Undertakings / Public sector Units
9. Supporting documents (Purchase order on IT projects) in existence for at least five years as on 1-1-2013
10. Copies of annual turnover (year-wise) for the last three years certified by CAs.
11. Copies of either Attendance Register or PF Statement summary of the staff strength of the organization with designation of the current financial year 2011-2012.
12. Copy of the CMM Level 3 Certificate.
13. Last three years income tax clearance certificates and sales tax clearance should be produced along with the bid.
14. Duly filled and signed all the Appendixes (A1 - A5)

/----- Cut here and paste it on **Cover 2 top left corner** -----/

| | |
|--|--|
| Tender Notification No. NITT/MIS/2012 Dt. 12-Dec-2012 Cover 2: Technical Bid | Date of Opening 3-Jan-2013 @ 3.00 pm |
| Name of the Vendor: | |
| Address: | |
| | Seal |

Sealed Cover 3 (Price Bid)

Price details of the e-Governance solution as per Institute's Price Format given under **Section 4**. Technically qualified offers alone will be opened on a date which will be intimated to the qualified bidders.

/----- Cut here and paste it on **Cover 3 top left corner** -----/

| | |
|--|--------------------|
| Tender Notification No. NITT/MIS/2012 Dt. 12-Dec-2012 Cover 3: Price Bid | Do Not Open |
| Name of the Vendor: | |
| Address: | |
| | Seal |

Sealed Common Cover

All the three sealed covers; Cover 1, Cover 2, and Cover 3 shall be placed in a common outer cover which shall also be sealed and addressed to: **'The Director, National Institute of Technology, Tiruchirappalli-620 015, Tamil Nadu, India.'**

/----- Cut here and paste it on **Top Left Corner of the Common Cover** -----/

| | |
|--|--------------------|
| Tender Notification No. NITT/MIS/2012 Dt. 12-Dec-2012 | Do Not Open |
| Name of the Vendor: | |
| Address: | |
| | Seal |

1.6.4 Technical Evaluation

Technical evaluation will be completed before the opening of the commercial bid. The evaluation will be done based on the technical solution provided in the bid response and the technical presentation by the vendors in the presence of the Technical Committee

1. Solution Architecture and Technology proposed
2. Flexibility of the solution
3. Number of reference sites and reference site response
4. Security/Audit trail provision
5. Disaster Management and System Recovery of the solution
6. Qualification of the Team Members

Weight-age will be assigned by the technical committee and score will be computed for the total of 100. **The Institute reserves the right to technically evaluate the bidder with criteria mentioned above or with modifications.**

1.6.5 Selection of Vendor and Right to Reject

Even though the vendors determined eligible through Technical evaluation, the Institute reserves the right of accepting any bid other than the lowest or even rejecting all the bids without assigning any reasons therefore. The decision of the Institute is final in all matters. The Institute reserves the right to reduce/ alter the quantity to be purchased.

1.7 Warranty/Handholding

- a. The bidder should provide warranty for Two years on completion of the Handholding and the system goes 100% live.
- b. During the warranty period, the developer will provide on-site support (without demanding any labour charges, etc.), all products, documentation updates, patches/fixes, version upgrades.
- c. If during the period of warranty any component of the software solutions is found defective, and which failed in test or in operation, the same shall be rectified or replaced by the successful bidder free of cost.
- d. The Institute shall promptly notify the successful bidder in writing of any defect and claim arising under this warranty. Such notice shall be valid during the period of warranty and up to 30 days after the date of expiry of the warranty period. Upon receipt of such notice, the successful bidder shall promptly and satisfactorily rectify or re-implement the deflection portion of the software.
- e. The liability of successful bidder in respect of such claims against warranty shall be limited to rectification or re-implementation of the concerned component of the software, inclusive of all charges for such rectification and re-implementation. Such rectification or re-implementation shall be warranted for the same period as mentioned above.
- f. In the event of an emergency where delay in rectification would cause serious loss or damage, if successful bidder fails to remedy the defects in accordance with the contract, within a reasonable time (not exceeding one day) NITT may proceed to take such remedial action as may be necessary at the expense of the successful bidder.
- g. Whatever the case may be, the successful bidder will undertake to provide to the persons/ agencies, authorized by NITT for the purpose, requisite maintenance training, technical know-how, and expert assistance on terms mutually agreed upon between NITT and the successful bidder at the time during the warranty/hand holding period.

1.8 Annual Maintenance

- a. NITT reserves the right to outsource the maintenance of the systems to a third party or NITT may decide to perform the maintenance in-house.
- b. The Institute will have the option of entering into an Annual Maintenance Contract (AMC) with the successful bidder for both the software solution and its implementation at NITT for a period of five year at the price quoted in the bid. This shall be in effect from the date of expiry of the warranty period on completion of the implementation. A qualified technical expert should be placed at NITT who has work experience in this type of projects.
- c. The contract shall be renewed every year during the five years duration and NITT reserves the right not renew the contract at the end of any particular year.
- d. As a part of the solution maintenance, the successful bidder will provide patches/fixes during the annual maintenance contract
- e. Any faulty items to be replaced with new items within a week.

1.9 Project Team

The project team shall comprise of Project Manager, System Analyst/Programmers, Account Specialist and a core training team.

1.9.1 Project Manager

The Vendor will provide a Project Manager who will act as a single point of contact for all activities regarding this project. The Project Manager will be totally responsible for all aspects of the work and shall have the authority to make immediate decisions regarding implementation or changes to the work.

1.9.2 System Analyst/Programmers

One should have experience in similar project with reasonable amount of knowledge and experience in the system analysis, software development and implementation.

1.9.3 Account Specialist

He/she shall be a senior person of having at least 5 years of experience in handling corporate accounts with knowledge of Tally (desirable).

1.9.4 Core Training Team

Training has to be organized for faculty & staff level by core training team having experience in conducting training programmes on this e-Governance solution. Trainer should have certification in conducting training with good academic records and experience in conducting training program.

1.10 References

The vendor must provide as many reference accounts as possible of similar works both in scope and design completed by them in India in the recent past. This parameter will be used for evaluation of Vendors.

1.11 Official Contact

Dr. M. Umapathy
(Professor, Dept. of Instrumentation & Control Engineering)
Chairman – MIS Committee
National Institute of Technology
Tiruchirappalli-620015
Ph.: 0431 - 2503353
Email: umapathy@nitt.edu

1. The Institute requires integrated e-Governance solution of all the modules. If any deviation in the e-Governance solution/ incomplete e-Governance solution will not be acceptable.
2. The E-Governance solution should strictly comply with the Technical specification mentioned under Section 3. If selected for order placement, the bidder shall demonstrate the compliance of the solution at the Institute's premises prior to the placement of Order.
3. The certificate for the perpetual license of the software shall be submitted by the bidder along with the supply of the software. The software shall be registered in the name of "National Institute of Technology, Trichy-15".
4. **Performance Security:** The successful bidder shall submit Performance Security at 10% of the contract value in the form of Bank guarantee by scheduled nationalized banks for the total period of warranty.
5. **Release of EMD:** The EMD shall be released after receipt of performance security from successful bidder.
6. **Validity of bids:** The rate quoted shall be valid for a minimum of 120 days from the date of price bid opening. No claim for escalation of rate will be entertained after opening the Tender.
7. **Imports:** In case, the e-Governance solution is to be imported, the Indian agent should furnish authorization certificate by the principles in abroad for submission of the bid in response to this Notice Inviting Tender.
8. **Clarification of Tender Document:** Any clarification of the Tender document may be sought only from the contact person given in this notice inviting tender.
9. **Amendment of tender document or tender opening date:** At any time prior to the last date of receipt of bids, Institute may for any reason, whether at its own initiative or in response to a clarification requested by prospective bidder, modify the Tender document or extend the tender opening date by an amendment.
10. The E-Governance solution shall be implemented within 12 months from the date of the Purchase order.
11. The E-Governance solution shall support all the processes and reports mentioned below each module in the succeeding sheets. If the standard e-Governance solution does not cover any process, then the bidder shall develop programs to support all such unsupported processes and integrate them with the e-Governance solution before implementation of the solution.
12. **Payment:** The payment for the E-Governance solution will be made on different phases and are: 20% on Completion of System Study, 20% on Development and pilot implementation, 30% on Installation and completion for go live, 30% at the end of Handholding.

Authorized Signatory of Vendor & Seal

13. **Payment of excise duty and sales tax / VAT** (on ultimate products) as applicable on the closing date of tender will be to the supplier's / contractor's account. Any statutory variation (both plus and minus) in the rate of excise duty/sales tax/VAT after closing date of tender/revised price bid but before the expiry of the contractual delivery / completion period will be to the account of the office.

The bidder(s) will indicate, in their bid, the amount with exact rate of the Excise and Sales tax/VAT on ultimate finished product, as applicable at tendering stage, separately in the bid. In case the above information subsequently proves wrong, incorrect or misleading

(a) this Institute will have no liability to reimburse the excess in the difference in rates of the item under which the duty/tax assessed finally

(b) this Institute will have the right to recover the difference in case the rate of duty / tax finally assessed is on the lower side. Any increase in excise duty, sales tax / VAT during extended period of the contract / supply order will be to supplier's / contractor's account where such extension in delivery of the materials/completion of the project was on the request of supplier / contractor. However, any decrease in excise duty/sales tax/ VAT during extended period of the contract / supply order, will be to the account of this Institute.

14. **Warranty:** Two year Warrantee of the software shall be provided. During the period of Warranty, the bidder shall provide on-site support for the performance of the e-Governance solution and bug-fixing, patches and other support services shall be provided free of charge.

15. The bidder shall not tamper/modify the tender forms in any manner. In case, if the same is found to be tampered/modified, the tender will be summarily rejected and full Earnest Money Deposit (EMD) will be forfeited. The bidder will be banned from doing business with NIT, Trichy and/or prosecuted.

16. In case of dispute, the matter will be subject to Tiruchirappalli, Tamil Nadu Jurisdiction only.

17. The bidder may sign and affix the seal at the end of every page of the Terms and Conditions document to indicate the Acceptance of all Terms and Conditions by the vendor and the signed document shall be submitted along with the **Technical bid (Cover 2)**.

Name of the Authorized Signatory of Vendor:

Sign of the Authorized Signatory of Vendor

Seal of the Vendor

Date:

SECTION 3

1. ACADEMIC PROGRAMMES PROCESSING SYSTEM MANAGEMENT

The NIT, Tiruchirappalli offers ten under graduate programmes (9 in B. Tech. – 8 semesters and the B.Arch. – 10 semesters) and twenty three postgraduate programmes (18 specializations in M. Tech. – 4 semesters, 3 in M.Sc. – 4 semesters, MBA – 6 trimesters and MCA – 6 semesters), M.S. (by research) in all Engineering departments and Ph.D. programme in all departments.

Over three thousand undergraduate students, thousand five hundred postgraduate students and two hundred Ph.D. scholars are admitted from all over the country. As on September 2012, NIT-T is providing education to 5318 students including 925 female students (5318 = UG-3548 and PG-1770). A Central Counselling Board (CCB) constituted by the Govt. of India coordinates admissions to the B.Tech. and B.Arch. UG degree programmes on the basis of All India Engineering Entrance Examination (AIEEE) ranks. Around 10% of the total numbers of students are admitted through Non-Resident Indians (NRI) and Direct Admission of Students Abroad (DASA) quota. Admissions to M.Tech., MBA and MCA are based on the scores in the Graduate Aptitude Test in Engineering (GATE), Common Admission Test (CAT) and by NIT MCA Common Entrance Test (NIMCET) examinations respectively. Admissions to the M.Sc. programmes are based on entrance examination conducted by NITT. The M.S. (by research) and Ph.D. admissions are made twice in an academic year in January and July sessions. Admission to the M.S. course is through GATE examination held at all India level. Admission to the Ph.D. programme is through entrance exam and interview. GATE/NET qualified candidates are preferred for admission to the research programme. The notification and admission of M.B.A., M.Sc., M.S. (by research) and Ph.D. are done by the institute.

The Office of the Dean (Academic) manages the academic activities of the institution at the administration level in coordination with the departments and centers. The admissions and student registration, conduct of examinations, processing and publishing the results, result analysis, collecting students feedback, conduct of senate meetings, institute day and convocation, maintain hard and soft copy of record of academic documents, issue of transcripts and other certificates, verification for employers, supply of academic information from records to the government are the major functions of the Office of the Dean (Academic).

The students' details have to be maintained as a database. The receipt of admission fee, payment of scholarship, etc need to be maintained. The necessary reports for communication to the Government/MHRD and for the Accounts Department of the NITT have to be developed.

Major functional requirement of the proposed automated system for the conduct of the academic system is listed. Implementation of this functionality is the primary requirement for the Academic Processing.

The following functions are to be incorporated under Academic Processing System in MIS:

I Student Database

A. Student Admission and Registration

1. Recording of personal and academic information along with photograph by the student at the time of admission.

With possibility to have a web page interfaced with internet (www.nitt.edu) to fill the details by the candidates from their home when they are coming for admission.

2. Verification of provided information with documents and save after approval by the verification officer/faculty. Every optional field should be validated i.e., saved only after selection.
 3. Automatic generation of admission number and corresponding barcode to be printed on the admission report.
 4. Entry of original documents collected by the institute.
 5. Automatic generation of two copies of retention certificate, one for the institute record and the other for the student, provision to print.
 6. Automatic generation and assignment of roll number and corresponding barcode in accordance with alphabetical order of the students in a class, to be done by separate master menu in the MIS.
 7. Record of every transaction in admission like change of branch, cancellation of admission, rejoining, redo, etc.
 8. Information on Disciplinary action/Temporary discontinuation and Termination.
 9. Automatic generation of student ID card with barcode
 10. Generation of record from student information based on requirement like category, ranking, etc.
- B. Fee payment and details like date, amount, mode of payment, etc.
1. Display of tuition fee and other miscellaneous fee for every batch of students
 2. *Linking payment of fee through online mode with SBI*
 3. Information on payment of tuition fee and other fees inclusive of examination fee as per the guidelines by the institute
 4. Information on payment of fee for supplementary examinations
 5. Information on payment of fee for condonation, make up classes and summer classes for redo
 6. Information on payment of fee for issue of duplicate ID card
 7. Information on payment of convocation fee
 8. Information on payment of fee for issue of Transcripts, grade cards, duplicates certificates, etc.
- C. Information on scholarship payments made to eligible students: Record of details of adjustments with institute fees from scholarships and balance Stipend and leave record for M.Tech, M.S. (by research) and Ph.D. (FT)
- D. Record of remittance of refunds like caution deposit, mess refund, etc.
- E. Dues/ No dues: Online information of dues/no dues (for issue of provisional degree, degree certificate, transfer certificate and transcript) to be interlinked with dues from institute fee, computer support group (CSG), scholarships, hostel and mess, library, department, etc.
- F. Automatic generation of bonafide certificate

- G. Provision link for online verification of payment of fees and status of dues for H, I, J and K .
- H. Online application for duplicate ID card, record of issue on online verification of payment of fee.
- I. Online application for collecting original certificates retained at the time of admission, record of issue on online verification of no dues and course completion
- J. Online application for issue of transcripts, grade cards, rank certificate, etc., record of issue on online verification of payment of processing fee and shipment made (to be linked with the online despatch section)
- K. Online application for issue of duplicate grade cards, TC and Degree Certificate, record of issue on online verification of payment of processing fee and shipment made (to be linked with the online despatch section)
- L. Online registration for convocation, provision to provide proper postal address with pin code if receiving the degree in absentia, link for online verification of payment of convocation fee.
- M. Automatic registration as alumni on preparation of degree certificate at the time of convocation, provision for updating information and contact details

II Academic database

- A. Display of rules and regulations for every admitted batch of students and programme
- B. Display of academic calendar
- C. Display of examination (regular and supplementary) schedule and hall.
- D. Attendance record of students from attendance entry made by the faculty for each theory and laboratory course. Automatic assignment of grade for attendance based on the rule.
- E. Entry of permission/leave on genuine medical grounds on prior request and intimation
- F. Generation of report of monthly attendance to indicate low/lack of attendance
- G. Entry of attendance for makeup classes, automatic change of the attendance grade, indication of eligibility to appear for supplementary exam in which month and year
- H. Automatic indication of long absence, faculty/department can follow up/verify whether the student is on roll or struck from roll.
- I. Entry of students' feedback about faculty and course, facility for summary to be viewed by the faculty, HoD, Dean (Academic) and Director.
- J. Preregistration of courses to be made by each student before the end semester examination.
- K. Generation of class list of each semester
- L. Registration for supplementary examinations, make up classes, summer classes for redo on online verification of payment of fee.
- M. Issue of Hall Ticket. Automatic generation of hall ticket only if dues are cleared, attendance in each subject meets the eligibility, and pre registration is done.

N. Evaluation

- Indication of credits and whether core course, elective, global elective for each course
- Automatic appearance of attendance grade and evaluation grade for students prevented from appearing the examination
- Entry of marks for theory subject - cycle test 1, cycle test 2, retest, assignment and end semester (ES) examination. Automatic sum of continuous assessment (CA) marks and, total of CA and ES marks.
- Entry of marks for laboratory - continuous assessment marks and end semester examination. Automatic sum of CA and ES marks.
- Automatic allotment of grades based on range of marks assigned for each grade – absent, withheld, redo, etc. should also be assigned separate grades.
- Provision for saving information and final submit
- Provision to obtain printout of the student list alone, skeleton mark entry form and final grade allotment.
- Provision to upload minutes of the Class Committee (CC) meetings and Performance Analysis Committee (PAC) report.
- Provision to generate/print record of minutes of the Class Committee (CC) meetings and Performance Analysis Committee (PAC) report.
- Entry of marks on revaluation by the faculty member
- Entry of marks of supplementary examination, summer term redo
- Automatic calculation and updation of GPA and CGPA and overall class if all subjects are cleared
- Automatic appearance of month & year of passing, and course completion

O. Uploading M.Tech. project thesis linked to library

P. Automatic generation of grade card, course completion certificate, transcript, provisional certificate, rank certificate, transfer certificate and conduct certificate.

Q. Award of degree on online verification of no dues and all subjects cleared, with CGPA and class.

R. Report generation like result statement, result statistics and analysis, academic record, etc.

S. Provision for publishing the results linked to website

III Admission of M.S. (by research) and Ph.D., M.Sc., MBA and MCA

A. Uploading notification for admission

B. Online application and online payment of application fee.

C. Management of DDs of application fee

D. Display of norms for short listing the applicants under various categories

E. Display of list of short listed candidates called for written test and interview

F. Display of results/selected candidates

G. Admission and Registration, as in I A

IV Management of M.S. (by research) and PhD programme

- A. Admission of M.S. & Ph.D.
- B. Generation of list of Ph.D. research scholars under full time (FT) - with institute scholarship, under TEQIP and sponsored project, part time - PT regular and PT external and, non-stipendiary.
- C. Management of stipend of full time research scholars and their leave.
- D. Generation of consolidated statement of registration fee paid to M.S. scholars.
- E. Generation of statement of scholarship availed by Ph.D. (FT) scholars.
- A. Display of list of directed study courses and syllabus.
- B. Automatic generation of subject code for courses under directed study.
- C. Registration for direct study/ M. Tech. course
- D. Evaluation and entry of marks as in **II M**.
- E. Automatic calculation of CGPA

For Ph.D. the student has to earn an average CGPA of 8. For M.S. the student needs to earn a minimum of fifteen credits from the five courses. The minimum cumulative grade point average (CGPA) of 7.5 should be obtained.

If not register for re-exam of course in which earned less than C grade or register for a direct study course. Including the grade obtained from re exam or directed study, the average CGPA should be 7.5.

- F. Uploading of DC and GTC members, schedule and record of Doctoral Committee Meetings/General Test Committee Meetings.
- G. Record of comprehensive examination for Ph.D.
- H. Online request to attend conference (workshop) and On Duty, record of the paper presentation (title of the workshop), date and place of conference (workshop), registration fee, etc. This is to be linked to the scholarship section/respective section office.
- I. Management of research grant given to research scholars. This is to be linked to the scholarship section/respective section office.
- J. Online/forwarding application for sitting fee for research scholars' GTC, DC, synopsis and viva-voce., examiner's remuneration for comprehensive viva-voce and final viva-voce.
- K. Entry of date and time of synopsis presentation, submission of synopsis, panel of examiners.
- L. Entry of thesis title, submission of thesis, evaluation and viva-voce - Indian examiner, foreign examiner, viva-voce examiner, date and time of viva-voce, minutes/result.
- M. Uploading soft copy of thesis linked to library and institute website

V Documents Registration

1. Generation of reports in various formats and data search
2. Senate meetings – upload schedule and minutes

3. Convocation - List of graduands, medal winners, awards and prizes, convocation address, etc.
4. Record of institute day prize winners, merit list, institute day report, best teacher award, etc.
5. Entry and record of students attending internships in universities abroad
6. Entry of students' achievements in sports, cultural, etc.
7. Entry of students' achievements in technical competitions, paper presentations, patents, etc.
8. Online educational verification system, record of authentication on online verification of payment of processing fee and shipment made (to be linked with the online despatch section).
9. Parents' module linked to website
10. Faculty profile – database report generation for institute day, convocation report, MHRD and other communication – to be interlinked with all departments.
11. Data compilation of students for various governmental and other agencies
12. Student travel concession
13. Record of NBA documentation – institute details
14. Purchase: Printing of answer booklets, additional sheets, covers for answer papers, and security forms for print of certificates, covers for despatch of transcripts, cloth line covers for despatch of certificates and other stationery.
15. Display of notifications for students and faculty
16. Record of despatch of certificates
17. Managing/Answering RTIs
18. Representation of roll number by barcode on certificates, use of barcode reader for automatic entry of despatch details
19. Uploading forms and formats that can be printed and used when required

| Sl. | Requirements |
|-----|---|
| (1) | (2) |
| a. | Student Admission and Registration |
| | Provision to record personal and academic information along with photograph by the student at the time of admission with possibility to have a web page interfaced with internet (www.nitt.edu) to fill the details by the candidates from their home when they are coming for admission. Access for candidates getting admission and Dean Academic Office. |
| | Provision to verify the provided information with documents and save after approval by the verification officer/faculty. Every optional field should be validated i.e., saved only after selection. Access for Dean Academic Office. |
| | Provision for automatic generation of admission number and corresponding barcode to be printed on the admission report. Access for Dean Academic Office. |
| | Provision for entry of original documents collected by the institute. Access for Dean Academic Office. |
| | Automatic generation of two copies of retention certificate, one for the institute record and the other for the student with provision to print. Access for Dean Academic Office. |
| | Automatic generation and assignment of roll number and corresponding barcode in accordance with alphabetical order of the students in a class, to be done by separate master menu in the MIS. Access for Dean Academic Office. |
| | Record of every transaction in admission like change of branch, cancellation of admission, rejoining, etc. Access for Dean Academic Office. |

| (1) | (2) |
|-----------|---|
| | Information on Disciplinary action/Temporary discontinuation and Termination Access for Dean Academic Office. |
| | Automatic generation of student ID card with barcode Access for Dean Academic Office. |
| | Generation of record from student information based on requirement like category, ranking, etc. Access for Dean Academic Office. |
| b. | Fee payment and details like date, amount, mode of payment, etc. |
| | Display of tuition fee and other miscellaneous fee for every batch of students Access for Fee section of Main Office. |
| | Provision to link payment of fee through online mode with SBI Access for Fee section of Main Office. |
| | Information on payment of a. Tuition fee and other fees inclusive of examination fee as per the guidelines by the institute b. fee for supplementary examinations c. fee for condonation, make up classes and summer classes for redo d. for issue of duplicate ID card e. convocation fee f. for issue of transcripts, grade cards, duplicate certificates, etc. Access to fee section of main office and to be viewed by Dean Academic and Transcript section of Dean Academic Office. |
| | Information on scholarship payments made to eligible students Record of details of adjustments with institute fees from scholarships and balance Access to scholarship & fee section of main office and to be viewed by Dean Academic and Transcript section of Dean Academic Office. |
| | Provision to generate monthly report on attendance and leave record of PhD (FT), M.S. and MTech students and project staff for the release of the scholarship / stipend and salary. Access to department for online submission and for scholarship & fee section of main office |
| | Provision to link the monthly report on attendance and leave record of PhD and PG students with the Dean Academic office and institute accounts section and to deposit the scholarship/ stipend to students Account. |
| | Record of remittance of Refunds like caution deposit, mess refund, etc. Access to fee section of main office |
| | Online information of dues/no dues (for issue of provisional degree, degree certificate, transfer certificate and transcript) To be interlinked with dues from institute fee, computer support group (CSG), scholarships, hostel and mess, library, department, etc. Access to fee section of main office and to be viewed by Dean Academic and Transcript section of Dean Academic Office. |
| | Provision for students to submit online request for the issue of various certificates Access to student for submission and transcript section of Dean Academic Office for action |
| | |

| (1) | (2) |
|-----------|--|
| c. | Administration of Academic Database |
| | Display of rules and regulations for every admitted batch of students and programme Access to Dean Academic Office, viewed by students and |
| | Display of academic calendar Access to Dean Academic Office, viewed by students and faculty |
| | Display of examination (regular and supplementary) schedule and hall. Access to Dean Academic Office, viewed by students and faculty |
| | Attendance record of students from attendance entry made by the faculty for each theory and laboratory course. Automatic assignment of grade for attendance based on the rule. Access to faculty, viewed by Dean Academic Office and students |
| | Entry of On Duty/permission/leave on genuine medical grounds on prior request and intimation Access to faculty, viewed by Dean Academic Office and students |
| | Generation of report of monthly attendance to indicate lack of attendance Access to faculty, viewed by Dean Academic Office and students |
| | Entry of attendance for makeup classes, automatic change of the attendance grade, indication of eligibility to appear for supplementary exam in which month and year Access to faculty, viewed by Dean Academic Office and students |
| | Automatic indication of long absence, faculty/department can follow up/verify whether the student is on roll or struck from roll. Access to faculty, viewed by Dean Academic Office and students |
| | Entry of students' feedback about faculty and course, facility for summary. To be viewed by the faculty, HoD, Dean (Academic) and Director. Access to student and Dean (Academic) office |
| | Preregistration of courses. Access to student and Dean (Academic) office |
| | Generation of class list of each semester Access to faculty and Dean (Academic) office |
| | Registration for supplementary examinations, make up classes, summer classes for redo on online verification of payment of fee Access to student and Dean (Academic) office |
| | Issue of Hall Ticket. Automatic generation of hall ticket only if dues are cleared, attendance in each subject meets the eligibility, and pre registration is done. Access to student and Dean (Academic) office |
| | d. Evaluation |
| | Indication of credits and whether core course, elective, global elective for each course Access to the department and Dean Academic Office viewed by faculty |
| | Automatic appearance of attendance grade and evaluation grade for students prevented from appearing the examination Access to the faculty and Dean Academic Office |
| | Entry of marks for theory subject - cycle test 1, cycle test 2, retest, assignment and end semester (ES) examination. Automatic sum of continuous assessment (CA) marks and, total of CA and ES marks. Access to the faculty and Dean Academic Office |
| | Entry of marks for laboratory - c.a marks & end semester examination. Automatic sum of CA and ES marks. Access to the faculty & Dean Academic Office |

| (1) | (2) |
|-----------|--|
| | Automatic allotment of grades based on range of marks assigned for each grade – absent, withheld, redo, etc. should also be assigned separate grades Access to the faculty and Dean Academic Office |
| | Provision for saving information and final submit Access to the faculty and Dean Academic Office |
| | Provision to obtain printout of the student list alone, skeleton mark entry form and final grade allotment Access to the faculty and Dean Academic Office |
| | Provision to upload minutes of the Class Committee (CC) meetings and Performance Analysis Committee (PAC) report Provision to generate/print record of minutes of the Class Committee (CC) meetings and Performance Analysis Committee (PAC) report Access to the faculty and Dean Academic Office |
| | Entry of marks on revaluation by the faculty member Access to the faculty and Dean Academic Office |
| | Entry of marks of supplementary examination, summer term redo Access to the faculty and Dean Academic Office |
| | Automatic calculation and updation of GPA and CGPA and overall class iff all subjects are cleared Access to the Dean Academic Office |
| | Automatic appearance of month & year of passing, and course completion Access to the Dean Academic Office, viewed by H.O.D. and faculty |
| | Uploading M.Tech. project thesis linked to library Access to the H.o.D./guide -faculty and Dean Academic Office |
| | Automatic generation of grade card, course completion certificate, transcript, provisional certificate, rank certificate, transfer certificate and conduct certificate. Access to the Dean Academic Office |
| | Award of degree on online verification of no dues and all subjects cleared, with CGPA and class. Access to the Dean Academic Office |
| | Report generation like result statement, result statistics and analysis, academic record, etc. Access to the Dean Academic Office and H.o.D. |
| e. | Admission of M.S. (by research) and Ph.D., M.Sc., MBA and MCA |
| | Uploading notification for admission Access to the Dean Academic Office |
| | Online application and online payment of application fee. Option to print filled application Access to the applicant linked to institute website. H.o.D.s and Dean Academic Office |
| | Management of DDs of application fee Access to Dean Academic Office |
| | Display of norms for short listing the applicants under various categories Access to Dean Academic Office |
| | Display of list of short listed candidates called for written test and interview Access to H.o.D.s and Dean Academic Office |
| | Display of results/selected candidates Access to H.o.D.s and Dean Academic Office |

| (1) | (2) |
|-----|--|
| | Admission and Registration Access to H.o.D.s and Dean Academic Office |
| f. | M.S. (by research) and Ph.D. |
| | Admission of M.S. & Ph.D. Access to H.o.D.s and Dean Academic Office |
| | Generation of list of Ph.D. research scholars under full time (FT) - with institute scholarship, under TEQIP and sponsored project, part time - PT regular and PT external and, non-stipendiary. Access to H.o.D.s and Dean Academic Office |
| | Management of stipend of full time research scholars and their leave |
| | Generation of consolidated statement of registration fees paid to M.S. scholars to attend conferences Access to H.o.D.s and Scholarship section, viewed by Dean Academic Office |
| | Generation of statement of scholarship availed by Ph.D. (FT) scholars Access to scholarship section, viewed by Dean Academic Office |
| | Display of list of directed study courses and syllabus Access to H.o.D.s and Dean Academic Office, viewed by scholars |
| | Automatic generation of subject code for courses under directed study Access to Dean Academic office |
| | Registration for direct study/M.Tech. course Access to student and Dean Academic Office |
| | Evaluation and entry of marks Access to faculty and Dean Academic Office |
| | Automatic calculation of CGPA For Ph.D. the student has to earn an average CGPA of 8. For M.S. the student needs to earn a minimum of fifteen credits from the five courses. The minimum cumulative grade point average (CGPA) of 7.5 should be obtained. If not register for re exam of course in which earned less than C grade or register for a direct study course. Including the grade obtained from re exam or directed study, the average CGPA should be 7.5 Access to faculty and Dean Academic Office |
| | Uploading of DC and GTC members, schedule and record of Doctoral Committee Meetings/General Test Committee Meetings Access to faculty-guide and Dean Academic Office |
| | Record of comprehensive examination for Ph.D. Access to faculty and Dean Academic Office |
| | Online request to attend conference (workshop) and On Duty, record of the paper presentation (title of the workshop), date and place of conference (workshop), registration fee, etc. This is to be linked to the scholarship section/respective section office. Access to student, faculty and scholarship section, viewed by Dean Academic Office |
| | Management of research grant given to research scholars. This is to be linked to the scholarship section/respective section office. Access to student, faculty and scholarship section, viewed by Dean Academic Office |
| | Forwarding application for sitting fee for research scholars' GTC, DC, synopsis and viva-voce., examiner's remuneration for comprehensive viva-voce and final viva-voce Access to faculty and Dean Academic Office |

| (1) | (2) |
|-----------|---|
| | Entry of date and time of synopsis presentation, submission of synopsis, panel of examiners Access to faculty and Dean Academic Office |
| | Entry of thesis title, submission of thesis, evaluation and viva-voce - Indian examiner, foreign examiner, viva-voce examiner, date and time of viva-voce, minutes/result. Access to faculty and Dean Academic Office |
| | Uploading soft copy of thesis linked to library and institute website Access to faculty and Dean Academic Office |
| g. | Documents Registration |
| | Generation of reports in various formats and data search Access to Dean Academic Office |
| | Senate meetings – upload schedule and minutes Access to Dean Academic Office |
| | Convocation - List of graduands, medal winners, awards and prizes, convocation address, etc. Access to Dean Academic Office |
| | Record of institute day prize winners, merit list, institute day report, best teacher award, etc. Access to Dean Academic Office |
| | Entry and record of students attending internships in universities abroad Access to Department and Dean Academic Office |
| | Entry of students' achievements in sports, culturals, etc. Access to department and Dean Academic Office |
| | Entry of students' achievements in technical competitions, paper presentations, patents, etc. Access to department and Dean Academic Office |
| | Online educational verification system, record of authentication on online verification of payment of processing fee and shipment made (to be linked with the online despatch section) Access to Dean Academic Office |
| | Parents' module linked to website Access to parents, can be viewed by student, faculty and Dean Academic Office |
| | Faculty profile – database report generation for institute day, convocation report, MHRD and other communication – to be interlinked with all departments Access to department and Dean Academic Office |
| | Data compilation of students for various governmental and other agencies Access to department and Dean Academic Office |
| | Student travel concession Access to department and Dean Academic Office |
| | Record of NBA documentation – institute details Access to department and Dean Academic Office |
| | Purchase: Printing of answer booklets, additional sheets, covers for answer papers, security forms for print of certificates, covers for despatch of transcripts, cloth line covers for despatch of certificates and other stationery Access to Dean Academic Office |
| | Display of notifications for students and faculty Access to department and Dean Academic Office |

| (1) | (2) |
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| | Record of despatch of certificates Access to Dean Academic Office |
| | Managing the records on RTIs of Office of the Dean Academic Access to Dean Academic Office |
| | Representation of roll number by barcode on certificates, use of barcode reader for automatic entry of despatch details Access to department, Dean Academic Office and despatch section |

ACADEMIC DEPARTMENT, CENTER AND GROUP MANAGEMENT

The departments, Center and Group in the institute are:

1. Department of Chemical Engineering
2. Department of Civil Engineering
3. Department of Computer Science and Engineering
4. Department of Electrical and Electronics Engineering
5. Department of Electronics and Communication Engineering
6. Department of Instrumentation and Control Engineering
7. Department of Mechanical Engineering
8. Department of Metallurgical and Materials Engineering
9. Department of Production Engineering
10. Department of Architecture
11. Department of Management Studies
12. Department of Computer Applications
13. Department of Mathematics
14. Department of Chemistry
15. Department of Physics
16. Department of Humanities
17. Department of Energy and Environmental Engineering
18. Computer Support Group
19. Library
20. Physical Education

Each department, Center and Group is headed by a faculty member. Each department has faculty members, non-faculty members. Each department conducts a UG, PG and Ph.D program. Few centers conduct UG, Ph. D programs. The following are major activities of the above department, Centers and Groups and these activities need to be brought under MIS.

Administration of Student Activities:

- A. Each department, Center and Group conduct Board of Studies (BoS) every year to update the curriculum of their UG and PG program. The entire curriculum must be made available. The head of department, Center and Group will have administrative control, faculty, students and Dean Academic office can have access to this.
- B. For all UG and PG programs department, Center and Group prepares the time table for each semester and decides the faculty allotment for each course in that semester. Faculty member of a department can be allotted to handle a course in any other department also. The head of department, Center and Group will have administrative control, faculty, students and Dean Academic office can have access to this. The record/report must be made available to the Dean Academic office.

- C. Each student need to register every subject in a semester (includes core courses and elective courses). For elective courses option must be provided to limit the number of registration. Moreover course registration for upcoming semester must be linked to issue of Hall ticket for the current semester. Student must be able get the Hall ticket for the current semester only if he/she completes the course registration for the upcoming semester. Each semester, subject wise student registration record/report should be made available to the head of department, Center and Group and Dean Academic office.
- D. The academic performance of UG and PG students is reviewed by the committee (Class Committee) consisting of students and faculty. The number of review meeting is generally three per semester. The head of the department/center/group will nominate a chairperson for the committee, and then the chairperson forms the committee with maximum of 12 faculty members and 15 students. The minutes of the meeting need to be made available to the Head of the department and Dean Academic office.
- E. Entry of student attendance for each subject and availability of attendance record to a student, and his/her parents in online. Provision to link % of attendance with issue of Hall ticket and grade sheet.
- F. Notification of the Performance Analysis Committee (will consist of the same members as the class committee but including the Head of the Department and excluding the student members) meeting, display of minutes and submission of the same with approved results to the Dean Academic office for the publication of results. Administrative control to head of the department and access to the Dean Academic and all faculty members of the institute.
- G. Management of requests (for the issue of various certificates, leave application /information, etc.,) by students and process of approval involving head of the department alone, head and dean(s) alone , head, dean(s) and Director alone, etc.
- H. Attendance and leave record of PhD and PG students and project staff for the scholarship / stipend and salary with the link to institute accounts, Dean(s) office.
- I. Record of PhD and MS (by research) students committee meetings with minutes. Administrative control to the department with an access to the Dean Academic office.

Administration of faculty and staff Activities:

- A. Management of faculty and staff attendance. Submission and approval of all type of leave applications with provision to display availed and available leave record. Submission of monthly leave report to Registrar office with the link to pay bill.
- B. Submission, approval and issue of acknowledgement and office order for various request applications (like request for attending training courses, conferences, visit to other institutions or organizations, etc.,) by faculty and staff.
- C. Submission of faculty and non faculty member's appraisal and record of the same to the personal file.
- D. Record and display of paper and book publication details, awards, patents, Ph. D / M. Tech students guidance, sponsored projects handled, courses attended, invited lectures delivered, courses organized, etc., by faculty members and integration of the same in the institute level report. Administrative control to corresponding faculty member with the access to concerned Dean and Director.
- E. Management of Department meeting, Department Administrative Committee meeting with the display and record of the same. Administrative control to the Head of the Department with the access Dean(s) and Director.
- F. Management of requests under Professional Development Allowance (PDA) from faculty members along with approval process.

Administration of Maintenance of Resources and Others:

- A. Record of all resources like building, Generator etc., with the details of its maintenance history.
- B. Provision for registering of complaints related to maintenance of department building electric supply, water supply and housekeeping and follow up of complaint status.
- C. Management of requests to utilize the facilities of other departments by students and faculty.
- D. Management of inward and outward files and letters.
- E. Issue of gate pass and record of the same.

| Sl. | Requirements |
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| (1) | (2) |
| | Provision to display the entire curriculum with the administrative control to the head of department/Center/Group and access faculty, students and Dean academic office. |
| | Preparation of each semester time table for all the UG and PG courses. |
| | Allotment of faculty for each course. Provision to allot more than one faculty per course. |
| | Provision to request by a department to handle the course by other department. |
| | Provision to register every subject (includes core and elective courses) in a semester by each student. |
| | Provision to set a limit for number of student registration for elective courses by the department. |
| | Each student course registration for upcoming semester must be linked to issue of Hall ticket for the current semester from the Dean Academic office. |
| | Generation of registered student list for each subject according to the department, Center and Group and availability of the same for registering student attendance. |
| | Institute level record/report on course registration for Dean Academic office. |
| | Provision for formation of class committee and display of committee minutes. |
| | Provision to forward the class committee minutes by the department head to Dean Academic office. |
| | Provision to record student attendance for each subject |
| | Provision to access attendance record by a student, and his/her parents in online. |
| | Provision to link % of attendance with issue of Hall ticket and grade sheet |
| | Provision to prevent a student from writing examination based % of attendance in that subject. Provision to indicate all those subjects as redo course against corresponding student record. |
| | Provision for formation of Performance Analysis Committee (PAC) and its meeting schedule. |
| | Approval of the semester results by PAC and provision for forwarding the minutes to Dean academic office. |
| | Provision to issue various certificates in the format specified by the institute to the students |
| | Provision for students to submit request for the issue of various certificates with the provision to fill the specified institute format. |
| | Provision for students to submit leave applications to the department |
| | Provision to generate monthly report on attendance and leave record of PhD and PG students and project staff for the release of the scholarship / stipend and salary. |

| (1) | (2) |
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| | Provision to link the monthly report on attendance and leave record of PhD and PG students and project staff with the Dean Academic office and institute accounts section and to deposit the scholarship / stipend / salary to students Account. |
| | Record of PhD and MS (by research) students committee meetings with minutes. |
| b. | Administration of faculty and staff Activities |
| | Management of faculty and staff attendance. |
| | Submission and approval process of all type of leave applications by faculty and staff. |
| | Provision to display availed and available leaves (all type of leave). |
| | Provision to generate a monthly leave report and submit the same to the Registrar office with the link to pay bill. |
| | Provision to submit request for attending training courses, conferences, visit to other institutions or organizations, etc.,) by faculty and staff. |
| | Incorporation of approval process for the request submitted by faculty and staff |
| | Provision to release office order for various request applications (like request for attending training courses, conferences, visit to other institutions or organizations, etc.,) by faculty and staff. |
| | Submission of faculty and non faculty member's appraisal in the format provided by the institute. |
| | Provision to link the faculty and non faculty member's appraisal to the personal file. |
| | Provision to record and display paper and book publication details, awards, patents, Ph. D / M. Tech students guidance, sponsored projects handled, courses attended, invited lectures delivered, courses organized, etc., by faculty members. |
| | Generation of report on paper and book publication details, awards, patents, Ph. D / M. Tech students guidance, sponsored projects handled, courses attended, invited lectures delivered, courses organized, etc., by faculty members at department level and consolidated report at institute level. |
| | Management of Department meeting & DAC notifications and minutes. |
| | Provision to submit request in the format provided by the institute for the purchase/visit etc., under Professional Development Allowance (PDA) from faculty members along with approval process. This is to be linked with account section. |
| c. | Administration of Maintenance of Resources and Others |
| | Provision to record all the resources like building (with drawing, dimensions, number of fans, ACs, UPS etc.,) Generator etc., with the details of its maintenance history to be linked with Estate Office. |
| | Provision for registering complaints related to maintenance of department building civil works to be linked with Estate Office. |
| | Provision for registering of complaints related to maintenance of electric supply to the department building to be linked with Estate Office. |
| | Provision for registering of complaints related to maintenance of water supply to the department building to be linked with Estate Office. |
| | Provision for registering of complaints related housekeeping of department building to be linked with Estate Office. |
| | Management of requests to utilize the facilities of other departments by students and faculty. |
| | Provision to have the record of inward and outward files and letters |
| | Issue of gate pass and record of the same |

2. HUMAN RESOURCES MANAGEMENT

Human resource management is the management of an organization's workforce. It is responsible for the selection, assessment, maintaining service book entries of the employee. NITT has about 510 staff collective of Faculties and Non-Faculties. The following are tasks need to be included in the MIS:

Service Book Entries:

Staff Personal Information – Staff Unique ID – Category of Staff (Faculty, Administration, Technical, Others, Consolidated Pay, Projects, etc.) - Appointment Order Generation – Increments – Promotions - Leave - new leave - Training Attended - Publication - Seminar/workshop Conducted/Attended - L.T.C - Nominee Details - Document (All kind of Proceedings in PDF format) storage and retrieval - Disciplinary actions - Automatic Date of Retirement (based on the condition) - Service verification - Tour proceedings - Reports generation (Generic Report – PDA - Fields can input by the user) in A4, A3 sizes based on the fields selected. Report Heading can be printed in Bi-lingual.

Quarters Allotment:

Allotment of Quarters to the Staff – Quarters Number, Street Number – Calculation of License Fee - Reports

Payroll Functions:

Monthly Salary Processing of all employees by the Category with Earnings, Deductions (Standard, Non-Standard), Loans (facility to import loans from different sections; such as PF Adv., Vehicle Adv., Education Adv., etc.) – Attendance Entry - Supplementary Bills – Arrear (Pay, DA, Bonus, Loss of Pay) Calculations – Automatic Income Tax Calculations (based on Income tax rules) with various forms (Form 16, Form 27A), Facility to create forms in PDF format with Digital Signature, Proposed Income Tax Statement once in six months, Facility to create data base on monthly basis as per Income Office rules for uploading deducted Income Tax Amount. Month Schedules on deductions. Various kind of reports (Generic Report – required fields can be selected by the section) - Salary Register - Difference on calculation with previous Month data - Pay Slips - Supplementary Bills - Arrear Statement – Abstract - Bank Statements – Schedules & etc.

PF / NPS Functions:

Monthly PF Subscriptions from Payroll, Loan Advance Form, PF Loan Sanctions, Monthly Loan Statement, Bank Statement, PF Interest Calculator, Yearly Ledger Generation with Interest Calculation, Yearly PF slips to the staff, NPS Calculations, uploading etc.

Pensioner Payroll:

Pension Management – Calculation, Qualifying Service, commuted pension, Pensioner/Family Pensioner file creation, Bank Statement, Abstracts, Yearly Statements, claims, Income Tax Calculations.

Bills:

Cheque printing for Payments from different modules, Bill of entry for other payments, Bill of Statement on Daily / Monthly / Yearly.

| Sl. | Requirements |
|------------|---|
| (1) | (2) |
| a. | Service Record (SR) |
| | Staff Personal Information which inclusive of Family Particulars |
| | Appointment Order Generation |
| | Automatic Yearly Increments Proceedings based on the rule |
| | Qualification Particulars |
| | Promotion Particulars |
| | Promotion Order Generation (Proceedings) |
| | Nominee Particulars |
| | Training Attended / Conducted Particulars |
| | Seminar/Workshop Attended/Conducted Particulars |
| | Seminar/Workshop Proceedings |
| | Publications Details |
| | LTC Sanction Proceedings |
| | Various Leave Particulars (EL, ML, etc.) Facility to add new Leave |
| | Leave Sanction Proceedings |
| | Medical Book Generation for Self and the family |
| | Tour Sanction Proceedings |
| | Retirement Proceedings |
| | Retirement Benefits calculation |
| | Storage and Retrieval of Proceedings in PDF format |
| | Generic Report Generator in A4/A3 Sizes (Selecting fields) |
| b. | Quarters Allotments |
| | Quarters Allotment Proceedings |
| | Quarters Details |
| | License (Quarters Rent) Fee Calculation |
| | Report Generation |
| c. | Payroll Functions |
| | Monthly Salary Processing of all Employees by Category |
| | Import Loans from Different sections (EG. PF, Vehicle, etc.) |
| | Attendance Entry |
| | Supplementary Bills (Pay Arrear, DA Arrear, Bonus, LLP) |
| | Income Tax Calculations with Provisional IT Statement, Form 16, Form27A |
| | IT data base on Monthly basis for uploading deducted IT |
| | Monthly Schedules on Deductions |
| | Generic Report Generation (Fields selection option) |
| | Salary – Acquaintance, Pay slips, Abstract, Bank Statements |

| (1) | (2) |
|-----------|---|
| | Difference with Previous month data |
| | Locking of month pay calculations |
| d. | PF / NPS Functions |
| | Monthly PF Subscription Updating from Payroll |
| | Temporary / Part-final Loan Advance Form |
| | PF Loan Sanctions, Abstract |
| | Monthly Loan Statement, Bank Statement |
| | PF Interest Calculations |
| | Yearly Ledger Generation with Interest Calculation |
| | Yearly PF Slips to the staff in PDF Format |
| | PF Account Settlement with Interest |
| | NPS subscription Updating from Payroll |
| | NPS Calculations |
| e. | Pensioner Payroll |
| | Retirement Calculation - Qualifying Service, Commuted Pension |
| | Pensioner/Family Pensioner Data Base Creation |
| | Pensioner/Family Pensioner Pay Calculation |
| | Abstract, Bank Statement |
| | Yearly Pension Statement |
| | Income Tax Calculation |
| | IT data base on Monthly basis for uploading deducted IT |
| f. | Bills |
| | Cheque Printing Facility for Payments from various Modules |
| | Bill of Entry for other Payments |
| | Bill of Statement on Daily / Monthly / Yearly |
| | Bill Passing & Appropriation |

ADMINISTRATION OF DIRECTOR'S OFFICE

The Office of the Director communicates the Director's call for meeting of Deans, Heads of the departments, and other meetings, notes to Deans, Heads of the departments, the Registrar and Deputy Registrars. The office also manages the appointment with Director for faculty members, staff, students and visitors. The Director office receives and manages the files/letters/correspondences from Departments, Dean's offices, Registrar office, etc., for approval and directs them to appropriate office after approval. The following tasks need to be included in the Management Information System (MIS) for the administration of Director's Office:

- A. Management of appointments with Director
- B. Management of Circulars/Notes and other Communications from Director's office

- C. Management of Director's day-to-day and weekly schedule
- D. Management of Director Office operating cost
- E. Management of Director temporary duties
- F. Management of temporary duty advances
- G. Management of incoming and outgoing files/letters/other correspondence.
- H. Display and distribution of minutes of the meetings presided over by the Director

| Sl. | Requirements |
|-----------|---|
| a. | Management of appointments with Director |
| | Provision to seek appointment with the Director by Deans, Heads of the departments and Chairpersons of various committees constituted by the Director. |
| | Provision to seek appointment with the Director by Associate Deans with the approval of the respective Dean. |
| | Provision to seek appointment with the Director by faculty members/staff members with the approval of HOD. |
| | Provision to seek appointment with the Director by student(s) with the approval of HOD or Dean(s). |
| | Provision to seek appointment with the Director by outside persons/ visitors by Director's Secretary. |
| | Management of all appointments by the Director's Secretary with the concurrence of the Director. |
| b. | Communications by Director/ Director's Office |
| | Provision for the Director to send/communicate (note/letter) to Deans. |
| | Provision for the Director to send/communicate (note/letter) to Associate Deans with the intimation to the respective Dean. |
| | Provision for the Director to send/communicate (note/letter) to Department Heads. |
| | Provision for the Director to send/communicate (note/letter) to faculty member and staff member(s) with the intimation to the respective Department Head. |
| | Provision for the Director to send/communicate (note/letter) to Registrar, DRs |
| | Provision to display circulars/note/other communications regularly by the Director's office. |
| | Record of incoming and outgoing fax |
| c. | Other Administrative Activities |
| | Record and track of all incoming files/letters/correspondences to the Director's office. |
| | Record and track of all outgoing files from the Director office. |
| | Provision to request and settle the Director's office operating cost. |
| | Provision to draw and settle TA/DA advances for the Director. |
| | Provision to display weekly program schedule of the Director |
| | Provision to display updated day-to-day program schedule of the Director |
| | Provision to display & distribute minutes of the meetings presided over by the Director |

3. FINANCIAL ACCOUNTING, BUDGETS, PURCHASE & INVENTORY

This module computerizes any number of schemes and cashbooks for any number of financial years. The e-Governance solution is linked with Fees collection, stores, hostels, and payroll modules so that financial entries from these modules will be transferred to accounts module directly and manage following type of accounts. Investment Heads, Budgeting, Department Operating Cost (Imprest amount). Stipend/Scholarship - Pension & Payroll - Loan - PF - Income tax/Professional tax, GIS, FBS, GSLI, LIC - Medical reimbursement - LTC & TA bills - Any no. of cash, bank, and general ledger accounts - Advances to faculty, staff & vendors. Plan Fund / Non-Plan Fund Transactions - Department Operating Cost (Impress money) transactions, Advances, Mail alerts to Department Head regarding pending of advances.

Entries: Cash receipt/Payment - Automatic entries from Daily Fees receipt, GPF, Pay bill, stores Bills/Invoice - Testing & Consultancy transactions - Accounts of various schemes - Income Tax proformas - College Accounts - Bill passing & appropriation - Cheque printing - Bank reconciliation Part payment - Budget preparation – Fee reconciliation.

Reports: Cash Books - Cash Book with bank columns - Bank books - Ledgers - JV Books - Trial Balance - Bank Reconciliation - Receipt & Payments - Day Books - Income & Expenditure - Balance sheet & its schedules - Cheque printing, covering letters & bank wise cheque printed reports - Bill passing voucher, JV & Register - Monthly / quarterly / periodic progress report watching L.C. Payment, LSC, RTGs payments, Stores reconciliation with all department.

| Requirements |
|---|
| (1) |
| Link with Fees Collection, Pension & Payroll Accounts, PF/NPS Accounts, Bills Modules |
| Accounts Management: Investment Heads, Budgeting, Department Operating Cost, Stipend/ Scholarship, Income Tax, Professional Tax, GIS, Medical Reimbursement, LTC, TA Bills |
| Cash Book Generation on Heads of Account |
| General Ledger Accounts |
| Advances to Faculty, Staff & Vendors |
| Plan Fund / Non-Plan Fund Transactions |
| Mail Alerts to Department Head on Pending of Advances |
| Automatic transfer on Cash Receipt / Payments to Cash Book |
| Bank Reconciliation on Receipts and Payments |
| Trail Balance Statement |
| Income & Expenditure |
| Balance Sheet & Its schedules |
| Automatic transfer on Cash Receipt / Payments to Cash Book |
| Bank Reconciliation on Receipts and Payments |
| Trail Balance Statement |
| Income & Expenditure |
| Balance Sheet & Its schedules |
| Budget Preparation |
| Reports: Cash Book |

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| (1) |
| Reports: Ledgers |
| Reports: JV Books & Register |
| Reports: Trial Balance |
| Reports: Bank Reconciliation |
| Reports: Receipts & Payments - Day Book |
| Reports: Income & Expenditure, Balance Sheet & Its Schedules |
| Reports: Bank wise Printed Cheque |
| Reports: Bill Passing Voucher |
| Reports: Monthly / Quarterly Periodic Progress Report |
| Reports: LC Payment, LSC, RTGs Payments |
| Reports: Stores reconciliation with all departments. |

ADMINISTRATION OF BUDGET, PURCHASE AND INVENTORY:

- A. Management of budget allotment by the institute to departments, Centers, Groups, etc., under various heads (like for equipment, building, etc.) and provision to track the record of spending with the generation of report for the institute level.
- B. Initiation of purchase by a faculty member / Purchase In-charge from the budget head, approval of the same according to the purchase value by the Head of the department/center/group or Dean(s) or Director.
- C. Provision to constitute a purchase committee and approval of the same from the Head of the department/center/group or Dean(s) or Director.
- D. Provision to prepare invitation for quotation, tender notification and have the record of invited quotation, tender notification for each department/center/group with provision to generate report in the institute level.
- E. Preparation of technical evaluation, price evaluation report for each purchase and approval of purchase committee recommendations by the Head of the department/center/group or Dean(s) or Director for the placement of purchase order.
- F. Preparation and release of purchase order and record of purchase order, invoice, payment details.
- G. Management of EMD amount received from bidders. Cancellation of PO and record the same
- H. Management of temporary advance request from department/center/group for repair and maintenance, purchase of consumables and components. Provision for the settlement of temporary advance.
- I. Management of Department Operating Cost (DOC), submission of monthly statement of account and reimbursement of the same.
- J. Management of purchase and issue of stationery to the departments from the central stationery stores.
- K. Record for receipt of equipment/stores like furniture, teaching aid tools, etc. with the provision to include in the inventory of department/center/group. Also all the existing equipment/stores like furniture, teaching aid tools, etc. are all to be brought under MIS. Creation of Master inventory record for the institute. Verification of annual stock inventory of department/center/group with master record.
- L. Report for Annual stock verification with provision to write remarks like working/not working/ recommendation for condemnation.
- M. Record of condemnation committee / board proceedings. Report on condemned stores/equipment at department/center/group and institute level.

| Requirements |
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| (1) |
| Allotment of budget by the institute to departments, Centers, Groups, etc., under various heads (like for equipment, building, etc.) |
| Provision to track the record of budget allotment and spending with the generation of report at the institute level. |
| Initiation of purchase note by a faculty member / Purchase In-charge from the any one of the allotted budget head. |
| Approval of the purchase request according to the purchase value by the Head of the department/center/group or Dean(s) or Director. |
| Provision to constitute a purchase committee and approval of purchase committee from the Head of the department/center/group or Dean(s) or Director or Chairman |
| Preparation of invitation for quotation, tender notification and record of invited quotation, tender notification for each department/center/group with provision to generate report in the institute level. |
| Preparation of technical evaluation, price evaluation report for each purchase and submission of purchase committee recommendations. |
| Approval of purchase committee recommendations by the Head of the department/center/group or Dean(s) or Director for the placement of purchase order. |
| Preparation and release of purchase order and record of all purchase order released from the department/center/group. |
| Record of purchase order from the entire departments/center/group at institute level. |
| Record of invoice, approval process for payment (by following a format provided by the institute) with payment details like cheque number/account number etc., at department level. |
| Report on all payment made for each purchase at institute level |
| Management of EMD amount received from bidders |
| Cancellation of purchase order and record of the same at department and institute level. |
| Management of temporary advance request from department/center/group for repair and maintenance, purchase of consumables and components. |
| Provision for the settlement of temporary advance |
| Management of department operating cost, submission of monthly statement of account and reimbursement of the same. |
| Management of purchase of all stationery required for the institute by the central stationery stores. |
| Monitoring and record of distribution of all stationery items to department/center/group. Report at institute level periodically. |
| Record for receipt of equipment, stores like furniture, teaching aid tools, etc. with the provision to include in the inventory of department/center/group. |
| Creating a record in the inventory of department/center/group for all the existing equipment/stores like furniture, teaching aid tools, etc.. |
| Creation of Master inventory record for the institute. |
| Verification of annual stock inventory of department/center/group with master record electronically. |
| Report for Annual stock verification with provision to write remarks like working/not working/ recommendation for condemnation. |
| Provision to constitute a condemnation committee |
| Report on list of condemned stores/equipment at department/center/group and institute level. |

4. PROJECTS & CONSULTANCY

The faculty members of NIT, Tiruchirappalli execute sponsored Research & Development projects, consultancy services for Government and Private Organizations. The R&D projects are funded by central and state government departments, public sectors, private and multinational companies/organizations. The institute also signs and operates MOU with government, public and private organizations for R&D work, upgrading their employee qualification by allowing them to register for PhD and M.S (By Research) program. Most of the R&D projects have provision to appoint Research Assistant/ Research Associate, etc., to work in the project. Apart from R&D projects, faculty members carry out consultancy work (like testing and calibration, etc.,) by utilizing the institute facilities for government and private organizations. All the sponsored research projects, consultancy works and activities under MOU are managed by the OFFICE OF THE DEAN RESEARCH AND CONSULTANCY. The following are the activities:

Administration of sponsored R&D Project:

- A. Registration and record of the sponsored projects details: Title of the project, sponsoring agency, project period, year of sanction, sanctioned fund (with heads), name of the principal Investigator, Co-Investigator(s) / coordinator(s), fund received(with Heads), etc., on receipt of the project sanction.
- B. Correspondence with Project Investigator(s) / Coordinators by the Dean R&D office.
- C. Management of project funds (with heads).
- D. Management of recruitment of project staff, project staff pay and allowances, etc.,
- E. Management of sponsored funds for PhD program.
- F. Management of advances including TA/DA from project funds.
- G. Record of all purchases carried out under project funding.
- H. Management of incoming and outgoing files / letters / correspondence.
- I. Issue of all certificates as required by the sponsoring agency.
- J. Record / Report on sponsored projects at institute level.

Administration of consultancy services:

- A. Registration and record of required consultancy services.
- B. Management of technical services and charges for technical services.
- C. Management of fund earned through consultancy.
- D. Issue of all certificates as required by the customer.

Administration of MOU's:

- A. Registration and record of documents related to MOU's.
- B. Management of activities under MOU including registration to post graduate programs.
- C. Management of funds under MOU's.
- D. Issue of all certificates and documents.

**** For all purchase from the project funds need to implement the requirements given under Administration of budget, purchase and inventory of this tender document.**

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| Requirements |
| Provision to register the projects on receipt of the sanction/award with following details: Title of the project, sponsoring agency, project period, year of sanction, sanctioned fund (with heads), name of the principal Investigator, Co-Investigator(s) / coordinator(s). |
| Provision to prepare acknowledgement for the receipt of the sanction letter and other documents as required by sponsoring agency. |
| Provision to prepare and have a record of receipts submitted to funding agency for the release of fund. If the release of fund is not 100%., provision to record the installment as and when received. |
| Provision to notify the project sanction to the principal Investigator / Co-Investigator(s) / coordinator(s) |
| Provision for the principal Investigator / Co-Investigator(s) / coordinator(s) to prepare and submit the required documents to the office of Dean R&C. |
| Provision to notify the fund received with heads to the project principal Investigator / Co-Investigator(s) / coordinator(s) |
| Approval process for the recruitment of project staff including release of advertisement in the institute web page, constitution of selection committee, submission of selection committee recommendations and release of appointment order. |
| Management of monthly performance report, leave statement and salary for the project staff to be linked with department office |
| Management of sponsored funds for PhD program. |
| Provision to submit advance request (for TA/DA, consumables, etc.,) from the corresponding heads of the project fund in the format provided by the institute and approval process. |
| Provision to settle the advances drawn. |
| Project wise record of all purchase from the project fund. |
| Management of incoming and outgoing files / letters / correspondence |
| Issue of all certificates like utilization certificate, etc., as required by the sponsoring agency. |
| Provision to generate record / report on sponsored projects with major essential details at institute level. |
| Administration of consultancy services |
| Provision to register the consultancy service requirement based on the acceptance from the departments / Faculty member. |
| Provision to submit the brief note on type of technical services to be provided with the indication of charges to be paid by the department / faculty. |
| Provision to have a record of consultancy charges paid with details like department, faculty member , etc., |
| Provision to pay the consultancy charges to the department / faculty member as per institute norms with the link to institute account section / pay bill section |
| Issue of all certificates like Test report, Calibration report etc., as required by the customer. |
| Provision to generate a report at institute level. |
| Administration of MOU's: |
| Provision to have the record of all documents related to each MOU signed by the institute. |
| Management of activities under MOU including registration to post graduate programs, payment stipend or remuneration. |
| Provision to manage funds (if any) received under each MOU with the correspondence to the associated department / faculty member. |
| Record of purchases made using the funds received under MOU |
| Issue of all certificates as required by the organization(s). |

5. HOSTEL MANAGEMENT

NIT, Tiruchirappalli runs 24 hostels & 6 messes catering to 3700 boys and 960 girls (UG, PG & PhD students). The messes and housekeeping of hostels are outsourced and the contract is renewed once in a year or two year by fresh tender process. The hostel and outsource messes are managed by hostel administration committee consisting of Chief Warden, Additional Chief Wardens, Hostel Convener, Wardens, Deputy Registrar (Student Activity), Resident Student Counselors, Hostel Manager and, hostel and mess committee student members. They are responsible for the regular activities of hostels & messes and in any emergency. The following are tasks need to be included in the Management Information System (MIS):

Student Hostel Admission

- A. Hostel admission and fee collection at the time of admission & during semester commencement
- B. Room allotment & room change.
- C. Inventory of furniture & electrical fittings in the room.
- D. Fee payment (mess bill, room rent, establishment, caution deposit) monthly mess bill debit & balance statement, linking with Institute account, Temporary accommodation charges.
- E. Mess allotment, change of mess, mess reduction, mess bill preparation, daily dinners attendance (to be linked through bio- metric attendance), monthly mess feedback, automation of caterer outsourcing process.
- F. Occupancy status hostel wise

Hostel Maintenance

Up keeping of hostels, registering of complaints related to electricity, water supply, carpentry & housekeeping, follow up of complaint status, outsourcing of housekeeping, feedback regarding housekeeping.

Hostel Accounts

Automation of receipts & payments, with monthly and yearly account summary, purchase of consumables & non consumable items for hostels, stock entry of same & updating it periodically, annual stock report. Refund of caution deposit & other leftover balances. Cash register management.

Hostel Staff Management

Establishment (appointments, increments, service record, leave), salary arrears, PF, loans & advances

Disciplinary Activity

Record of disciplinary action of both student & staff, record of action taken, receipts of fine payment

Certification & Permission

Issuance of no-dues certificate, application for temporary accommodation in the hostel, hostel vacating request, bonafide certificate, residential status certificate etc.,

| Requirements |
|--|
| Provision for hostel admission and fee collection at the time of admission. |
| Provision for hostel admission cancellation and refund of fee with the consolidated record / report of the same. |
| Provision for hostel fee collection during the commencement of each semester. |
| Provision for room allotment. |
| Provision to submit application for room change in the same hostel or in the other hostels. |
| Provision for change of room in the same hostel or allotting room in other hostels. |
| Provision for the allotment of mess. |
| Provision to prepare daily dinners attendance through bio- metric attendance. |
| Provision for change of mess on monthly basis. |
| Provision to apply for mess reduction. |
| Provision to prepare mess bill and display of the same. |

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| Submission of monthly mess feedback by the students and generation of consolidated report for each mess. |
| Provision to display action taken report on students mess feedback. |
| Provision to pay mess bill, room rent, establishment charges and caution deposit. |
| Generation of report on monthly mess bill debit & balance statement. |
| Provision to submit application/request for Temporary accommodation. |
| Provision to allot Temporary accommodation and record of the same with the charges collected. |
| Provision to submit hostel vacating request and the approval process of the same. |
| Provision to submit request for issue of no-dues certificate, bonafide certificate, residential status certificate etc., |
| Issue of above mentioned certificates in the format provided by the institute hostel administration. |
| Hostel Maintenance |
| Registering of complaints related to electricity, water supply, carpentry and its status report on daily basis. |
| Provision to record and track the housekeeping status in each hostel on daily basis. |
| Provision to submit feedback on housekeeping by the students and display of action taken report. |
| Hostel Inventory |
| Provision to submit request for the purchase of consumables and non consumable items and approval process for the same. |
| Provision to have a record of all purchase order. |
| Provision to have the record of invoice for all purchased items. |
| Provision to create master inventory for the hostel administration. |
| Provision to create, maintain inventory of furniture, electrical fittings, etc., in each hostel room wise. |
| Provision to upload/transfer the existing hostel inventory. |
| Provision to generate annual stock verification report based on the master inventory and each hostel inventory. |
| Hostel Accounts |
| Automation of receipts and payments, with monthly and yearly account summary. |
| Provision to track and generate the record of refund of caution deposit and other leftover balances. |
| Record of individual student mess bill and debit statement. |
| Hostel Staff Management |
| Record of all hostel administrative people (like wardens, etc.,) with their contact details. |
| Provision to register the attendance and generation of monthly report for the payment of salary. |
| Submission and approval of leave applications. |
| Provision to maintain service record (including pay, increment, loan, advance, leave details) of all hostel staff members. |
| Management of new appointments |
| Record of disciplinary action of both student & staff, record of action taken report, receipts of fine payment. |

6. HOSPITAL MANAGEMENT

Institute has Hospital to cater the medical, paramedical and clinical services to the students, faculty and staff members of the institute. It operates with duty doctors, visiting doctors, paramedical staff nurses and other supporting staff members. The following are major procedures practiced in the hospital and are to be brought under e-governance.

- A. Creation of medical record for each student admitted to the institute with their vital health records (like blood group, etc.). This must be linked with academic section of the institute for all other details about students like his/her permanent address, phone number, contact person for emergency, etc.
- B. Creation of medical record for each employees of the institute with their vital health records (like blood group, etc.). This must be linked with establishment section (Human resource management section) of the institute for all other details about employees like his/her permanent address, phone number, contact person for emergency, their family members etc.
- C. Creation of medical record for every family member of each employee of the institute with their vital health records (like blood group, etc.). This must be linked with establishment section (Human resource management section).
- D. The pharmacy in the hospital is outsourced. The medicines, injections etc., in the data base of pharmacy must be linked to MIS and made available for the doctors to prescribe to the patients.
- E. The clinical lab in the hospital is also outsourced. The type of clinical tests available in the data base of clinical lab must be linked to MIS and made available for the doctors to prescribe clinical tests to the patients.
- F. Provision for the doctors to record the investigation, diagnosis and prescription for the students, employees and family members of each employee in the MIS.
- G. Upon doctor's prescription medicines, injections, etc., are issued and clinical tests, etc., are carried out. MIS should have a provision to have a record of all medicines, injections issued and clinical tests carried out for each student and employee with its cost.
- H. Provision to provide a consolidated report on medicines, injections issued and clinical tests carried out for each student and employee with its cost to the hospital administration every day for monitoring/records and consolidated report for every month to the institute administration for payment to the outsourced pharmacy and clinical lab. To be linked with institute accounts.
- I. The hospital has visiting doctors on specific days in a month. MIS should have provision to display the schedule of visiting doctors in the start of every month.
- J. Provision for booking appointments for consultation with visiting doctors.
- K. Based on doctors advice patients are referred to other hospitals. Provision to have a record of the same with the consultation/treatment fee. This is to be linked with institute accounts section.
- L. Issue of medical certificates to the students and employees by the authorized doctors only based on the medical record and treatment given/recommended by the institute hospital.

- M. The hospital works 24 hrs; hence the duty doctors and staffs work in three shifts. The MIS should have provision to schedule the shift and duty for doctors and other staffs.
- N. Provision for doctors including visiting doctors and other staff members to register their daily attendance. Automatic generation of monthly leave report with the link to institute pay bill section.
- O. The procedure for submission of leave applications and its approval, any other request submission by the hospital staff is similar to the administration of faculty and staff in academic departments/centers/groups.
- P. The procedure for administration of budget, purchase and hospital inventory is similar to the academic departments/centers/groups. Hence the same may made available including the annual stock verification procedure.
- Q. Institute has an ambulance and planning to have outsourced ambulance also. Provision to track the use of ambulances on day to day basis with the facility to generate monthly report.
- R. Provision to register and provide medical care to non-student, non-employees and non- family members of the employees on emergency.
- S. The institute is planning to appoint counselors mainly for students. The counselors are to be part of institute hospital. Provision is to be made in the MIS to book an appointment with counselors.
- T. The hospital is administrated by a Dean/Associate Dean/Committee provision in MIS to send invitation for meeting and display the minutes of the meeting.

| Requirements |
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| Creation of medical record for each student admitted to the institute with their vital health records (like blood group, etc.). This must be linked with academic section of the institute for all other details about students like his/her permanent address, phone number, contact person for emergency, etc. |
| Creation of medical record for each employees of the institute with their vital health records (like blood group, etc.). This must be linked with establishment section (Human resource management section) of the institute for all other details about employees like his/her permanent address, phone number, contact person for emergency, their family members etc. |
| Creation of medical record for every family member of each employee of the institute with their vital health records (like blood group, etc.). This must be linked with establishment section (Human resource management section). |
| Provision to link the medicines, injections etc., in the data base of pharmacy to MIS and made available for the doctors to prescribe to the patients. |
| Provision to link the type of clinical tests available in the data base of clinical lab to MIS and made available for the doctors to prescribe clinical tests to the patients. |

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| Provision for the doctors to record the investigation, diagnosis and prescription for the students, employees and family members of each employee in the MIS. |
| Provision to have a record of all medicines, injections issued and clinical tests carried out for each student and employee with its cost. |
| Provision to provide a consolidated report on medicines, injections issued and clinical tests carried out for each student and employee with its cost to the hospital administration every day for monitoring/records. |
| Provision to provide a consolidated report on medicines, injections issued and clinical tests carried out for each student and employee with its cost for every month to the institute administration for payment to the pharmacy and clinical lab with the link to institute accounts section. |
| Provision to display the schedule of visiting doctors in the start of every month. |
| Provision for booking appointments for consultation with visiting doctors. |
| Provision to have a record of the patients referred to other listed hospitals with the consultation/treatment fee. This is to be linked with institute accounts section. |
| Issue of medical certificates to the students and employees by the authorized doctors only based on the medical record and treatment given/recommended by the institute hospital. |
| The MIS should have provision to schedule the shift (three shifts) and duty for doctors and other staffs. |
| Provision for doctors including visiting doctors and other staff members to register their daily attendance. |
| Automatic generation of monthly leave report with the link to institute pay bill section. |
| Provision of management of leave applications and its approval, any other request and its approval similar to the administration of faculty and staff in academic departments/centers/groups. |
| Provision to manage the budget, purchase and hospital inventory similar to the academic departments/centers/ groups, including the annual stock verification process. |
| Provision to track the use of ambulances on day to day basis with the facility to generate monthly report. |
| Provision to register and provide medical care to non-student, non-employees and non-family members of the employees on emergency situations. |
| Provision is to be made to book an appointment with counselors. |
| Management of hospital committee / Dean / Associate Dean meeting invitation and minutes. |

7. ESTATE WORKS & MAINTENANCE

The Estate Maintenance department of NIT, Tiruchirappalli has the responsibility to maintain the NITT campus spread over an extent of 777.77 acres. The Department works under the overall control of Chief of Works. The Chief of Works coordinates and oversees the functions of the building, water supply, electrical wings and overall campus. The following are tasks need to be included in the Management Information System (MIS) for the administration of estate maintenance department.

- A. Complete plan of NITT campus
- B. Record of all Institute buildings
- C. Award and track of CPWD contracts.
- D. Award and track of civil and electrical contracts
- E. Record of faculty and staff quarters.
- F. Record of maintenance work in faculty and staff quarters.
- G. Utilization of electricity and water
- H. Management of complaints
- I. File management
- J. House keeping
- K. Management of estate office staff members
- L. Management of commercial shops in the Institute

| SI. | Requirements |
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| | Provision to have a record of layout and plan of NITT campus |
| | Provision to have a record of all the buildings in the Institute with its plan, year of construction, cost of construction, contractors detail, etc., |
| | Provision to register new contracts for buildings/ electrical/ roads work with CPWD |
| | Provision to track the progress all CPWD contracts as per the terms of reference |
| | Provision to record of payment history |
| | Record of all faculty and staff quarters |
| | Record of faculty & staff quarters maintenance works carried out |
| | Provision to generate the electricity bill for faculty and staff quarters with the link to the Institute pay bill section |
| | Record of water consumption by the Institute |
| | Provision to register civil , electrical, water and housekeeping complaints in the format provided by the Institute |
| | Record of housekeeping, details of employees of the housekeeping service provider, and housekeeping payment details |
| | Record and track of all the files, letters and other correspondences |
| | Provision to register daily attendance, record of leave with link to pay bill section |
| | Record of buildings in the Institute for the commercial purpose |
| | Record of license, license holder, monthly rent, history of electricity and water bill payment for each shop in the Institute |

8. GUEST HOUSE MANAGEMENT

The Institute has two guest houses namely Old Guest House (OGH) and New Guest House (NGH). The old guest house has 18 AC rooms and the new guest house has 42 AC rooms. All the rooms are furnished with cots, study table, portable television, and chairs with cushion. The catering and housekeeping of guest house is outsourced and the contract is renewed once in two years. Though the guest house is outsourced it is fully administrated by a Faculty member In-Charge of the guest house. The following are tasks need to be included in the Management Information System (MIS):

Management of room booking and catering

Allocation of rooms

Occupancy status

Billing for guest occupants and catering

Record of all employees of service provider

Inventory of guest house

Management of water, electricity and other complaints

Management of room rent and payment for service provider

Cash register maintenance

Monthly and yearly statements for all receipts and expenses

Guests Feedback

| Sl. | Requirements |
|-----|---|
| | Provision to submit application for room booking in the format provided by the institute |
| | Provision to acknowledge the application with the status |
| | Provision to submit application for catering services in the format provided by the institute |
| | Provision to acknowledge the catering service request |
| | Provision to allot rooms |
| | Provision to display occupancy status |
| | Provision to prepare room rent bill and dining bill separately |
| | Record of consolidated monthly report on room rent bill |
| | Provision to book catering services alone by faculty members and billing for the same |
| | Provision to register and have a record of all employees of service provider |
| | Provision to submit monthly bill by the service provider with approval process for payment. |
| | Provision to register complaint by the service provider for the water supply and electric supply problems with Estate Office. |
| | Record of all Inventory of guest house including room wise stock entry and maintenance. |
| | Cash register maintenance |
| | Provision to generate monthly and yearly statements for all receipts and expenses |
| | Provision to register feedback on service provider by the guests |

9. TRANSPORT MANAGEMENT

NIT Trichy has a separate transport section which caters the transport needs of institute like educational tours; field visits by students, School trips for the wards of the staff, etc. The numbers of vehicle are limited. The section also supports Co-curricular and extra-curricular activities of the institute. The following are the requirement in MIS:

Vehicle Database and History of Vehicle Maintenance

Vehicle request and allocation

Driver Scheduling

Daily trip chart

Fuel consumption

Accounts

| Requirements |
|---|
| Registration of all vehicles with details like Registration Number, Year of purchase, cost, etc., |
| Service details of each vehicle like regular service, FC, etc., |
| Record of major service carried out |
| Record of fuel consumption with account |
| Provision for vehicle booking and cancellation as per the format issued by the institute |
| Provision to prepare and display vehicle schedule on weekly basis |
| Provision to prepare and display driver schedule on weekly basis and management of staff attendance, leave, etc., |
| Record of inventory |
| Record of all purchases details like Purchase order, Invoice and payment details |
| Provision to register the attendance and generation of monthly report for the payment of salary. |
| Provision to register and record disciplinary action. |
| Management of new appointments |

SECTION 4 - Price Bid*(To be submitted in the Cover 3)*

The bidder shall carefully follow the points given below, while filling the price schedule

- The rates shall be quoted in Indian Rupee for NIT-Trichy for supply within India.
- Unit price rate has to be quoted **excluding Taxes**. Taxes and Duties should be quoted separately both in figures and percentages, considering exemptions if any.
- In case of import both CIF and/or FOB rate shall be quoted. Any other expenditure involved in bringing the software to Chennai shall be explicitly specified
- The bidder shall indicate the excise duty exemption for the goods, if applicable
- The Institute is eligible for customs duty and excise duty exemption
- Unit Price Rate quoted should be inclusive of Testing, Commissioning, Installation of e-Governance solution in the Institute's premises, and Training.
- The Price shall be quoted both in Words and Figures without corrections and over writing.
- There should not any variation in Words and Figures. If there is a variation in the rate quoted in Words and rated quoted in Figures, the former rate only will be taken into the consideration.

4.1 Unit Price (Excluding Taxes & Other charges)

| Sl. No. | Particulars | Price | |
|---------|---|-----------------|----------|
| | | In Figure (Rs.) | In Words |
| 1 | E-Governance Solution for NIT Tiruchirappalli including 2-Years Warranty with on-site technical expert(s). | | |

4.2 Taxes and Other Charges

| Mention the type of Taxes, & Duties | Percentage & in Figures |
|-------------------------------------|-------------------------|
| | |
| | |
| | |
| | |

4.3 Annual Maintenance Charges for Five Years (after 2 Years Warranty)

| AMC | % of Unit Price | | | | |
|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | 1 st Year | 2 nd Year | 3 rd Year | 4 th Year | 5 th Year |
| With On-site Technical Expert | | | | | |
| Without On-site Technical Expert | | | | | |

SEAL**SIGNATURE OF THE BIDDER****Date:**

CONTRACT FORM

(To be provided by the Bidder in the Business Letter Head)

1. {Name of the Supplier's Firm} hereby abide to install and Implement the 'Management Information System for e-Governance of the National Institute of Technology Tiruchirappalli' as per the schedule mentioned in the Section 3 of the tender document for supply & implementation of MIS, if the purchase order is awarded.
2. The item supplied will be conforming to the specifications stated in the tender document without any defect and deviations
3. Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NIT, Trichy during this period.
4. Back to back software support contract with the Original software vendor will be entered for the Warranty and AMC period.
5. Source Code shall be given to NITT.

Name :

Designation :

Business Address :

Place:

Date:

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SECTION 6 (To be submitted in the Cover 2)

Details of the Vendor

| General Information | Bidder's Response | | |
|---|-------------------|----------------|---------------|
| Name of the Vendor | | | |
| Address of Head Office in India | | | |
| Contact Information: <div style="margin-left: 100px;">Person's Name:</div> <div style="margin-left: 100px;">Designation:</div> <div style="margin-left: 100px;">Address:</div> <div style="margin-left: 100px;">Phone:</div> <div style="margin-left: 100px;">Email:</div> | | | |
| Organizational Setup in India <div style="margin-left: 100px;">Number of Offices:</div> <div style="margin-left: 100px;">Number of Technical Employees:</div> | | | |
| Location of Offices in India and Addresses | | | |
| Number of years actively in the Indian software industry | | | |
| List of Indian customers similar to NITT for implementation of the proposed software solution product: <ul style="list-style-type: none"> • Government customers • Public sector customers with turnover more than Rs.15 crores Provide contact names, telephone numbers | Client Name | Contact Person | Telephone No. |
| | | | |
| | | | |
| | | | |
| | | | |
| Can Visit of the NITT team be arranged to each of the above sites? | | | |

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Appendix A (To be submitted in the Cover 2)

A.1 Technical Specification of Management Information System (MIS)

| Requirement of NIT | Complied (Yes/ No) | Document Reference |
|---|--------------------|--------------------|
| Confirm that the following Modules are available | | |
| ➤ Academic Programmes Processing System & Academic Department Management | | |
| ➤ Human Resources Management & Administration of Director's Office | | |
| ➤ Financial Accounting, Budget, Purchase & Inventory | | |
| ➤ Projects & Consultancy | | |
| ➤ Hostel Management | | |
| ➤ Hospital Management | | |
| ➤ Estate Works & Maintenance | | |
| ➤ Guest House Management | | |
| ➤ Transport Management | | |
| Confirm that the e-Governance solution has the following features | | |
| The source code of e-Governance Solution shall be given to NIT, Trichy. | | |
| Have implemented similar solution in at least two Universities / Institutes / Government Departments / Undertakings / Public sectors Units with annual turnover not less than 40 lakhs each month for the past three years. | | |
| Company should be in existence for at least five years as on 1-1-2013 | | |
| Financially sound to carry out this project for a period of three years. Average annual turnover should be more than 15 crores in each year in the last three years. | | |
| Have organization strength of at least 150 experts including account specialists, management specialists, IT personnel, Engineer & Programmer. | | |
| Income tax clearance and sales tax clearance certificates available for the last 3 years. | | |
| Confirm that the e-Governance solution has the following features | Yes / No? | |
| Is fully an integrated system? | | |
| Is it possible to implement in phased manner? | | |
| Is same module can be opened in two different systems by the same user? | | |
| Is System administrator shall be in a position to give access to limited menus – sub menus to a user? | | |
| Is the solution supports Workflow Automation System, Documentation Management with configurable? | | |
| Is the solution supports bio-metric based authentication, digital signature, smart card etc.? | | |
| Is Data Vulnerability certification obtained? (if yes proof to be enclosed) | | |
| Is the solution support to generate alerts/warnings on any wrong functionality of the application? | | |

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A.2 Technical Specification of Management Information System (MIS)

| Architecture | Please specify |
|--|----------------|
| Indicate the supported networking architecture under which the application can run | |
| Is the application web-enabled? | |
| Can all the application components such as menu screens, data input forms, reports, and graphical reports etc., available to run using browsers on Intranet /Internet? | |
| Are all transactions accessible through the web without any additional software on the workstations/ thin clients? | |
| Specify the minimum bandwidth required per user to efficiently operate the solution over WAN? | |
| Can the application be accessed over a dial-up connection? | |
| Confirm that the application can be used 24x7 | |
| Data Base | |
| Does the system use a well-established database management system with SQL query capabilities? | |
| Names of RDBMS supported (specify the version) | |
| How is the connectivity made to the RDBMS (ODBC, JDBC, or any other drivers)? | |
| Does the application have normalized databases with controlled redundancies? | |
| Platforms | |
| What are the hardware/operating systems on which the application can run? | |
| What are the operating systems on which the application client can run? | |
| Are there provisions for portability of the application to different platforms? | |
| Provide hardware (server) configuration required to run your software solution product | |
| Development & User Interface | |
| What is the programming language (Front-end) used? | |
| Does the application have GUI with context of users? | |
| Is the help customizable for particular users/ group of users? | |
| Is there is any limitation on storing and online accessing on data? | |
| Can reports/ data be easily downloaded/ exported into Spreadsheets and Word Documents? | |

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A.3 Technical Specification of Management Information System (MIS)

| System Integration | Please specify |
|--|----------------|
| How the integration is achieved with other systems, i.e. is there is generic input/ output interface, or is it an ASCII file/ ODBC file interface? | |
| Is connectivity with bar codes, PDAs, Smart Card, Finger print device, mobile devices etc. supported? | |
| Can static data be updated on-line and/or imported from another system? | |
| Can entities for dynamic data be imported/ exported from/ to other systems? | |
| Does the application integrate with document management and workflow automation systems? | |
| Access Control Rights & Security | |
| What levels of security are available within the application, viz. system level security, module level security, screen level security, record level security, and field level security? | |
| Does the system provide password protection in addition to the system security access provided by the operating system? | |
| Is access across all modules possible for a user by means of a single ID and password? | |
| What types of audit trails are available within the application? | |
| What parameters are traced for the transactions, e.g. user id, date and time, program, terminal location, nature of change etc? | |
| Is IP address based protection can be given for more critical applications? Especially payroll processing, service record entries, fees collection, Students mark sheets etc. | |
| Is automatic generated e-mail facility (eg. Email notification on result declaration, pending dues)? | |
| Confirm capability of logging(Event Log) all security changes, transactions and attempted violations. | |
| Does the application maintain the audit trail of the activities of the system administrator? | |
| Is there any tool for system administrator to assist him/her in viewing/ granting access rights to users/ groups? | |
| Can user menus be modified or reorganized? | |
| Can on-line and update screens be built by authorized users? | |

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A.4 Technical Specification of Management Information System (MIS)

| System Control & Administration | Please specify |
|--|----------------|
| Does the application provide for the following system functions to be carried out automatically? a. Database housekeeping b. Back-up and recovery c. Communications Control d. Archiving e. Disk Mirroring Capabilities f. Database Replications g. Batch Processing h. Job Scheduling | |
| Is there on-line help available by field or by function? | |
| How long does is the downtime typically for recovery from the backup? | |
| Confirm ability to popup operating procedure for all users | |
| Confirm availability of database imaging feature | |
| Confirm ability to define certain fields as mandatory fields | |
| Can the e-Governance solution recover without damage to master files or transaction data from adverse conditions such as power failure? | |
| Software Flexibility | |
| What is the level of flexibility to make major changes to work practices, reporting hierarchies, code structures etc.? | |
| Ability to copy, edit and load information pertaining to an existing organizational unit to a newly created organizational unit (e.g. department or section) | |
| Can the users configure workflows on their own? | |
| Reports & Implementation | |
| Can different printers be allocated for different types of documents? | |
| Can the reports produce amount figures in words? | |
| Does the application provide the flexibility to schedule automatic running of large reports during non-working hours? | |
| Please give the exact number of people going to be involved in the implementation of this solution. Provide profiles of these employees mentioning all the details. | |

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A.5 Technical Specification of Management Information System (MIS)

| Training | Please specify |
|--|----------------|
| <p>Provide the details of the following training classes to be executed during implementation:</p> <ul style="list-style-type: none"> • Functional Training • Technical Training • System Administration Training • Database Administration Training • Supervisory Officer Training • End-user training | |
| <p>Furnish details of the training modules and number of days of training applicable to each of the training classes listed above</p> | |
| <p>Provide a list of training deliverables and documents that will be provided during the implementation</p> | |
| Migration of Data & Documentation | |
| <p>The data is available in different systems; Oracle, MySql, FoxPro, while rest exists in manual form. The bidder must take the responsibility for the complete data collection and creation required for the solution for these sources.</p> | |
| <p>Kindly confirm that each of the following documents would be available at the minimum as part of the implementation:</p> <ul style="list-style-type: none"> • User guides for the system • Analysis and system study document • Data Migration strategy • Data Flow diagrams • Activity diagrams • Functional Design/ Setup and configuration document • Technical design documentation training guides • Function-wise operating manuals • System Administration Manual | |
| <p>Confirm that all documents will be provided as a soft copy on CD and two hard copies.</p> | |
| Solution Warranty | |
| <p>Does the systems integrator provide any guarantees against malfunction of the solution?</p> | |

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