



Requirements for Request for Proposal

Acquisition & Implementation of NUTECH Information

Management System (NIMS)

NUTECH/SCM/IT SYSTEM-Tender-016

NATIONAL UNIVERSITY OF TECHNOLOGY

TENDER NOTICE
NATIONAL UNIVERSITY OF TECHNOLOGY (NUTECH)

Tender No: NUTECH/SCM/NIMS 2018/TD-016

Sealed bids are invited from Government / FBR Registered Firms for the acquisition and implementation of NUTECH Information Management System (NIMS).

1. Tender documents containing terms & conditions and detailed specifications of requirement can be downloaded from NUTECH web "<https://nutech.edu.pk/d-p.php>" wef **20-12-2018**.
2. Quotations shall be submitted as per requirement of the tender documents.
3. Bidders will be required to submit bank draft/PO equal to 4% of quoted value as Bid Bond in favor of National University of Technology (NUTECH).
4. Sealed bids with detailed specification should reach on the following address latest by **1130 hours on 07-01-2019**. Late submission will not be entertained.
5. Bids will be opened at **1200 hours** on **07-01-2019** at SCM Office.
6. Project will be completed in 18 months from date of award of contract.

Deputy Director (Supply Chain Management Office)
NATIONAL UNIVERSITY OF TECHNOLOGY (NUTECH)
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NATIONAL UNIVERSITY OF TECHNOLOGY

SUPPLY CHAIN MANAGEMENT OFFICE

INVITATION TO TENDER

Submission Date/Time 07-01-2019 at 11 30 hours

1. NUTECH desires to hire IT firms for requirements as per **Annex-A**. Interested bidders/firms with strong understanding of CMS,LMS, ERP packages and preferably experienced with national & international academic institutions are requested to send their **Technical Proposals** (supported with complete relevant technical details), without price, through courier or deliver at NUTECH under sealed envelope (marked clearly, "Technical Offer", to Deputy Director Supply Chain Management Office (SCM), National University Of Technology NUTECH, IJP Road, Sector I-12, Islamabad, latest by or before above mentioned due date. If due to any unforeseen circumstances, NUTECH establishment remains closed, then the last date of submission will be extended to next working day.
2. The technical proposals will be evaluated in accordance with the specified evaluation criteria and will be discussed with all bidders/firms, regarding any deficiencies and unsatisfactory technical features. After discussion/presentation, all bidders/firms shall be permitted to revise their respective technical requirements or NUTECH may revise the evaluation criteria. We shall communicate all new requirements, criteria, revisions, deletions, modifications or additions to all the bidders/firms before submission of revised bids giving sufficient time. Those bidders/firms not willing to conform their respective bids to the NUTECH technical requirements will be allowed to withdraw from the bidding.
3. The bidders, whose technical proposals or bids have not been rejected and who are willing to conform to the revised technical requirements of NUTECH, shall be invited to submit a revised technical proposal along with the financial proposal (in two separate envelopes marked clearly "REVISED TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" placed together in third envelope.

4. The revised technical proposal and the financial proposal will be opened as per schedule mentioned in Annex A (6.8)/ will be intimated. Financial proposal will be retained and technical proposal evaluated to ascertain compliance.
5. Firms will be invited for the financial bid opening and announcement of the successful bidder accordingly.
6. Following must be noted for this IT (Invitation to Tender):-
 - a. Validity of offer will be 90 days.
 - b. Delivery period {completion of the project i.e release of Final Acceptance Certificate (FAC) by NUTECH will be 18 months from the award of contract.
 - c. Financial proposal must be accompanied with a Bid Bond in agreement of faithful compliance of the conditions of Contract. This amount will be equivalent to 4% of the quoted amount. In case of non-acceptance of any offer, the Bid Bond will be returned to the bidder by fastest possible means. The Bid Bond submitted by the successful bidder will however, be refunded on effective termination of Contract. (The Bid Bond will be forfeited in case of default by the bidder from his commitments made through his offer). Submission of Bid Bond is mandatory in the form of P.O/ Bank Draft in favour of National University of Technology (NUTECH), otherwise your offer will be rejected.
 - d. 1 year technical support against 5% bank guarantee will be required from the successful bidders from the date of Final Acceptance Certificate.
7. We reserve the rights to accept or reject any or all tenders as a whole or in part without assigning any reason whatsoever. The NUTECH decision in this regard will be firm, final and binding on all bidders.

DD (Supply Chain Management)

ACQUISITION & IMPLEMENTATION OF NUTECH INFORMATION MANAGEMENT SYSTEM (NIMS)

6th Dec, 2018

Technical Requirements for Request for Proposal (RFP)

Final Ver. 1.8

Procurement Ref: No	
Date of Opening	
Venue	

Data Sheet

Deliverables	<ul style="list-style-type: none">▪ Project Charter, Project Schedule (WBS)▪ Fortnightly Progress Reports▪ Inception Report▪ Software requirements specification, functional specification and software design documents▪ Gap Analysis Report, Data Migration Plan▪ Deployment of project (NIMS) at Data center of NUTECH▪ Training material▪ Training and UAT at NUTECH▪ Source code & related training and technical documentation
Language	Proposals should be submitted in English language
Estimated Time	The estimated number of professional staff-months required for the Assignment is: 18 months from the award of the contract

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1 Project Overview

IT Department, National University of Technology (NUTECH) is soliciting proposals from different firms to acquire integrated Campus Management System (CMS), Learning Management System (LMS) and Enterprise Resource Planning (ERP) solutions collectively called NUTECH Information Management System (NIMS). This will include configuration, customization, integration, testing, training, etc. for the automation of IT infrastructure of NUTECH and its own business processes.

1.1 About NUTECH¹

NUTECH is the first chartered Technology University of Pakistan for “National and Global Industry”. It is established as an independent degree awarding institution to address the challenges posed by rapid advances in science, engineering and technology. At NUTECH we believe that professional competence in the creation, design, development, implementation, promotion and management of existing, emerging and future technologies is best fostered by coupling classroom teaching, research with practical lab and industry projects work and focusing attention on real-world problems. At NUTECH innovative teaching and technology research become the “Way of Life” with relevance to the practical world as a guiding principle. To establish strong relationship with the practical world, NUTECH offers academic courses in all disciplines with direct relevance, application and practical opportunities for the students to practice their concepts in terms of implementation, at the relevant industries. NUTECH introduces the culture of undergraduate technology research communities in line with the best international practices of world’s top-ranking technology universities. On-Campus strong academic technology research groups and interdisciplinary composite technology research groups provide the foundation for innovative learning and technology driven research at NUTECH. To address the complex challenges of technology in a comprehensive manner, NUTECH has designed teaching courses with their content similar to that being taught at the world’s top ranking technology Universities at USA and Europe. NUTECH is the pioneer University in Pakistan, which has successfully coupled basic and applied technology sciences and integrated them with the creative social sciences to produce genuine and unique industry leaders of technology. NUTECH offers unique engineering technology learning programs like industrial project based learning communities for Freshmen (1st Year), undergraduate technology practice opportunities program (UTPOP) for ‘Sophomores’ (2nd Year), undergraduate technology leadership Program in Industry for the ‘Juniors’ (3rd Year) and Undergraduate technology research opportunities program (UTROP) for the ‘Juniors’ and ‘Seniors’ (4th Year) to cultivate and support research partnerships between NUTECH faculty and undergraduates.

¹ Source: <https://nutech.edu.pk>

2 Project Objectives and Background

2.1 Assignment Objectives

The objective of this assignment is to identify and select a software development/ IT firm with proven experience in developing and implementing Enterprise Resource Planning, Campus Management System and Learning Management System. Vendors with experience in development of international academic solutions will be preferred. Instead of traditional waterfall methodology in SDLC, the project must be conceived / planned for development through Agile Software Development Methodology.

The high-level objectives of acquiring a new solution are as follows:

- Achieving paper less working environment;
- Improve service level and coordination among all departments at NUTECH;
- Reduction of approval time through automation of work flow, case management and approval cycle;
- Empowering faculty members, students and other staff to accomplish work at their own;
- Streamline accounting process;
- A self-sustainable and cost-effective solution;
- Efficient student life cycle management;
- Automation of all inter-departmental manual processes at NUTECH;
- Strong IT infrastructure to support new solution.

2.2 Assignment Background

The university desires to acquire a robust, state of the art solution preferable based on open source technologies to automate its entire business processes using agile methodology.

3 Terms of Reference (TOR)

NUTECH intends to have web based and scalable Enterprise Resource Planning (ERP), Campus Management Solution (CMS) and Learning Management System (LMS) at Data Centre of its Main Campus. Users of Main Campus will access these centralized web-based services through intranet platform, however remote side users of the university will access these services through internet secure services.

The main components and deliverables of the assignment are as follows:

- Project charter, Project Schedule (WBS)
- Fortnightly progress and inception reports
- Conduct Gap Analysis for system/ modules
- Data Migration Plans
- Software requirements specification, functional specification and design documents
- Develop system as per the NUTECH requirements
- Installation and deployment of the system
- User Guide (Role based)
- Training and UAT of the system
- Implementation and live run of system
- Source code and related training and technical documentation
- Technical support services

3.1 In Scope Locations

Following is the list of in-scope locations:

1. Dean Office
2. Registrar Office
3. Administration Office
4. Admissions Office
5. HR Office
6. Treasurer Office
7. Examinations Office
8. IT Office
9. Supply Chain Management Office
10. Planning and Development Office
11. Project Management Office

All the offices and departments working under the umbrella of NUTECH and their interfaces will be interlinked with each other for successful execution of their processes. Additional offices (if any) may be added in the above list after initiating the change request.

3.2 Priority Metrics for Deployment

This section prioritizes the implementation of the systems and modules discussed in the following section according to the criticality and need of the system. The priority metrics is as follows:

Sr. No.	System Name	Criticality Level (High/ Medium/ Low)
Package A		
1.	Workflow & Data Archiving System	High
2.	Campus Management System (CMS)	High
3.	Learning Management System	High
4.	Human Resource Management System	High
5.	Payroll System	High
6.	User Management System	High
7.	Inventory System	High
8.	Financial Management System	High
Package B		
1.	Supply Chain Management System	Medium
2.	Library Management System	Medium
3.	Complaint Management	Medium
4.	Hostel Management System	Medium
Package C		
1.	Advertisement Management System	Low
2.	Maintenance Management System	Low
3.	Transport Management System	Low

The functional and other requirements are the integral part of this TOR and discussed in detail in Sections 4.

4 Functional & Other Requirements

4.1 Workflow & Data Archiving System

4.1.1 File Tracking and Workflow System

The salient features of the system should include but not limited to the following:

- Facility to define organizational structure, departments, sections, etc.
- Facility to define various roles and designations such as Dean, Registrar, Director, HOD, etc.
- Facility to assign users with their corresponding designations.
- Facility to define approval hierarchy for different types of transactions.
- Facility to define different stages for different types of transactions.
- Facility to map workflow stages with the transactions recorded in the core systems.
- Facility to define approval limits.
- Facility to define service level (time) for each role for the completion of each task assigned to him.
- Facility to raise demand to initiate process where the user is allowed to enter data like date, file number, concerned person/organization, remarks, noting, processing stages, etc.
- Facility to attach scanned documents with each stage/ process and should be stored in archiving system.
- Facility to send and receive any communication among the users engage in the process with read receipt.
- Facility to store document reference of transactions recorded in the core systems with the stages defined for each case/ demand. Alternative, the user will select the demand reference while creating transaction in the core system.
- Facility to define additional charge in case of the non-availability of primary responsible person.
- Facility to generate alerts in case the tasks is not completed in the due course of time.
- Auto closure of case/ demand upon completion of last stage.
- Facility to monitor the status of each case/ demand raised by the requesting person.

4.1.2 Document Imaging & Archiving System

- Document Imaging and Archiving system will be integrated with the File Tracking and Workflow system to capture and store the documents with reference to various stages of each case/ demand.
- Facility to scan images along with tags such as document case/ demand number, subject, date & time, keyword, etc.
- Facility to attach other documents such as PDF, Word, Excel Sheets, etc.
- Facility of auto-indexing to facilitate search.
- Facility to retrieve documents based on different search tags define in the system.

4.2 Campus Management System (CMS)

4.2.1 Departments & Faculty Data

The salient features of the module should include but not limited to the following:

- Facility to maintain multiple departments data at NUTECH, addresses, contact information, higher management profile, etc.

- Facility to define student information such as name, contact number, email address, mailing address, academic records and other details.
- Facility to define different fee structures.
- Facility to define quota rules.
- Facility to define academic rules for admission, enrollment, exams, semester freeze and un-freeze, semester repeat, attendance, grading system and other rules and other scenarios defined in the prospectus and university directives.
- Facility to define scholarship programs, donors and criteria for awarding scholarships.
- Facility to setup faculties, their departments and affiliated colleges with NUTECH.
- Facility to setup admin staff such as Rector, Directors, Dy. Directors, Registrar, Dy. Registrar, lab in-charge, superintendents, etc.
- Facility to maintain bank accounts for fee collection.
- Facility to maintain Academic Programs and their details such as maximum units, degree duration, batches with the following information: -
 - Batch Code and Name.
 - Maximum Units to Pass.
 - Number of Core Units to Pass.
 - Number of Major/Minor Units.
 - Date of Admission.
 - Registration Number Template if any.
 - Passing Marks of a Course.
 - Batch Timings (Morning or Evening etc.).
 - Number of Probations.
 - Probation starts CGPA and ends CGPA.
 - Any Specialization is offered.
 - Any Thesis/Project is offered.
- Any other setup required for the processing of CMS related transactions.

4.2.2 Entry Test Module

The salient features of the module should include but not limited to the following:

- The module starts at the stage when a student applies for the admission test and ends when the entry test results are notified to the student.
- Facility to prepare test schedule for entry test to be conducted for different disciplines such as undergrad, postgrad, etc.
- Online facility for students to enter their basic information for the registration of entry test.
- Facility to create test schedule covering the test date, test center capacity, test center location, engagement of supervisory staff, student allocation, other resources, etc.
- Facility for the student to print and upload entry test fee challan in the system which has been deposited by the student in the bank.
- After clearance of dues, the student is allowed to select entry test venue, date, time etc. to generate exam admit card/ ticket based on availability of seats in different venue and time slots.
- Facility to conduct online exams at the designed test centers. Alternately, the university can take answer on a manual sheet (Scanner readable format) that can be scanned to compute marks through the system.
- Auto calculation of results upon completion of the test using the workstation and alert generation to communicate result of test to the students.
- Facility to integrate Test Module with the external testing bodies such as NTS etc.

4.2.3 Admission Module

The salient features of the module should include but not limited to the following:

- The module starts at the stage when a student applies for the admission and ends when the student is selected in a program.
- Facility to allow students to apply online admission. In case of receiving manual application, the concerned admission staff can enter the credentials of students such as particulars of students registered for different programs.
- Facility to verify applicants' data based on criteria defined in the system.
- Facility to define merit including quota for gender, district, provinces, marks of previously attained qualifications such as Matric, Secondary, Bachelor and other qualifications possessed by the candidate.
- Facility to publish merit list and send alert to successful candidates for interview and pay admission fee and submit their credentials online.
- Facility to tag the students who qualifies the interview and document verification process.
- Facility to generate notification to the successful candidates to deposit fee as per the schedule.
- Provision to apply for other facilities offered by the university such as transport, hostel, etc.
- Facility to cancel, suspend student admission based on the rule defined in the system such as low GPA, misconduct, non-payment of dues etc.
- Facility to conduct and maintain Hafiz-e-Quran test records.
- Facility to re-admit a student whose admission has been cancelled due to non-payment, absence or any other administrative issues.

4.2.4 Enrollment Module

- The module starts at the stage when a student gets admission in a program and ends when the student is enrolled in a program.
- Facility for the student to select courses offered in a semester through the system upon new admission.
- Facility to select courses for new semester by the students.
- Facility to define and implement course selection rules as defined in the prospectus such as number of units, eligibility of re-selection of a repeat course, etc.
- Facility to review enrollment list/ course selection prepared by the students.
- Facility to assign CMS Registration number and maintain number of under gradates for record tracking.
- Facility to maintain study schemes in which students have been enrolled.
- The system should have the facility to allocate courses from multiples study schemes to students where a student can select a course from new scheme though he/she has been enrolled to old study scheme.
- Facility to freeze semester or course and generation of alerts to all the concerned departments.
- Facility to setup batch/ session to be attached with each student.
- Facility to close enrollment of student at the completion of study programs.

4.2.5 Timetable & Class Scheduler Module

- Facility to define parameter such as number of students per discipline, number of students per course in each discipline, number of labs per course, number of classes per week, teachers' maximum load, section per course, etc.
- Facility to define number of rooms and their usage (lecturing, tutorial, lab, etc.)
- Facility to assign lecturers to the subject/ course

- Facility to define calendar such as shifts (morning, afternoon, night etc.), working days (Monday, Tuesday, etc.) and class duration (1 hour, 2 hours, etc.)
- Facility to define common subject combination into a single class.
- Facility to define lecturer day preference (Monday, Tuesday, etc.), lecturer time preference etc.
- Facility to support cancelation, replacement and relocation of classes.
- Based on the above parameters, the system should auto generate timetable with clash checking for classroom, lecturer and student.
- Facility to generate various reports based on timetable.

4.2.6 Academic/ Event Calendar Module

The salient features of the module should include but not limited to the following:

- Facility to create semester creation with semester start date and end date.
- Facility to enter course/ semester add/ drop dead line date.
- Facility to enter tentative examination (mid-term & final-term) date sheets.
- Facility to enter result submission dead line date.
- Facility to enter tentative result declaration date.
- Facility to enter convocation dates.
- Facility to enter dates of other non-academic events such as sports event, job fairs, drama & debate competitions, naat & qirat competitions, or any other external event.
- Facility to define and generate alerts of the upcoming events.

4.2.7 Student Financial Module

- Facility to generate online fee challans for the following cases:
 - Entry test fee
 - Admission of new program
 - Semester fee challan
 - Course fee, diploma, certificate fee, etc.
 - Other fee such as transcript fee, degree fee, semester freeze, etc.
- Each challan will have multiple head of accounts i.e. security fee, admission fee, course fee etc.
- Facility to handle the following scenarios:
 - Part payments and instalments
 - Adjustment of advances
 - Scholarship
 - Waivers
 - Penalties on late payment
 - Refund of fee
- Facility to upload bank scroll in machine readable format based on challan ID of a student or electronic data interchange service giving challan wise collection of fees deposited by the students in the bank.
- Facility to record bank/ cash receipt
- Provision to enter adjustments to rectify errors
- Provision to create bank reconciliations
- Facility to handle final settlement of students through the system
- Facility to generate projected fee estimates of any program enrolled with reference to any particular student.
- Facility to generate challan based on different category such as batch, individual student, semester wise, program wise, etc.
- Facility to maintain history of semester wise fee charged to the student.

- Integration with General Ledger (a module of ERP software) to post financial effects of different receipts in the form of journal voucher.

4.2.8 Examination Module

- Facility to propose tentative semester wise date sheet by the head of departments.
- Facility to publish final date sheet on university website as well as on student portal after getting approvals.
- Facility to schedule exam and resources such as sitting capacity, supervisory staff, etc.
- Facility for the faculty to setup scoring scheme for each course such as weightage of mid-term exam, final-term exam, assignments, quizzes, class participation, etc. to compute GPA.
- Provision to adjust score based on relative marking where highest score and lowest score is used as a scale for computing marks.
- Facility for the faculty to upload scores of mid-term, final-term, quizzes, assignments, etc.
- Facility to verify and approve award list compiled by the different faculties. The award list contains the results of mid and final terms exam and score of assignments/quizzes performed by the students.
- Online hosting of final results and transcript so that the student can view or print it result from student web portal.
- Facility to constitute committee of external examiner, supervisor and other member to examine the thesis submitted by students and to conduct viva.
- Facility to attach each batch of students with the committee, supervisors, etc.
- Provide an online access to supervisor/ committee member to record result of thesis and viva to prepare award list (results).
- Facility to handle students migrated to and from other institutes.
- Facility to handle course equivalency of migrated students.

4.2.9 Curriculum Module

The salient features of the module should include but not limited to the following:

- Facility to add department wise course code and name with number of units and course type (regular, non-credit, etc.)
- Facility to configure batch scheme of study with course code, course units, passing marks, course type (regular, non-credit, etc.), optional or core course.
- Facility to attach teachers with courses offered in the semester of the specific batch.
- Facility to enter course syllabus/ outlines along with recommended books.
- Facility to enter course composition such as theory, lab, project, assignments, quizzes, etc.

4.2.10 Degree/ Transcript Module

The salient features of the module should include but not limited to the following:

- Maintain student application status for issuance of required certificate or degree
- Maintain stock and movement of blank copies of transcripts, provisional certificates, degrees and distinction certificates
- Maintain issued Transcript, Provisional Certificate, Degree and Distinction Certificate along with their number records of a student
- Integration with Student Financial Module to ensure that students' outstanding dues have been cleared and fee for degree/ transcript has been paid.
- Facility to maintain history of issuance of certificate to the student i.e. original, duplicate, etc.

4.2.11 Attendance Module

The salient features of the module should include but not limited to the following:

- Attendance module should be integrated with the electronic machine such as biometric or RFID card machine.
- System should maintain the attendance of students and faculty members of each class.
- Facility to rectify data fetched by the attendance machine by the authorized personnel.
- Facility to integrate with the Timetable & Class Scheduler module to record class-wise attendance of teachers and students.
- Facility to record the check-in and check-out times of teachers, students, employees, etc. at entry and exit points of the university through swipe cards and electronic barrier gates.

4.2.12 Faculty Portal

The salient features of the module should include but not limited to the following:

- The Faculty Portal should be integrated with other core module of CMS to perform the teacher's specific tasks.
- Facility to record attendance entry by classes.
- Facility to enter marks of each exam.
- Facility to auto lock of lecturer exam screen once the marks entry has been posted.
- Facility to view complete student profile.
- Facility to create e-learning courses.
- Facility to develop e-learning subject, quiz and online exam.
- Facility to upload multimedia e-learning contents.
- Facility to upload e-learning content assignment by the students.
- Facility to monitor student upload of homework and assignment, track by time.
- Facility to send messages and chat with student and University administration.
- Facility to raise expense claims, demands, etc. and monitor its status.

4.2.13 Students' Portal / Learning Management System (LMS)

The salient features of the module should include but not limited to the following:

- Students should access the portal using their own login id and password.
- Facility to view and update the following information
 - Email/ contact number/ mailing address
 - View academic calendar
 - Register in a program
 - Register for an exam
 - View program/ subjects registered
 - View exam results
 - View attendance
 - View event calendar
 - Access online library
 - Print fees challan
 - Print grade report/ transcripts
 - View payment information such as invoice
- Provision to generate various request such as request for transfer of program, request for hostel transfer, etc. and monitor its status.
- Facility to conduct online quizzes and exams.
- Facility to download homework and assignments, lectures and e-learning contents.
- Facility to submit homework and assignments to lecturer.

- Facility to send messages and email to instructors.
- Facility to distribute class-related content through forums and message boards
- Facility of chat rooms so that students can discuss with each other or teachers can quickly review information.
- Facility to participate in a survey conducted by the university.

4.2.14 Research and FYP Module

The salient features of the module should include but not limited to the following:

- Facility to enroll students for final year projects and thesis.
- Facility to approve proposals and thesis by evaluation committee.
- Facility to define schedule for proposal, presentation and final reports
- Facility to record FYP, thesis, research project and publications by faculty members
- Facility to record grade for completed projects and thesis
- Facility to record feedback for proposal/thesis, presentation and reports
- Facility to record and archival of proposal and thesis for undergrad and postgrad students
- Integration with central repository/ achieving system for storing project related material
- Facility to record payments of both local & external examiners Payable system
- Facility to generate alerts and reports for enrolled students and users
- Facility to attach images/ MS Office files along with submission of proposal and other requirements

4.2.15 Feedback/ Survey Module

The salient features of the module should include but not limited to the following:

- Facility to define custom surveys such as teacher's evaluation, course evaluation, etc. as required by the HEC or any other bodies.
- Facility to define rating scales, score and weightage of questions.
- Facility to host survey online and invite audience to participate through email / SMS.
- Facility to specify time for collecting feedback and subsequent reminders.
- Facility to export data of the collected feedback in CSV/Excel/ or any other format.
- Facility to generate status of pending and completed feedback.

4.2.16 Event Management Module

The Event Management module should assist the user to plan and execute various activities that need to be performed to organize any event hosted by different department/ section i.e. Career Centre, Faculties, Sports, etc. The system will have the following salient features:

- Facility to define event calendar which should be displayed on the NUTECH Website.
- The system should be able generate alerts (SMS and Email) to the staff and student regarding upcoming event.
- Provision to define event schedule to plan various activities to organize an event. The user should be able define timeline, budget and resource for each activity.
- Facility to update actual cost and time for each activity.
- This module should be integrated with the Workflow system to raise demand for getting approval from the competent authority.
- Facility to integrate with social media applications to share events related information.

4.2.17 Scholarship Management Module

The salient features of the module should include but not limited to the following:

- Facility to define different scholarship programs offered by different bodies i.e. HEC, Faculty Development Program, Overseas Scholarship, etc.
- Facility define criteria for shortlisting of applicants for each scholarship program.
- Facility to record and process request raised by the donors i.e. HEC for the advertisement of scholarship slots for submission of scholarship applications.
- Facility to host online application form on the NUTECH website to collect application from the applicants who wish to avail scholarship.
- Facility to attach supporting documents with the application form.
- Facility to view the application in tabular form and assign scores based on the credential provided by the applicant.
- Facility to shortlist the applicants based on the scores they achieved and rules defined by the University.
- Provision to plan interview sessions with the applicants who qualify for next round of interview and send call letter to the student for interview.
- Facility to enter score of applicants achieved during the interview session.
- Provision to prepare merit list and waiting list of shortlisted applicants.
- Provision to record award of scholarship for qualified applicants.
- Facility to record invoice in the system to release funds from the donor. The system should be integrated with Receivable module to post the financial effect of invoice
- Facility to record the receipt against invoice through Cash Management module discussed above.
- Facility to disburse payment to the applicant through the Cash Management module or adjust the amount against fee challan generated from the Student Billing module of CMS.
- Facility to generate the scholarship grant utilization report from the accounting system.
- Facility to enter closing of scholarship award upon successful completion of the program by the student.

4.3 User Management System

The salient features of the system should include but not limited to the following:

- Facility to maintain user profiles.
- Facility to process requests for granting/ revoking access rights.
- Facility to manage access rights at the following levels:
 - Modules
 - Menu
 - Setups
 - Transactions
 - Reports
 - Data
 - Button
- Facility to maintain multi role base access i.e. need to know basis like edit, entry, view, entry & view, edit & view and all.
- Facility to define user groups to define roles and access rights. Once a user is assigned to a particular group all the access rights given to group can be assigned to the particular user.
- Facility to control access by faculty wise, department wise, section wise, etc.
- Facility to log users along with their activities with date and time stamp.
- Facility to generate logins in batch mode, where multiple logins can be generated for multiple students at once.
- Facility to allow user to change passwords

- Facility to define policies related to password strength, password change.
- Facility to grant/ revoke/ modify access rights.
- Facility to maintain audit log of all activities performed by a user.

4.4 Advertisement Management System

The Advertisement Management system starts when request for advertisement and content receives from the concerned department and ends when supplier bill is entered in the system.

- Facility to log and process advertisement and content requests from different departments.
- Facility to define news in newspaper and their rates.
- Facility to prepare purchase/ release order containing newspaper name, advert size, release date, rate, discount if any, amount, etc.
- Facility to attach image of advert with the purchase/ release order.
- Provision to close purchase/ release order upon the release of advertisement.
- This module should be integrated with the Workflow system to raise demand for getting approval from the competent authority.
- The system should allow the user to enter bill/ invoice against the release/ purchase order. The bill entry should be integrated with the Payable system to post the financial effect for onward payment processing.
- The Advertisement Management module should be integrated with the Archiving system to archive print and electronic media contents.

4.5 Maintenance Management System

The salient features of the system should include but not limited to the following:

4.5.1 Preventive Maintenance Module

- Facility to provide a setup called 'Preventive Maintenance Period Type' to define different periods i.e. weekly, monthly, quarterly, annually, etc.
- Facility to setup resources and team for maintenance activities.
- Provision to define maintenance tasks to be performed on different machine/ lab equipment.
- Facility to group maintenance tasks with reference to main categories.
- Facility to link technical resources with reference to maintenance tasks so that the system can suggest the technical resources needed for the execution of maintenance tasks.
- Facility to have a multi-level coding scheme within the system to define machine and sub-components for which maintenance is required.
- The user will be able to define hierarchy of coding scheme where main machine will be setup at the group level and sub machines will be defined within the respective group.
- Facility to define preventive maintenance schedule to record the preventive maintenance activities for each machine.
- System to provide a console called Job Ticket Console to display all the scheduled maintenance tasks to be performed during the year.
- Facility to generate job ticket from the console for any particular machine.
- The system will be integrated with Inventory system such that the material requirements computed by the job ticket will be transmitted into the Inventory system in the form a Store Requisition.
- Facility to record job completion report.

- Facility to record feedback from the requesting department upon completion of job.
- Facility to log actual time spent on each job.

4.5.2 Corrective Maintenance Module

- Provision to create a list of root causes and corrective actions to respond any incident.
- Facility to log fault/ breakdown incidence to record particulars related to an incidence reported by the concerned department.
- Facility to enter work order to plan corrective action by identifying activities to be performed, timeline, human resources, spares part, etc.
- Facility to create job order against work order to initiate corrective actions.
- Facility to record job completion report
- Facility to record feedback from the requesting department upon completion of job
- Facility to log actual time spent on each job
- The system will be integrated with Inventory system such that the material requirements computed by the job ticket will be transmitted into the Inventory system in the form a Store Requisition.

4.6 Hostel Management System

The system will be used by the Provost and supports activities that assist student for seat allotment process specific to all applicants. The salient features of the module should include but not limited to the following:

- Facility to create setups of male/ female hostel blocks, floors, rooms and their description with type, capacity and detail of other item in a room, room charges, details of supervisory staff of hostel and mess such as Warden, Assist. Warden, Head Bearer, Bearer, etc.
- Facility for the students to apply online for hostel and other services.
- Facility to configure room allocation rules and automatically allot rooms to students based on room size, type and capacity.
- Facility to maintain the room status whether it is occupied or vacant.
- Facility to manage the reallocation of room to student with semester wise and also maintains attachment detail of the same.
- Facility to maintain the details of fee paid by the students.
- Facility to manage the student clearance with respect to vacant date and submission of other related item of the room.
- Facility to maintain the information of visitors with respect of student and room.
- Facility to manage and control hostel assets efficiently and track hostel consumables and durables by location, value, date and lot codes using RFID or barcode scanners.
- Facility to maintain details of meals and accounts of each student.
- Facility to create week wise menu.
- Facility to automatically calculate mess charges, track mess expenditures and other transactions.
- Facility to monitor monthly expense of mess, kitchen stock, etc.
- Facility to generate monthly mess bill of each student.
- Facility to record attendance through check-in and check-out times of students at entry and exit points of the hostel and mess by swipe cards and electronic barrier gates (i.e. tripod, flap, etc.)
- Facility to track missing students in the hostel and notify parents by email/ messaging.
- Facility to integrate with complaint management module to lodge any complaints.
- Facility to generate reports of hostel for hostel officials such as hostel wise, floor wise occupied and vacant rooms list, students list availing mess services, non-payers list, etc.

4.7 Transport Management System

The salient features of the system should include but not limited to the following:

- Facility to integrate with Fixed Assets module to retrieve details of vehicles and other assets.
- Facility to integrate with HRMS to retrieve complete profile of Transport Officers, Drivers, Conductors, workshop employees and other staff.
- Facility to maintain complete details of routes of different vehicles along with the pick and drop points.
- Facility to record student application to avail transport facility and registration.
- Facility to record student application to avail ambulance service and approval.
- Facility to assign route/ vehicles with driver and conductors.
- Facility to assign duty and rotation of drivers according to work load with responsibility
- Facility to enter trip logs (meter reading before and after trip).
- Facility to perform auto calculation of over time duty by both drivers/conductors.
- Facility to suspend any trip/ route.
- Facility to maintain log of different study tours in order to comply with university rules
- Facility to record of fuel quantity consumed and cost for each vehicle/ other equipment.
- Facility to record oil change, filter change, tire change, service/washing history and other parts of each vehicles/ other equipment with reference to mileage and date
- Facility to maintain record of vehicles repaired (minor/ major) and its approval process.
- Facility to record information related to vehicle health.
- Facility to maintain detailed record of staff/ pool cars.
- Facility to maintain complete track of drivers/conductors holidays/leaves and their replacements (should be handled through Attendance module).
- Facility to maintain history regarding misconducts of drivers/conductors & action taken against them (may be handled through complaint management module)
- Facility to maintain history of outsourced vehicles and their expense.
- Facility to generate reports for administrator and senior management such as number of vehicles, drivers, maintenance, warehouse management, fueling, etc.

4.8 Complaint Management

The salient features of the system should include but not limited to the following:

- Facility to register complaint by the student/ faculty member/ employee giving the information such as applicant name, job title, department, contact numbers, addresses, cause of the grievance, solution requested, complaint type, etc.
- Facility to generate complaint number in order to track complaint.
- In case the complaint is related to services such as fixation of fault then it is forwarded to the concerned section for resolution.
- In case the complaint is related to the administrative issues then it is forwarded to the concerned department for resolution.
- Facility to review each type of complaint by the relevant section and give their recommendations.
- Facility to follow-up the implementation of the recommendations.
- Facility to enter feedback of the complainant regarding its resolution.
- Facility to properly close the complaint in case of resolution.
- Facility to show the progress of the complaint to the complainant.

4.9 Financial Management System

The Financial Management System (FMS) should be implemented for the following functional areas:

- Main Campus Accounting
- GP Fund Accounting
- Benevolent Fund Accounting
- Pension Fund Accounting
- Any other entities operating independently

4.9.1 General Ledger

The General Ledger system (GL) will be fully integrated with all other modules having financial effects such as Student Accounting Module, Payables, Receivables, HRMS, Fixed Assets, etc. The integration will be done to the extent that any financial transaction generated by other modules, will be periodically posted into the control accounts in the GL. The GL system will have the following salient features:

- The General Ledger should support cash basis/ double entry system.
- Provision to maintain financial accounts of multiple departments/ entities/ employee funds within a same database thereby helping the user to consolidate the financial information at Group level.
- Facility of maintaining multiple years of data jointly allowing previous and current year's data to be accessed simultaneously.
- Providing multi-level cost center structure to record transactions with reference to different segments like department, campuses, etc. to produce segment wise analysis.
- Calendar with user-defined financial periods according to reporting requirement of the NUTECH.
- Facility to define standard vouchers with customized printing options.
- Facility of standard transaction narration on single keystroke for each voucher type.
- Full screen-editing facility while entering data.
- Provision to define month end vouchers as 'reversible' at the opening of subsequent financial period.
- Providing options whether to maintain automatic numbering of all documents or user entered document number.
- Powerful password protection for all activities.
- Facility to lock entered data to protect against any changes.
- Provision for standard/ recurring vouchers.
- Flexible user defined on-screen inquiries to analyze the entered vouchers with different logical operator and filters.
- Automatic calculation of excess/ shortage of funds at year-end (temporary or permanent) and update of user defined profit account with corresponding printing of Journal Voucher.
- Period-end and year-end processing and generation of year-end voucher for closing balances of accounts.

General Reporting

- Option to print the voucher as soon as its entry has been completed.
- Printing of transactions list, voucher type wise.

- Printing of trial balance at any level of the chart of accounts with data range selection.
- Printing of general journal, ledger activity and ledger balances.

Financial Reports

- Month wise income and expense report, with budget comparatives.
- Comparison of data of different periods
- Facility to design user-defined report formats through the report writer including balance sheet, profit/ loss statement, income / expense statement.
- Facility to set up cash flow statement through the report writer
- Cost center definition enabling cost-center wise reporting.

4.9.2 Budget Module

The Budget module is designed to allocate the financial budgets at group or detail account code level, in accordance with the NUTECH's requirements. The system will also maintain track of budget revisions during a financial year. The proposed module will have the following salient features:

- Facility to enter annual budgets for different heads of account and campuses with a breakup of financial periods defined by the user.
- Facility to define multiple budgets such as HEC budgets as well as recurring budgets.
- Facility to allocate budget figures with reference to business segment i.e. cost center, department, campuses, etc.
- Facility to copy previous year's budgeting values or get new allocation using a factor of previous data to minimize the data input efforts.
- Facility to revise the budget before completion of the year.
- Facility to print report for each head of account comparing the actual amount therein with the budgeted figure and the last year's figure.
- Facility to view consolidated budget covering all the departments and campuses.
- Facility to import budget data from the spreadsheets.
- Facility to compare budgets from periods of different years for a head of account and their actual for different reports including profit and loss statement, balance sheets, cost center-reports and other user defined user defined reports.

4.9.3 Accounts Receivable

The Accounts Receivable module will cover the transactions of parties, employees other than students. The module should be fully integrated with the General Ledger system, where only control accounts will be maintained for trade debtors. At the end of every day/ or every month the control account in the General Ledger will be updated based on the detailed transactions in the accounts receivable. The main features of the module are as follows:

- Facility to enter invoice into the system thereby producing a corresponding accounting voucher into the general ledger system to book the financial effects in customer ledger
- Maintenance of customer account balances
- Facility to knock off invoices with cash receipts
- Facility to maintain details of outstanding invoices
- Facility to enter credit and debit notes to handle effects of sales returns, bad debts, replacements etc.
- Facility to incorporate adjustment notes

Reports

- Details of outstanding invoices

- Printing of customer ledger/ customer statement
- Customer balances report
- Ageing analysis of receivables
- Tax reporting

4.9.4 Accounts Payable

The Accounts Payable module should be linked with the inventory system to validate all the purchases. The user will be able to enter supplier's invoices and record payable liabilities. The system should also be integrated with the General Ledger system to book accounting effects, resulting from the entry of supplier invoice, debit/credit notes etc. The system should provide a facility to make payments against the payable liabilities and make necessary deductions. The main features of the system are as follows:

- Facility to enter bill/ invoice containing demand reference, supplier reference, payment and tax deductions.
- Facility to enter supplier invoice along with other costs breakups to account for purchases and accounts payable.
- Facility for the Purchase department to validate and approve invoices on the computer.
- Maintaining track of local and foreign purchases.
- Maintain history of foreign currency rates used for the purchase of imported items.
- Facility to define approval cycles to authorize payments initiating from different authorities such as Rector, Pro-Rector, etc.

General Reporting

- Details of outstanding bills/ list of payments to be made during each week
- List of payments due in the next xx number of days and the related cash outflow requirements
- Aging analysis for a given set of days
- Printing of supplier ledger and balances
- Sales tax report

4.9.5 Cash Management Module

The Cash Management module is designed to analyse the future inflow and outflow of cash generated from the accounts receivables, payables, etc. This module also includes preparation of bank reconciliation, maintenance of multi-currencies, computation of forex gain/ loss etc. The proposed module will have the following salient features:

- Facility to setup banks, bank accounts, cash accounts, impress accounts, etc.
- Facility to prepare payment voucher on the basis of supplier invoice.
- Handling of supplier payment by incorporating withholding tax according to the nature of services and amount limit.
- Facility to link payment with available budget.
- Facility to prepare and maintain cash receipts
- Facility of advance payments from customers and adjust this at the stage of issuing invoices.
- Providing a reporting lines for evaluating future cash inflow and outflow, thereby gives a base for future fund management in terms of investment, debt service, pay off liabilities, etc.
- Provision to prepare bank reconciliation to evaluate exact cash position at different banks of the NUTECH.
- Facility to compute forex gain/ loss upon receipt of customer dues and payment of outstanding amounts.

- Facility to print cash, bank books, ledgers, etc. for given range of dates.

Tax Reporting

- Tax payment receipt (challan)
- Monthly statement
- Annual statement
- Supplier Certificates

4.9.6 Fixed Assets Module

Fixed assets system maintains complete record of all assets owned by the NUTECH and records the movement of these assets from one department to the other and from one location to other. The system also calculates year-end depreciation and determines the written down value (WDV), at the time of disposal to calculate the gain/ loss on disposal of assets. The salient features of the Fixed Assets system are given below:

- Maintain comprehensive database of assets using multilevel asset codes for analyzing group and detail level information.
- Multi-location assets maintenance
- Department-wise assets management
- Disposal of assets using various modes of asset disposal.
- Provision to write-off assets
- Provision for different type of adjustments i.e. revaluation, re-classification etc.
- Transfer of asset to other locations/ departments.
- Breakup for assets costs either acquired locally or imported
- Maintains the history of previous years schedules
- Fixed assets register for individual items
- Edit lists and MIS reports
- Integration with the General Ledger system

Depreciation

- Maintaining different methods of depreciation calculation like straight line, reducing balance etc.
- Depreciation methods setup at group level as well as at individual level
- Provision to define depreciation policies regarding acquisitions and disposals
- Prepares monthly and annual depreciation schedules.
- Cost center-wise depreciation allocation
- Initial and normal depreciation rate (if different). Initial depreciation values are for the first year of newly acquired assets
- Number of shift days (if applicable) at group level
- Provision for calculating shift-based depreciation.

Reports

- Fixed assets register
- Depreciation schedule – financial and tax
- List of assets location-wise, department-wise
- List of transfers/ disposals/ additions
- List of revalued assets/ re-classified assets/ written-off assets

4.9.7 Contingency Fund Module

This module should maintain contingency fund account of each department, recording of contingencies and reimbursement of contingency fund. The salient features of the module should include but not limited to the following:

- Facility to record the receipt of cheque/ cash in the Contingency Fund module.
- Facility to enter the contingency details in the register.
- Facility to create demand to replenish the fund by submitting details to the concerned department.
- Facility to generate report related to contingencies.

4.9.8 Investment Portfolio Module

The Investment Portfolio module should be integrated with the Financial Management System (FMS) to automate the complete cycle of making investment i.e. term deposit (TDRs) in financial institutions, profit calculation on investments, accounting, maturity and renewal of investments. This module should have the following features:

- Facility to record financial investment i.e. TDR, COD, Mutual fund, etc. in different banks containing investment amount, maturity date, profit rate, profit terms and other parameters.
- Facility to compute profit and post the corresponding accounting voucher in the Accounting System for fund management
- Facility to distribute profit amount among the members of fund based on the formula devised by the management.
- Facility to record maturity and renewal of investment.
- Facility to terminate the investment.
- Facility to record any financial charges, taxes levied on the investment and posting of these effects in the accounting system.

4.10 Supply Chain Management System

The supply chain management system will be used to maintain all activities related to purchase monitoring and execution, starting from the entry of the requisition, getting quotations from the market and preparing purchase orders to communicate with suppliers. The proposed system will be integrated with the Inventory system as required to maintain supply chain. The system will also be integrated with the Payable system to share purchase order data for the preparation of supplier invoice. The main features of the system are as follows:

- Facility to maintain supplier database containing name, address, credit period, credit limit and their origin like foreign and local etc.
- Facility to enter requisition by each concerned department.
- Requisition generated by various departments would be accessible to Supply Chain Management Office for requesting quotation or calling tender for the procurement of goods and services depending upon the value of goods or services.
- Facility to generate MIS reports related to purchase transactions.

Tendering

- Facility to enter various stages of tender such as development of RFP, publishing, opening, awarding, etc
- Facility to handle open and all alternate methods of procurement procedures as per PPRA rules
- Facility to record bidders applied for providing goods or services

- Facility to shortlist bidders based on their initial EOI submission
- Facility to handle different selection methods such as QCBS, least cost, etc
- Facility to record tender fee with respect to each bidder
- Facility to evaluate each bid and record scores of the bidders
- Facility to award contract to the successful bidder
- Facility to prepare all types of tender documents
- Facility to convert IT documents into a standard contract
- Facility to prepare all types of correspondence templates

Procurement of Low Value Items (other than tendering)

- Provision to enter quotations received from suppliers.
- Facility to generate comparative statement based on the quotations received from supplier.
- Facility to generate purchase/ supply orders against quotation received from suppliers.
- Integration with the Inventory system to maintain the status of goods received and outstanding quantities against each purchase order.

4.11 Inventory System

The Inventory system is designed to manage movements of stock i.e. receipts of materials from supplier, issuance of materials to the user departments, materials returns, etc. The system will maintain built-in controls related to stock management like re-order level, lead-time, re-order quantity, etc. The Inventory system will be integrated with the Purchase system, such that all the Goods Received Notes will be linked with Purchase Order to evaluate quantity ordered, quantity received and partial status of purchase orders. Efficient management of stocks by maintaining stock monitoring parameters like minimum and maximum levels, re-order quantity and lead time.

- The total cost of an item can be maintained as a break up of various cost heads, for instance purchase price, freight, custom duty, etc.
- Valuation of stock based on weighted average cost.
- Preventing shortfall by maintaining a minimum level for all items in stock.
- Multiple stock adjustments and reports on their quantitative and financial effects
- Producing financial / quantitative reports of the stocks procured, issued and in hand
- Different characteristics can be defined for different groups of items. This is in addition to the levels of codes maintained in the system.
- Facility to maintain multiple warehouses. Each warehouse can have its own Goods Receiving Notes, Material Issues, Sales Invoices and other transactions.
- Facility to enter quantitative information separately by Stores staff and financial valuation separately by the Treasurer Office for each GRN.
- Facility to define item types such as capital goods, consumable items, etc. Upon entering the GRN the system should update the acquisition in the Fixed Assets system.
- Materials valuation linked with the prices in PO/ supplier invoice/ payment voucher.
- QC inspection and facility to maintain stock as useable, damaged/ expired
- Providing the management with consumption pattern of stock items
- Provision to maintain separate buying units and issuing units and their conversion
- Material Issue and Material Return Note to manage stock movement between store and departments.
- Stock transfer note to move stock between various warehouses.
- Stock adjustment note for different type of errors like excess/short stock

- Facility to return damage stock to the supplier and automatic generations of debit note to supplier ledger balances.
- Cost center-wise storage and issuance of stock.
- Facility to generate MIS reports related to inventory transactions.

4.12 Human Resource Management System

The salient features of the system should include but not limited to the following:

4.12.1 Employee Module

- Facility to enter employee personal information
- Facility to enter academic record
- Facility to enter date of joining or leaving
- Facility to enter details of employee family
- Facility to record medical history
- Facility to enter multiple addresses
- Facility to enter status of annual leaves

4.12.2 Job Profile

- Facility to create areas of operations such as Academic, Administration, Accounts, HR.
- Create uniform Job titles to be used in whole organization such as Director, Supervisor, Lecturer etc.,
- Facility to define government grade structure and pay scale to accommodate salary
- Create Job positions such as Deputy Director IT, Assistant Director Budgeting, lecturer Mathematics etc.,
- Facility to define job description by attach duties, responsibilities, skill, qualifications with the Job position
- Define Job Evaluation Factors (Age, Qualification, Experience)

4.12.3 Recruitment and Selection

- Resources planning to define all the sanctioned posts in each department
- Facility to view status of sanctioned positions such as vacant position, positions to be vacant, etc.
- Facility to generate request for the hiring of a position.
- Facility to publish adverts of vacancies on the website
- Facility to define hiring criteria.
- Facility to create and upload CVs using candidates own login id, password.
- Facility to search best candidate from the CV database based on the criteria defined in the system and custom filters. Search of suitable personnel from the database of resumes based on:
 - Skills requirements
 - Educational requirements
 - Experience requirements
 - CV text search for uploaded CVs
- Facility to shortlist the selected candidates and send them call letters for interviews from the system.
- Facility to define different stages for selection such as selection board, syndicate, registrar, etc.
- Facility to schedule interviews/ assessment of the candidates.
- Facility to conduct tests/ assessments/ interview sheets

- Facility to generate offer letter to the selected candidate

4.12.4 Training and Skills Development

- Facility to raise training request based on training needs identification during the appraisals, recruitment, department's specific needs, etc.
- Facility to prepare course calendar
- Facility to enroll employees based on:
 - Courses already attended by person
 - Prerequisites/ skills required for course
- Facility to mark course completion by:
 - Performing post training evaluations
 - Entering training costs

4.12.5 Appraisals/ Performance Management

- Facility to configure performance evaluation form for different grades
- Facility to record details of performance evaluation of the concerned HOD.
- Facility to define various stages of review, recommendations and approvals
- Schedule reviews and intimate stakeholders such as assesses, assessors
- Perform assessments based on the assessment workflow configured earlier.
- Recommend (review and amend system generated) compensations
- Review and finalize compensations
- Facility to generate promotion letter and update the grades and pay scales.

4.12.6 Employee Self Service (ESS) Module

This module should be designed to serves as an employee interface to the HR department. This module should have the following features:

- Online access to:
 - Pay slips
 - Outstanding Loans
 - Outstanding Leaves
 - NUTECH procedures and policies
- Interfaces to file leave applications, loan applications and approvals should also be possible
- Provisions for notice board, employee feedback, newsletters and connecting other internal modules, where required.

4.12.7 Correspondence Management

- Reduce the burden of HR department by sending auto intimations from various processes such as job interview schedules, employee review schedule, compensation intimations, etc.
- Facility to define letter/ email templates such as warning letter, appreciation letter, offer letter, employment contract, etc.
- Facility to attach NUTECH's templates being used for the correspondence process
- Facility to add system bookmarks (such as employee name, designation, salary, etc.) in the template
- Facility to generate emails/ letters and send to recipients

4.12.8 Housing and Accommodation Module

The salient features of the module should include but not limited to the following:

- Facility to maintain record of all housing units owned by the NUTECH such as location, category, covered area, number of rooms, number of washrooms, other amenities, etc.
- Facility to register request for the allocation of house/ hostel rooms.
- Facility to create a waiting list of all those who applied and case has been approved for accommodations based on the rules defined in the system.
- Facility to allocate accommodation to the applicants containing applicant name, tenure, terms and conditions, etc.
- Facility to deallocate accommodation upon the retirement or the will of the occupants.

4.13 Payroll System

Payroll system should have a facility to set up employees' master file and the salary structure for each employee in terms of monthly allowances and deductions. The system should maintain the location wise/ department wise employee cost thereby enabling the management to analyse the payroll cost contribution with reference to each department/ business unit. The effect of these transactions should be transferred to General Ledger system electronically.

The system should also provide a loan module, which will maintain a track of various loans given to the employees by the NUTECH and will automatically make loan deductions according to the loan terms set in the system. All loans will be treated as interest free loans.

The payroll system should maintain track of leave record of each employee, in terms of leaves availed and leaves outstanding, and will automatically calculate the deductions for 'leave without pay'. The module wise features of the system are as described below:

4.13.1 Basic Salary Module

- Employees should be identified by unique numbers allotted to them and the system maintains the personal information of each employee, like employee's name, father's name, address, department, designation, location, date of joining and confirmation, date of leaving (for employees who have left), grade, National Tax Number and National Identity Card Number, eligibility for EOBI, Social Security, General Provident Fund, etc.
- Facility to define government basic pay scales for each grade to compute allowances, annual increase.
- Facility to revise basic pay scales as and when required.
- All allowances offered to the employees and deductions made from their salaries are user-defined in the system.
- Allowances and contributions should be computed automatically based on formulas defined by the users as per the NUTECH policy.
- Non-salary benefits offered to the employees should also be maintained by the system.
- Provision to split an employee's net salary for remittance to multiple banks.
- Printing of Pay-slips
- The Basic Salary module should be integrated with Workload module to compute and make payments of the extra work load (academic and administrative)
- The following reports should be produced from the system:
 - Employee's personal details
 - List of employees: Department / location /designation wise
 - List of employees joined and left during the month.
 - Department-wise and grade-wise strength
 - Monthly payroll sheet by employee/department/location
 - Departmental summary of the salary paid

- Annual payroll sheet: detailed and summarized
- List of employees paid by bank and cash
- EOBI, ESSI, education CESS and Group Insurance reports (monthly and annual) for the contributions made by the NUTECH on behalf of its eligible employees.

4.13.2 Loan Management Module

- This module should keep a track of loans disbursed to employees, their recovery in installments and the balance amount payable.
- Loans of various kinds should be maintained, such as car loan, house loan, loan against PF, revolving funds, etc.
- Facility to setup different types of loans having different installment plans.
- Both interest based and interest-free loans should be maintained.
- Once the installment per month has been decided, the system keeps deducting the same amount regularly in the subsequent months until the total loan has been recovered or the installment amount has been changed.
- The system should have provision for lump sum payment.
- Monthly and annual loan register

4.13.3 Leave Management

- Maintenance of employees' leaves in terms of leaves allowed, leaves availed and leaves outstanding.
- The actual dates when the leaves were availed can also be maintained.
- The effect of days not worked in the month (leaves without pay etc.) is reflected on the salary of that employee.
- Monthly and annual leaves register can also be produced.
- Leaves encashment is also calculated once the cashable leaves have been identified.

4.13.4 Load Management/ Overtime Module

- The module should keep record of extra load on daily basis and make payments on monthly basis through the pay-slip.
- The number of hours worked as overtime per day can be recorded through attendance module.
- Facility to define rules for the work load of maximum chargeable hours for academic and administrative.
- Facility to define overtime rates against various roles.
- Facility to generate remuneration bill on the basis of workload and class attendance.

4.13.5 Bonus Module

- Bonus module should work out the annual bonus based on detailed working of average basic salary and the bonus rate. Bonus should be calculated on the basis of the criteria defined by the user, which may be such parameters as:
 - Bonus rate
 - Category of employees
 - Designation
 - Department
 - Period of service of the employees
 - The allowances that would form the basis of computation of bonus
 - Provision to pay more than one bonus per year
 - Provision to define formula for calculations of bonus amount based on configured allowances and specified rates

4.13.6 General Provident Fund Module

- The module should compute the amount of provident fund to be deducted for employees who are members of the fund.
- Both employees and employers' contributions are maintained for each member employee as per the percentage decided. The accrued provident fund for each member is also maintained.
- The system checks that loans taken against provident fund do not exceed the accrued value of GPF for that employee.
- Printing of GPF ledgers for each member employee.
- Monthly/ Annual reports of contributions by the members and the NUTECH are also printed.
- The users can also get report from the system for the monthly allocation to be done for Provident Fund.

4.13.7 Benevolent Fund Module

- The module should compute the amount of benevolent fund to be deducted for employees who are members of the fund.
- The system checks that grant taken against benevolent fund do not exceed the limits set-out for different categories by the university.
- Printing of benevolent fund ledgers for each member employee.
- Monthly/ Annual reports of contributions by the members and the NUTECH can also be printed.
- The users can also get report from the system for the monthly allocation to be done for benevolent Fund.

4.13.8 Pension Module

- The system should provide facility to calculate based on formula as per government directives.
- Provision to enter opening balances and define contribution of employee and employer on the basis of basic pay and other allowances.
- Facility to record nomination forms submitted by the retired employee.
- Facility to disburse pension through payment system by making cheques.
- Facility to suspend pension or transfer the rights to the legal heirs as per the formula.

4.13.9 Final Settlement Module

- This module should compute the terminal benefits for the employee who leaves the organization based on the following parameters:
- Computation of leaves encashment
- Computation of notice pay (either side)
- Deduction of balance loan amount recoverable
- Deduction of tax recoverable form the employee
- Computation of salary for the days worked during the leaving month.

4.14 Library Management System

The salient features of the system should include but not limited to the following:

4.14.1 Bibliographic Records & Cataloging Standards

- Cataloging with authority control for bibliographic records
- Compliance with MARC/ RDA Standards for bibliographic

- Formats, provide flexibility to import and export records to/ from other database
- No limitation for bibliographic record length
- The LMS must support the following standards:
 - Library of Congress Subject Headings
 - Library of Congress Classification
 - International Standard Bibliographic Description
 - MARC21 format for catalog description
- System can detect duplicate records, can make separate file for duplicate or conflicted records
- Create, modify or delete fields or subfields without re-keying the entire record or sub record
- Cataloging and linking multimedia, including URL's, Documents (.doc, .docx, .pdf), slide shows (.ppt), images (.jpg, .tif), video (.dat, .mpg) etc.
- System can accept, store, retrieve and display UNICODE data.

4.14.2 Information Retrieval (LMS System Architecture)

- The LMS client and server side must be integrated following the NISO Z39.50, the LMS software must insure that it has the same architecture.
- Support the OPAC standard through GUL, in order to access information through titles, authors, subjects, call numbers, keywords, Boolean combinations.
- Account for LMS Administrator, Staff and Users, with access control defined for each user group.
- The system architecture for LMS should allow future extendibility and redundancy options. The initial architecture should include:
 - Application Server (For LMS Application)
 - Web Server (OPAC Enabled)
 - OPAC Terminals

4.14.3 Circulation Module

- Online real time processing control with track of all circulation transactions
- All circulation transactions are reflected immediately on Online Public Access Catalog (OPAC)
- Holds can be placed by user as per library policies
- Integration with RFID system (charging/ discharging) during check in/ check out
- The circulation module can be modified as per the Library Staff defined circulation map and also library calendar is followed, so that none of the item fell due on the date when the library is closed.
- Administrator/ Staff can set circulation policies, item Check in, Check out, calculate fines and holds renewals.
- The circulation module also enables the LMS to calculate and store the accounting entries behind every transaction, if required according to the library policy.

4.14.4 Serial Control Module

- The serial control must manage the prediction, receipt, and routing of all serial subscriptions, generating and maintain a separate MARC holding record for each subscription.
- Serial control must be USMARC format supported for holding data and holding information is updated automatically by check ins.
- Serial control module is able to handle different publication patterns such as annual, semi-annual, biannual, weekly, daily, etc.

4.14.5 Acquisition Module

- Automate the process of ordering, receiving, invoicing, and processing new materials.
- EDI standards compliance for acquisitions.
- Features should include funds management, vendor records management, and currency control.
- All reports related to vendor history/ all information related to vendor scheduling, ordering, invoicing, claims, cancellation and funds management can be issued through the acquisition module.
- Payment procedure for library media acquisition, multiple titles in a single purchase order, payment and vouchers/receipts can be generated.
- Acquisition module should be integrated with the other modules, information can be accessible from cataloging and OPAC modules.

4.14.6 Patron data/ Information Module

- Support the MARC patron format that specifies Library ID number, Personal ID number, Name, Title, Address, Email Address, Gender, Borrowing restrictions and all other fields as defined in the MARC patron standard.
- Circulation data such as loans, fines, holdings and other requests can be updated automatically in the patron file by the system
- The patron modification, renewal and deletion should be real time and simple process.
- The system must support unlimited number of patrons, all reports regarding patron status should be available to LMS staff.

4.14.7 Online Public Access Catalog (OPAC) Module

- Available on Library LAN and on World Wide Web with unlimited number of simulations.
- Must have a graphical and text-based user-friendly interface with OPAC help facility
- The user can access OPAC for catalog search, reservations, borrowing/searching of information, status/availability of media, and circulation information with user account status.
- OPAC terminal must facilitate the end user with searching of records by titles (main and added), series title, subject heading, author, publisher etc. with data filtration option like location, nature of contents, format and place of publication, publication/context year range, language code.
- System should support saving files to an external medium.
- OPAC should support Selective Dissemination of Information (SDI) functionality.
- OPAC status can be logged and LMS staff can generate reports about OPAC usage status.
- Boolean operations (AND, OR, NOT) are supported.

4.14.8 LMS Reporting

- Scheduling reports to run regularly, unattended at defined time period
- Reports must have a customized interface.
- Reports related to cataloging, circulation, acquisition, serial list, serial holding, patron list, patron status (Active, Expired)
- OPAC usage, media list, account summary, billing, bibliographic record list, media on holds, SDI, management, vendor list, shelving, vouchers, etc.
- The reports should be generated in non-editable printable format.

4.14.9 Other Requirements

- Multi language, the GUI interface of LMS software is supported by English, & Urdu text.
- Software must support scheduled backups, at application and database level (preferred)

- Option to export and import records in common file format like xml, xls, txt, etc.

4.15 General Requirements

4.15.1 Common Function Requirements

Following requirements are common to all system/ modules and should include but not limited to the following:

- Software should provide a detail audit trail of all the activities and should be equipped with the query analyzer to view any exceptions.
- All reports can be exported in different formats such as PDF, MS Excel Format, CSV, etc.
- Software should provide import data facility through MS Excel, CSV and other machine-readable formats.
- System should maintain electronic signatures of all the users and record with each transaction.

4.15.2 Non-Function Requirements

System Architecture

- Software should be preferably developed in open source technologies.
- The systems should be platform independent and compatible with all the leading Operating Systems such as Microsoft, Linux, etc.
- Systems should be web based and can be accessible from anywhere.
- All the web-based dashboards should be responsive in design with Android and IOS platforms.
- System should have single sign-on to access any system/ module.
- System should have unified architecture such that any setup students, employee, department, vendor, cost center, etc. created in one module should be accessible to other modules.
- All systems/ modules should be well integrated with each other to share financial effects and transaction references.
- The software should have a capacity to handle around 20,000 students and around 5,000 employees/ faculty members.
- Outline methodology, planning, design and execute strategies that will result in the analysis, design, implementation, and training of CMS, LMS and ERP solutions that are practical to the University. Include a detailed plan for the services to be provided, along with deliverables to be provided at each step, with a corresponding timeline, including meetings with University staff. The work plan should be consistent with the scope of work presented above, however, the BIDDER may suggest changes where appropriate.
- Additional modules if identified during development process will form part of same RFP and will be mutually decided by NUTECH and vendor.

System Security

- Systems should have secure communication with SSL (https) or any other equivalent security mechanism.
- All the sensitive information such as student grades, exam data, should be stored in encrypted form in the database.

Data Migration

- The vendor should submit and execute data migration plan at NUTECH.
- The vendor should verify the migrated data with the assistance of the NUTECH staff.

Source Code & Updates

- The vendor should hand-over the source code of all the systems/ module developed exclusively for the NUTECH.
- The vendor should also provide the development tools, technologies, APIs, etc. for future enhancements by the NUTECH.
- The vendor should provide updates of any new release from time to time during the agreed maintenance period.
- The vendor should impart training and transfer skills for onward customization and maintenance.
- The original source code and customization made by the vendor shall be the property of the NUTECH. The NUTECH shall have complete rights to modify and sell the software to other organizations.

Service Levels

- The vendor should specify the service levels for:
 - Fixation of critical and non-critical bugs and errors
 - Response to any queries
 - Time required for maintenance and upgrades
- The vendor should provide 1-year free technical support services after the successful deployment of the software.
- The vendor should also quote the technical support services charges after the expiration of free services.

Availability

- Software solution should be available for internal users 24 x 7 x 365 with minimal downtime.

Training Manuals

- Vendor should provide online help and user manuals covering each and every option for all the systems and modules discussed above.
- Vendor should provide installation manual.
- Vendor should provide all technical documents such as data dictionary, schema, system architecture, DFDs, class diagrams and other necessary documentation for the customization of software.
- All the manuals discussed above should be updated time to time by the vendor during development of whole project.

Trainings

- The vendor should impart training to the NUTECH's IT team and the end-users by taking the following initiatives:
 - Creation of test environment of the deployed software i.e. Conference Room Pilot (CRP) for software acceptance testing and on-going training.
 - Provision of hands-on training to the end-users to allow them to test key processes.
 - Train the trainer of the NUTECH for their capacity building.
 - Train and empower the NUTECH in house development team so that they can add new modules, enhance and customize the existing software according to their needs.

5 Evaluation Criteria

Evaluation of Technical Proposals will not be a purely mathematical exercise but will be based on the professional judgment of competent evaluators and experienced IT professionals. However, judgment will not be exercised in an arbitrary manner but will be done through a rating system based upon five general criteria with points assigned to each. Proposals will be judged against following assigned criteria / sub-criteria:-

Serial	Criteria	Points
5.1	Adequacy of proposed methodology and work plan	50
5.2	Suitability of transfer of knowledge (source code) & Training	15
5.3	Qualification and competence of key staff	15
5.4	Experience of Firms in the specific areas of CMS, ERP and LMS developed and implemented for academic institutions	15
5.5	Number of years in business and availability of local office	5

5.1 Methodology and Work Plan in Responding to TOR (50 points)

5.1.1 1st Sub-Criteria – Technical approach and methodology (20 Points)

- **Poor(40%):** Inappropriate, standard, not tailored
- **Satisfactory(70%):** Standard, not tailored
- **Good(90%):** Full details, methodology tailored
- **Very Good(100%):** In addition, innovative with outstanding knowledge of new solutions

5.1.2 2nd Sub-Criteria – Work Plan (20 Points)

- **Poor(40%):** Omits important tasks, timing of activities inconsistent
- **Satisfactory(70%):** All key activities included but not detailed
- **Good(90%):** Work plan fits TOR, interrelation between activities realistic
- **Very Good(100%):** In addition, good optimization of resources

5.1.3 3rd Sub-Criteria – Organization and staffing (10 Points)

- **Poor(40%):** Organization chart sketchy, staffing schedule inconsistent with timing of the output
- **Satisfactory(70%):** Organization chart complete, detailed definition of duties and responsibilities
- **Good(90%):** In addition, precise matching of staff skill, not too-many short term expert

- **Very Good(100%):** In addition, members have worked earlier as a team, optimized resources

5.2 Suitability of transfer of knowledge (source code) & Training (15 points)

The willingness of the firm and detailed plan for transfer of technology in terms of ownership of the source code and incorporation of NUTECH staff throughout the software development life cycle (SDLC), including **planning, analysis, design, development & implementation, testing & deployment** and **maintenance**. Training methodology to be specifically tailored to the objective of the program and discussed exhaustively so that by the end of the project, IT Department of NUTECH is enabled to take on the last stage of SDLC (maintenance) and any future development.

- **Poor(40%):** Unwilling to share code and incorporate resources of NUTECH
- **Satisfactory(70%):** Willing to share code and involve NUTECH staff in development, but proprietary rights will stay with the firm
- **Good (90%):** Ownership of the code will be transferred for modification and academic use. Resources of NUTECH will be trained and involved in development
- **Very Good (100%):** Full ownership of code for use / distribution for commercial purposes. NUTECH resources will be involved in all phases of SDLC and fully trained to modify, enhance and maintain code

5.3 Qualification and Competence of Proposed Key Staff (15 Points)

The assigned team will be judged as a complete unit on 3 sub-criteria:-

5.3.1 1st Sub-Criteria – Academic qualification of team members as per their Assignment (2 Points)

- **Poor(40%):** Basic academic qualification but less than 2 years of relevant experience
- **Satisfactory(70%):** Up to 5 years or more of experience with appropriate academic education and training
- **Good(90%):** Relevant academic qualification / certifications and more than 5 years' experience on similar assignments, steady increase in responsibility in the past
- **Very Good(100%):** More than 10 years of specialist experience, fully up to date in concerned discipline, and other attributes of "Good"

5.3.2 2nd Sub-Criteria – Adequacy for Assignment (6 Points)

- **Poor(40%):** Occasionally worked in similar position, junior professional
- **Satisfactory(70%):** experience fits the assigned position, completed at least one project of similar nature
- **Good(90%):** In addition, held several similar positions in similar assignment
- **Very Good(100%):** In addition, qualification and experience exceeds substantially the requirement

5.3.3 3rd Sub-Criteria – Experience in the specific domains of CMS, ERP, LMS (7 Points)

- **Poor(40%):** Never or occasionally worked in one of the domains

- **Satisfactory(70%):** Worked in similar domains and environment and has good understanding / knowledge of at least one domain
- **Good(90%):** In addition, worked recently in at least two domains and is expert in at least two domains
- **Very Good(100%):** In addition, has detailed and direct knowledge of all domains through years of professional work

5.4 Experience of Firms in the specific areas of CMS, ERP and LMS developed and implemented for academic institutions (15 points)

Experience of firms in the specific areas of CMS, ERP and LMS developed and implemented for academic institutions **(15 points)**

- **Poor(40%):** Irrelevant, incomplete, partial implementations
- **Satisfactory(70%):** Relevant experience in minimum two domains
- **Good(90%):** Extensive experience in all three domains
- **Very Good (100%):** State-of-the-art, world class

5.5 Number of years in business and availability of local office (5 points)

Number of years in business and availability of technical and training facilities in Rawalpindi / Islamabad **(5 Points)**

- **Poor(40%):** less than 1 year in business and no local facility
- **Satisfactory(70%):** Between 1 to 5 Years in business and some local presence
- **Good(90%):** 5 to 10 Years in business with full technical and training facilities
- **Very Good (100%):** More than 10 years in business and state of the art training and technical facilities in Rawalpindi / Islamabad.

5.6 Marking System

- Marking of the firms shall be based on information provided in Proposals.
- Proposals will be marked on the basis of 70 – 30 i.e. 70% of the proposal strength will be measured in Technical marking and 30% of the proposal strength will be measured in Financial marking.
- Marks obtained in both technical and financial evaluation will be added to arrive at the combined evaluated score. Bidder acquiring overall highest marks in the combined evaluated score will be considered to be the lowest bidder.

6 General requirements and information for proposal submission

6.1 Emphasis of proposal should be on completeness and clarity of content. Please do not include sales and marketing brochures. Additional information, if provided, should be separately identified in the proposal. A description summarizing the BIDDER's experience in performing similar services as listed in this RFP to large academic clients should be attached.

6.2 A statement identifying the names of key personnel that will be assigned to this project, including their titles, length of relevant experience (name of projects executed in education

institutions and task performed), qualifications (attach resumes). The BIDDER will depute qualified staff in this project, mainly comprising of Project Manager, Business Analyst, Application Developer, Graphic Designer, QA Analyst, Solution Architect, Technical Writer, etc. Please also send PDF copy in USB/DVD along with proposal

6.3 NUTECH reserves the right to retain all proposals submitted, and to use any ideas in a proposal regardless of whether that proposal is selected.

6.4 The BIDDER will provide module wise breakup of the timeline and prices for each package as mentioned in the” Priority Metrics for deployment”.

6.5 As a part of the evaluation, bidders may be asked to conduct presentation / demonstration of their proposed methodologies.

6.6 4 copies (1 original and 3 copies) of the bid will be provided by due date at the following address:-

Deputy Dir SCM, National University of Technology (NUTECH)

IJP road, Sector I-12

Islamabad

6.7 Stages of tender development will be as under:

Ser	Date	Activity
a.	Submission of technical offer	Minimum 15 Days from release of RFP
b.	Technical bid opening and processing	5 Working Days
c.	Technical evaluation by IT dept	15 Working Days
d.	Discussion/ Clarification by firms and/ or revision of requirement by NUTECH as the case may be.	10 Working Days
e.	Submission of revised technical proposal and financial proposals	Minimum 15 days after discussion/ clarification and or revision of requirement as the case may be.
f.	Revised bid opening and processing	15 Working Days
g.	Financial bid opening and announcement of lowest evaluated bid.	5 Working Days after preparation of the technical acceptance
h.	Award of contract	Within 30 days after financial opening

7 Schedule to the tender will be as under:-

Phase – 1

Ser	Benchmark	Milestones	Payment Schedule	Deliverable Time
1.	Req Gathering	a. User req gathering from all dept b. Preparation/discussion of project plan. c. Presentation to demonstrate project plan d. Plan approval.		
2.	Approval of Ph-1 modules	a. Detail presentation on completion timeline. b. Demonstration of all modules of Ph-1 c. Formal approval for modules		
3.	Deployment	a. Deployment of modules on NUTECH system.		
4.	Testing & Training	a. Training of NUTECH users on developed modules. b. Module testing on developed by concerned users.	20%	
5.	ToT	a. Handing over source code to NUTECH. b. Handing over complete documents, manuals, user guides and any other related documents to NUTECH.		
6.	PAC Phase-1 Acceptance Certificate	a. Provisional acceptance of Phase-1 by IT Dept NUTECH	20%	

Phase - 2

Ser	Benchmark	Milestones	Payment Schedule	Deliverable Time
1.	Req Gathering	a. User req gathering from all dept b. Preparation/discussion of project plan. c. Presentation to demonstrate project plan d. Plan approval.		
2.	Approval of Ph-2 modules	a. Detail presentation on completion timeline. b. Demonstration of all modules of Ph-2 c. Formal approval for modules		

3.	Deployment	a. Deployment of modules on NUTECH system.		4 Months
4.	Testing & Training	a. Training of NUTECH users of modules. b. Module testing for application by concerned users.		
5.	ToT	a. Handing over source code to NUTECH. b. Handing over complete documents, manuals, user guides and any other related documents to NUTECH.		
6.	PAC Phase-2 Acceptance Certificate	a. Provisional acceptance of Phase-2 by IT Dept NUTECH	20%	

Phase - 3

Ser	Benchmark	Milestones	Payment Schedule	Deliverable Time
1.	Req Gathering	a. User req gathering from all dept b. Preparation/discussion of project plan. c. Presentation to demonstrate project plan d. Plan approval.		4 Months
2.	Approval of Ph-3 modules	a. Detail presentation on completion timeline. b. Demonstration of all modules of Ph-3 c. Formal approval for modules		
3.	Deployment	a. Deployment of modules on NUTECH system.		
4.	Testing & Training	a. Training of NUTECH users of modules. b. Module testing for application by concerned users.		
5.	ToT	a. Handing over source code to NUTECH. b. Handing over complete documents, manuals, user guides and any other related documents to NUTECH.		
6.	PAC Phase-3 Acceptance Certificate	a. Provisional acceptance of Phase-3 by IT Dept NUTECH	20%	

Phase - 4

Ser	Benchmark	Milestones	Payment Schedule	Deliverable Time
1.	Req Gathering	a. User req gathering from all dept b. Preparation/discussion of project plan. c. Presentation to demonstrate project plan d. Plan approval.		
2.	Approval of Ph-4 modules	a. Detail presentation on completion timeline. b. Demonstration of all modules of Ph-4 c. Formal approval for modules		
3.	Deployment	a. Deployment of modules on NUTECH system.		
4.	Testing & Training	a. Training of NUTECH users of modules. b. Module testing for application by concerned users.		
5.	ToT	a. Handing over source code to NUTECH. b. Handing over complete documents, manuals, user guides and any other related documents to NUTECH.		
6.	PAC Phase-4 Acceptance Certificate	a. Provisional acceptance of Phase-4 by IT Dept NUTECH		

Total Value_____

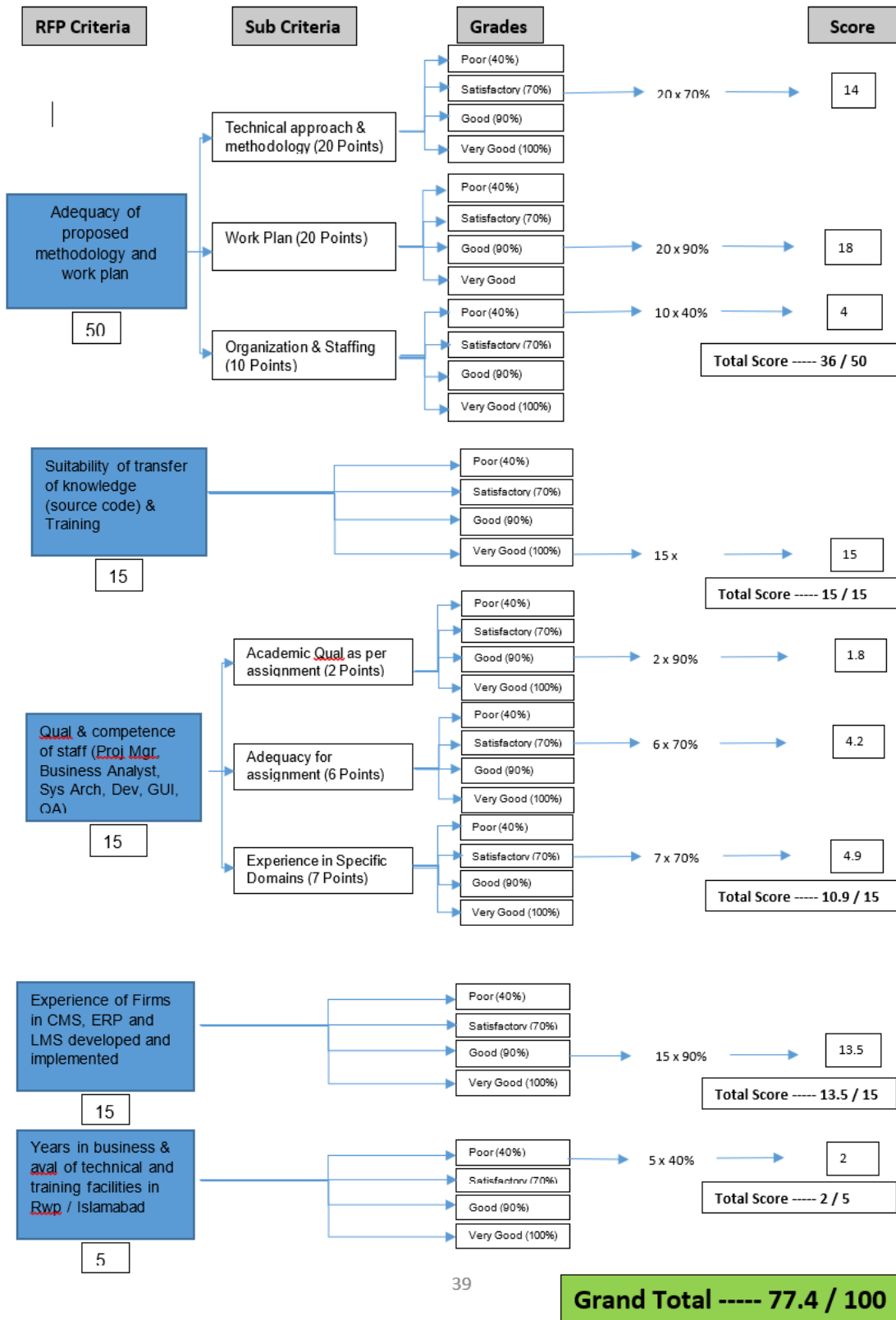
GST_____

Total Gross Value_____

Bid Bond Ref_____

Firm Name_____
Signature_____
Name_____
Designation_____

Example of Evaluation of Firm XYZ with Dummy Data





NATIONAL UNIVERSITY OF TECHNOLOGY
SUPPLY CHAIN MANAGEMENT OFFICE

FINANCIAL OFFER

Annex B

Ser	Project Value Rs	GST(if applicable)	Total Rs

GST Number _____

NTN Number _____

Bid Bond Number _____

DETAIL OF PAYMENT RECEIPT

a) Name/Title _____

b) Address: _____

Firm Name _____
Signature _____
Name _____
Designation _____