TENDER NOTICE
University of Sargodha

University of Sargodha intends to launch entire solution of Campus Management System (CMS) including Learning Management System (LMS) and financial management. Relevant interested firms registered with FBR (Income Tax / Sales Tax), PSEB, SECP in relevant category and field etc., and having sound experience in the relevant field preferably in Higher Education Sector may obtain / send their tender, upto **04-08-2022 at 10:30AM** and will be opened on the same day at **11:30AM** in the presence of representatives of the firms in the office of the Dean Faculty of Pharmacy, University of Sargodha.

Note: A Pre-Bid meeting for discussion about the specifications will be held on

19-07-2022 at 11:30am in office of the Dean Faculty of Pharmacy, University of Sargodha**.** Participation in Pre-Bid meeting is important.

Sr. No.	Description	Estimated Cost	Tender Fee
1.	Campus Management System (CMS) including Learning Management System (LMS)	Rs.53,681,000/-	Rs.15,000/-

Terms and Conditions

1. Detailed Tender documents are available immediately from the Purchase Office after the publication of tender notice on producing demand draft (Non-Refundable) of above mentioned amount in favor of **Treasurer, University of Sargodha**. Tender documents can also be obtained through courier.
2. **02%** Scheduled Bank CDR (Refundable) of the Estimated Cost in the name of **Treasurer, University of Sargodha** must be attached with **Technical Proposal**.
3. Detailed specifications along with estimated cost are available in the Tender document.
4. For all correspondence, please use postal address, **Purchase Office, University of Sargodha, Sargodha.**
5. For further details please contact on phone No. **048-9230999.**
6. **Purchase will be made under PPRA (Punjab) rule 38(2)(a) "single stage two envelope procedure" as amended from time to time.**
7. The employed I.T expert/s in the relevant field before the competent authority if and when required.
8. Name of the firm with year of establishment, full address, partnership deed and telephone numbers of person/s duly authorized by the firm with whom future correspondence shall be made.
9. A certificate from chartered firm and copy of up-to-date balance sheet of at least last three years. Moreover representative of the firm will have to substantiate the financial soundness of the firm.
10. Details of similar nature of works in hand and executed during at least last three years indicating project cost, scope of work with verification certificate from concerned authority regarding satisfactory completion in original time limit and extended time limit (if any)with reason.
11. Details of any arbitration/litigation or similar proceedings against any Government / Semi Government Department or any other organization showing extent and results.
12. Affidavit on Judicial paper that the firm was never blacklisted by any of the Government / Semi Government Department or any other organization.
13. Affidavit on Judicial paper that the firm is not under investigation by any investigation authority.
14. Copy of Partnership deed/articles of association in case of company/limited firm with power of attorney.
15. The short-listed firms will be invited for presentation on CMS and onward procedure as per PPRA (Government of Punjab) rules.
16. Any other particulars, the firm wishes to furnish.
17. All Firms shall have to follow all terms and conditions issued by University of Sargodha and PPRA (Punjab) from time to time.

Chairman,
CMS & LMS Committee
University of Sargodha,
Sargodha, Pakistan
Office Contact No. 048-9230110, 048-9230811-Ext: 501

Issued to:_____

Tender Document for

**Hiring of Firm to Provide Software Solution for
Campus Management System (CMS) including Learning
Management System (LMS) and Financial Management.**

Pre bid Meeting:	19-07-2022 (11:30AM)
Submission Deadline:	04-08-2022 (10:30 PM)
Opening Date:	04-08-2022 (11:30 PM)
	(At office of Dean Faculty of Pharmacy)

Must fill this document properly and attach with bid:

PURCHASE OFFICE
UNIVERSITY OF SARGODHA

July – August, 2022

Table of Contents

This document is compiled to provide necessary information to the potential bidders about the organization that is requesting for proposals, its functions, circumstances that necessitate the assignment and how the whole process of award of work will be handled.

The primary objective is to help the prospective bidders understand the pertinent needs and enable them to devise solutions that are capable of serving the purpose.

1 Introduction

University of Sargodha was established in November 2002, with a mission to provide purposeful education and training, to excel in research reliant to the regional, national and global needs incorporating all the resources available through innovation.

University of Sargodha has its main campus at Sargodha having number of Faculties, constituent Colleges, Institutes, Schools and affiliated Colleges University aims to utilize technology in its management, teaching and learning processes and intends to encourage, support and foster systematic integration of technology to automate its business processes related to human resource, finance, faculty, student, academics, examinations, admissions, learning and curriculum.

2 Background of the Proposed Assignment

Currently, University has very limited automation with respect to information management system. Most of the work is carried out manually. Manual processing of data makes it hard to enforce standards and improve the quality of the services across various units of the University. Processing data of thousands of students in traditional way is very time consuming and has delayed processing. With main campus situated in Sargodha, students from other cities have to travel to Sargodha to obtain prospectus for admission to the university, degrees, result cards, verifications, NOCs and other related matters. It is very difficult to collaborate and communicate between main campus and its affiliates to utilize the resources efficiently. With these limitations, to provide high quality education services with the help of Technology, University, desires to develop a complete software solution that has the capability to automate its processes in order to improve the quality of its services. Thus, University desires to assign the task of providing a well customized system that caters to the pertinent needs detailed in the Scope of Work or Design & Develop a system to meet these requirements to a qualifying firm interested in and capable of providing such a system. The interested firms are advised to carefully read the Scope of Work and other sections of this document to understand the technical as well procedural requirements in order to submit proposals that are not only complete in all respects but are also compliant with the relevant procedures, Ordinance, Statutes, Rules, Regulations of UOS.

3 Deliverables

In addition to the actual development/deployment/implementation of the desired solution owing deliverables are expected from this project:

i. Detailed plan for the project execution
ii. Detailed plan for the project maintenance and data conversion/migration and post deployment technical support and services time frame.
iii. Requirements Specification Document(s) and their Design Document(s) based on Requirements Specification, Implementation, and data migration details etc.
iv. Installation, configuration, customization, and integration covering the scope of the project System's documentation in the form of installation and configuration guides, user and administration manuals, maintenance and support etc.
v. Technical consultancy, advisory, training of the staff and necessary troubleshooting to ensure smooth transition from manual to completely CMS/LMS/Financials etc. assisted operations.
vi. Transfer of complete system to the University along-with key, complete source code, and software licenses (if applicable).
vii. Bidders shall submit a signed letter bearing their Official Stamp as per the format given in Annex I as a cover letter to the Bid/Proposal enclosed in the Technical proposal envelope. Bid/Proposal submitted without this cover letter shall be liable to rejection.
viii. Technical proposals shall contain Company profile, location of branch offices, company experience in related field, technical staff details, projects completed & firm's references as per the format given in Annex II, equipment's technical details (brochures, etc.)

4 Bid Submission Requirements

As per Tender Notice/Advertisement/Tender Documents

5 Selection Procedures

The objective of this section is to define the steps and procedures that shall be adopted for the award of the tender to the selected Bidder. Following procedures will be followed for the selection of the successful bidder.

i. In the first stage, only Technical Proposals will be opened in the presence of the bidders' representatives who choose to attend.
ii. Technical evaluation of the bids shall be based on the information provided in the respective Technical Proposals and the Technical Evaluation Criteria.
iii. As a part of technical evaluation, bidders will be asked to conduct, on a scheduled time, a Presentation/Demonstration/Proof of Concept.
iv. On the basis of technical evaluation, the Financial Proposal of only technically responsive bidders (qualified bidders) will be opened in the presence of their representatives if they choose to attend.
v. After the "Award of Tender" is approved, a Contract on the stamp paper (the worth of stamp paper shall be determined as per the relevant rules) shall be executed between the University and the Selected Bidder.

Annex I: Proposal Submission Form

(To be submitted as Cover Letter with the Proposal)

The Chairman Purchase Committee (CMS/LMS)
University of Sargodha
Sargodha

Sir

We, the undersigned, offer to provide the solution along with required services for the assignment "Campus Management System (CMS) Including Learning Management System (LMS) and Financial Management." in accordance with your Request for Proposal dated _____ and our proposal is enclosed herewith. We, hereby, submit our Proposal, which includes both the Technical and Financial proposals, sealed in separate envelopes, along with all the necessary attachments.

We understand that you are not bound to accept the proposals you receive and that you reserve the right to accept or reject all bids, and/or to annul the bidding process and reject all proposals without assigning any reasons or having to owe any explanation whatsoever.

We also understand that the decision of the Technical Evaluation Committee shall be final and cannot be challenged on any ground at any forum and that the said committee or the University of Sargodha or any office holder of the University of Sargodha will not be liable for any losses or damages that may be caused to this bidder as a consequence of the decision on our proposal.

Yours' sincerely

Authorized Signature: _____

Name and Title of the Authorized Signatory: _____

Name of the Firm: _____

Detailed Contacts: _____

Annex II: Firm's References

(To be filled by the bidder for each mentioned experience and to be attached with the technical proposal for evaluation) Please provide details of the relevant Services/Assignments carried out in the past (starting from the most recent) that Best Illustrate Qualifications/Experience of your firm. Using the format below, provide information on each reference assignment for which your firm, either individually or as a partner company within an association, was legally contracted. Please attach a copy of completion certificate issued by the referenced organization, without which the reference claim may not be considered.

Assignment Name:		
Client's Name/Title		
Client's Address		
Key Professional Staff Provided by Your Firm	Name	Responsibility
Duration of assignment	(Total Man Months):	
Timeframe of assignment (Tentative)	Start Date:	Completion Date:
Approx. Value of Project		
Description of Project/Solution Provided		

Annex III: Technical Evaluation Criteria

The proposals shall be evaluated in the light of following Evaluation Criteria (Part-A & B):

(Part – A)

Sr. No.	Documents Required	Marks
1.	**Details of Offices**	**Max Marks 5**
	Branch office in Karachi + Lahore + Rawalpindi / Islamabad + Faisalabad	05
	Branch office Karachi + Rawalpindi / Islamabad + Lahore	04
	Branch office only in one city	03
2.	**Company has been in Existence Since (years)**	**Max Marks 10**
	07 years and above	10
	05 to 07 years	07
	Less than 05 years	05
	BELOW 3 YEARS NOT ELIGIBLE	
3.	**Company Certifications**	**Max Marks 10**
	CMM, ISO Certifications and other relevant / applicable certifications of National and International levels	
4.	**Summary of Relevant Projects in Last Five Years with Govt. / Semi Govt. which shows turnover business of list of items applied. (Attach Purchase orders or other documentary evidence)**	**Max Marks 10**
	30 Million or above	10
	20 Million or above	07
	10 Million or above	05
5.	**Summary of Relevant Projects with Govt. / Semi Govt. (for CMS/LMS/Financials development, deployment and after services) (Attach Purchase orders or other documentary evidence)**	**Max Marks 15**
	05 Number of projects and above	15
	03 Number of projects and above	10
	Less than 03 Number of projects	05
6.	**Summary of Projects (Attach Purchase orders or other documentary evidence)**	**Max Marks 10**
	Relevant Projects completed in Higher Education sector	05
	Projects completed in Industry or other sector	05
	Minimum Qualification Criteria is 70% Total Marks: 60 Passing Marks: 42	

Part – B

Minimum qualification in Part – A is mandatory for evaluation of the Part – B.

Sr.#	Technical Evaluation Parameters	Remarks (Y/N)	Marks	Details
1.	Presentation/demonstration of proposed solution		0-40	Presentation/demonstration of proposed design and technical solution before the concerned technical team/officials of University
	Total Marks		0-40	
	Minimum Qualification Criteria is 70% Total Marks: 40 Passing Marks: 28			

Annex IV: Terms and Conditions

Total Estimated Cost including all payable taxes / supplies / installation charges / labour charges (If any):   Rs.53,681,000/-
Tender Fee: Rs. 15,000/-

1. **02% Schedule Bank CDR (refundable) of Estimated cost**, in the name of Treasurer, University of Sargodha, must be attached with the **Technical Proposal** as bid security.
2. In case of cheque, fictitious CDR / Bank Guarantee and non-attachment of CDR, bid of the firm will be rejected and / or action can be taken against the firm as decided by Purchase Committee UOS.
3. Rates should be valid up to 30-11-2022 and the company / firm will be bound to accept supply order.
4. Companies / Firms can purchase / send the tender documents upto 04-08-2022 at 10:30AM and Technical Proposal will be opened on same day at 11:30AM in Office of the Chairman Purchase Committee CMS / LMS of UOS (Committee room at College of Pharmacy University of Sargodha) in presence of available representatives of firms.
5. **A pre-bid meeting regarding discussion about specifications and other details of solution / item / articles / assignment etc., will be held on 19-07-2022 at 11:30AM in Office of the Chairman Purchase Committee CMS / LMS of UOS (Committee room at College of Pharmacy University of Sargodha). Presence of representative of firm is important.**
6. **Any other condition (if required) decided in the Pre-bid meeting will be considered as a part of the tender document.**
7. **Purchase will be made under PPRA (Punjab) rule 38(2)(a) "single stage two envelope procedure" as amended from time to time.**
8. **Bids must be delivered sealed and as per single stage two Envelope procedure.**
   a. Bid must be a single package consisting of **two separate envelopes**, containing separately the **financial** and the **technical** proposals. The envelopes must be marked as **"Financial Proposal"** and **"Technical Proposal" in bold and legible letters to avoid confusion**.
9. **After the evaluation and approval of the technical proposals the date, time and venue for opening of financial proposals of technically accepted bids will be announced and communicated to the qualified bidders in advance within the bid validity period.**
10. Firm owner / authorized representative's photocopy of National Identity Card, income tax / sales tax certificate and **affidavit for not being blacklisted by any authority / department on e-stamp paper of Rs.100/-** duly attested, must be attached with bid.
11. All Tax Deductions will be made as per Govt. rules amended / revised from time to time.
12. Bids received after the due date / time will not be entertained as per PPRA Rules.
13. Date & Reference No. must be written on your bid / quotation as per your record.
14. The presence of representative of the firm is important at the time of opening of the bids, so that any type of clarification could be sought "if required".

15. Purchase Committee (CMS / LMS) of UOS reserves the right to accept or reject all the tenders as per PPRA Rules.

16. **After deployment services, would be required, starting from the date of completion/deployment of solution for the next two years (details should be mentioned in technical proposal).**

17. **Details of annual basis Service Level Agreement (SLA) for the period next to the expiration of after deployment service period are also required to be mentioned.**

18. **CDR / Performance Guarantee will be released after expiry of after deployment service period (i.e. two years).**

19. Bidders are required to define the assignment milestones and the magnitude of work involved in a milestone against the total work. This will form the basis for payments schedule to be decided with mutual agreement. In case of any conflict decision of Purchase Committee CMS / LMS of UOS will be considered as final.

20. The successful Bidder will have to deposit performance security equal to 10% of the total cost of the bid amount in form of Bank Guarantee valid for two (02) years after the completion and handing over entire solution along with key and source code to the UOS.

21. All payments shall be made through cross cheque in the Pakistan Rupees (PKR).

22. No advance payment will be made.

23. Winning firm will have to execute agreement on stamp papers as per Govt. of Punjab Rules.

24. Preference may be given to the firms having their own proven business record / existence in respective fields as per PPRA rules (if required). Decision of Purchase Committee CMS / LMS of UOS in this regard will be final.

25. Conditional tenders / bids will not be entertained or will be treated as per decision of Purchase Committee CMS / LMS of UOS as per PPRA rules.

26. In case of late delivery, LD Charges / deductions will be made from bill as per decision of Purchase Committee CMS / LMS of UOS. Moreover, University of Sargodha reserves the right to reject the delivery and not to entertain the bill whatsoever is the case; decision of Purchase Committee CMS / LMS of UOS in this regard will be final.

27. In case of failure to deliver / installation of the required solution / item / article within prescribed time, CDR / Performance Guarantee of the Firm can be forfeited as per decision of Purchase Committee CMS / LMS of UOS.

28. In case, firm does not provide after deployment services, CDR / Performance Guarantee can be forfeited as per decision of Purchase Committee CMS / LMS of UOS.

29. **Winning firm will be responsible for complete installation of solution. All deliveries / installation are required at different respective places and as per requirement of University of Sargodha.**

30. There will be no compromise on quality, standard and specifications, In case of deficiency or fault, deduction can be made from the bill or action can be taken as per decision of Purchase Committee CMS/LMS. Moreover, University of Sargodha reserves the right to reject the delivery and not to entertain the bill whatsoever is the case. The decision of Purchase Committee CMS/LMS of the University in this regard will be final.

31. Tender documents shall be opened on the date and time as mentioned above. If the tender cannot be opened on the date as given above due to unavoidable circumstances,

the tender will be opened on the next working day unless separate notification is issued in this.

32. For further information about specifications for any query, please contact office of the **Director IT** University of Sargodha. (048-9230099).
33. Purchase will be made as per PPRA rules as amended from time to time.
34. All Firms are bound for strict compliance of all terms and conditions issued by University of Sargodha and PPRA from time to time.
35. If any firm competes for any tender / Lot then it will be assumed that firm has accepted all terms & conditions issued by UOS & PPRA related to that tender.
36. Omission / Clerical mistakes in tender document are acceptable and can be changed by the Secretary, Purchase Committee.

Chairman Purchase Committee
(CMS / LMS)
University of Sargodha

(Tender Opening Date: as above)
(Must be filled by bidder/firm)

I: _____ S/D/O: _____ having

ID card No: _____ contact No: _____

working as: _____ in firm / company _____

have accepted / agreed with all above mentioned terms and conditions issued by University of Sargodha.

Date:_____   Sign and Stamp

Annex V: Scope of Work (Details of Software Modules for Various Departments) Modules for Various Departments)

(List of Modules Enclosed)

Scope of Work for Campus Automation / CMS (Campus Management System/ERP)

A proposed system regarding Campus Automation will have following fundamental modules and system components based on the systems already in practice through manual or partially automated mechanisms w.r.t the various Departments/Administrative units and so on for review by each concerned department/administrative unit.

OFFICE OF THE DIRECTOR
ACADEMICS

1. Faculty Management System

   a) Statistical data regarding faculty is needed periodically.
   b) Designation qualification-wise faculty details (included in Annex-1)
   c) Development of Faculty/Staff ID cards. (Annex-la)

2. Student Management System

   a) Students' enrollment (Overall and detailed i.e. data of students admitted on reserved seats) (Annex-II)
   b) Statistical report of students and faculty (gender-wise) (Annex-III)
   c) Level wise report of students (Annex-IV)
   d) Issuance of Students' ID cards (Annex-V)
   e) Department-wise Six monthly progress Reports of MSc(Hons)/MPhil/PhD scholars (list containing
   f) session/name of student/name of supervisor/remarks) and report of each scholar (Annex-VI)
   g) Online applications for scholarships (Annex-VII)

3. Other miscellaneous data required from departments (Annex-1)

a. Detail of books and computers
b. Facilities like:
   I. Sport Grounds/Courts (Cricket/Hockey/Football/Squash Court etc.)
   II. Religious Places (Mosque/Church/Temple etc)
   III. Hostels for Boys
   IV. Hostels for Girls
   V. Hostels for Faculty Members (Male)
   VI. Hostels for Faculty Members (Female)
   VII. Auditorium(s) viii.
   VIII. Laboratories
   IX. Libraries
   X. Classrooms
   XI. Cars
   XII. Buses
   XIII. Coasters/Hiaces
   XIV. Cafeterias
   XV. Wi-Fi Hotspots
   XVI. CCTV Cameras
   XVII. Generator(s)
   XVIII. ATMs
   XIX. Trees
c. Admission applicants and fresh intake
d. Enrollment of Pakistani national students.
e. Enrollment of Foreign students
f. Pass-outs Pakistani national students
g. Pass-outs Foreign students
h. Faculty other than visiting

i. Faculty (visiting)
j. Staff Details
k. Students data belonging to erstwhile FATA
l. Students data belonging to religious minorities
m. Data of Students with disabilities.

<table>
<tr><td>DIRECTORATE OF IT (WEB DEVELOPMENT CELL / WDC)</td></tr>
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1. **Faculty Management System**
   a. Time Table Management (Teachers, Rooms, Labs)
   b. Online availability of course file of each teacher
   c. Course management system for teacher and department
   d. Labs and class rooms management
   e. Stock Directory of equipment's and other resources of the department
   f. Management of programs offered at Department (Under graduate /Graduate/Post-Graduate)
   g. Student attendance management
   h. Departmental Examination System in collaboration with Central Examination Management System.
   i. Online Biometric Faculty & Staff Attendance System
   j. Any other module(s) as required

2. **Student Management System**
   a. Online Enrollment of Student and Courses Management (Add courses/With Draw Courses according to defined scheme of study of Department)
   b. E-Challan for fee submission.
   c. Issuance of Students' enrollment cards
   d. Online Biometric Student Attendance Record Management
   e. Assignment submission through online portal.
   f. Course Assessment and Grading
   g. Semester freeze/drop
   h. Declaration of Student results, semester wise, provisional transcript generation etc.
   i. Transfer of Credits in case of migration from one university to other university
   j. Disciplinary Action/Punishment (in case of malpractices / discipline breach)
   k. Online applications for scholarships
   l. Student Health Management
   m. Convocation registration system.
   n. Any other module(s) as required

3. **Portals for Teaching Learning Management System**
    a. A portal for handling teaching learning material including curriculum, syllabi and teaching/learning materials to facilitate the learning process
    b. Administering and submission of assignments, quizzes and home works etc. through electronic means
    c. Possibility of discussion forums related with various training programs
    d. Any other module(s) as required
4. **Parents / Guardian Portal Management**
    a. Seeking / Providing Student Relevant Information
    b. Any other module(s) as required
5. **User Management**
    a. Create new users with authentication method
    b. Management of password policy and expiry
    c. Management of application rights for users
    d. Management of user groups roles and user rights
    e. Any other module(s) as required

6. **Digitalization of Old Record and Maintenance of Archives**
    a. Transformation of soft data from existing system into new system
    b. Scanning of Manual record into digital archives
    c. Maintenance and handling of data
    d. Any other module(s) as required
7. **SMS / E-Mail Management System**
    a. Automated System for sending alerts through E-Mail / SMS to disseminate any information
    b. Any other module(s) as required
8. **Reporting Management**
    a. Create various reports for each module
    b. Modification in Reports
    c. Adding new report
    d. Report of Statistics of relevant module
    e. Any other module(s) as required

DIRECTORATE OF IT (DATA CENTER)

IT Services Management System
    a. I.T Services Management (Internet, Smart Campus/Wi-fi, LAN, email accounts, Video Conferencing and others).
    b. Complaints management (Network support, System Support, Hardware Support, online events support)
    c. Office management
    d. Diary dispatch management
    e. Inventory/stock management
    f. Any other module(s) as required

Examination Management System (for Semester / Term System and Annual System)

1. **User Management System**
   i. Creation of users with authentication
   ii. Management of password its expiry and recovery (Chairperson, coordinators, Internal Controller of Examinations)
   iii. Application right to user (Department, students, teachers), supervisory staff (superintendents, deputy superintendent, invigilators), Principals/administrator of affiliated colleges, internal controller of examinations of affiliated colleges, paper setters, Head examiners, assistant to head examiners, officers and officials office of the of Controller of Examinations.
   iv. Any other module.

2. **SMS/E-Mail Management System.**
   i. Automated system for sending emails and SMS, WhatsApp to the users for updation of different activities performed by the office of the Controller of Examinations
   ii. Any other module.

3. **IT Services Management System for the office of the Controller of Examinations.**
   i. Provision of whole time internet services for its users and online traffic management.
   ii. Creation and maintenance of data backup repeatedly for safety of data.
   iii. Offline software data management system, log of official, officers
   iv. Any other module.

4. **Student services management system for Annual Examination System, Term Examination System, Semester Examination System and distance Examination system.**
   i. Student development online database system on the basis CNIC of student and result data of Matric, intermediate, Bachelor & Master / M.Phil. Certificates and degrees for submission of forms, such as admission form, enrollment form for issuance of result card and degree form, verification of results, degree etc. and any other service.
   ii. Allotment of Roll No. subject, course wise.
   iii. Data Sheets
   iv. Allotment of centers by using google map

v.   Online system for daily attendance of students and supervisory staff.

vi.   Generation of date sheet for conduct of examination

vii.   Centre Management system for appointment of supervisory staff and their online monitoring

viii.   Payment management system: management of answer books used by the students on the basis of bar code, bundling of answer books for examination. Preparation of award list question wise and totals for compilation of results. Printing of hard copies of award list having checked by examiners and revision by head examiners.

5. **Faculty services management system.**

     i.   Development of online system for entry as faculty member for different exam.

     ii.   Uploading of teaching learning material for course appointment as coordinator, paper setter, examiner, supervisory staff (superintended, deputy superintendent, invigilator etc)

6. Teaching learning management system for Main Campus, Affiliated Colleges & external students distance learners).

7. **Requirements for Semester Exam at Main Campus**

     i.   Feeding and updation of scheme of study of each programme offered at Main Campus of the University before start of each academic session.

     ii.   Courses enrollment of each student in each semester, teacher and student allotment/management.

     iii.   Faculty data (Department wise & course wise and semester wise regarding allotment of courses to each teacher and time table development.

     iv.   Uploading o f course file by each teacher in each semester for guidance of students to ensure proper teacher learning processes.

     v.   Midterm paper setting , sessional work and final term paper setting.

     vi.   Submission of detail of students who are being taught course by each teacher attendance, quizzes, presentation etc. Midterm results along with question papers, detail of sessional work and marks, final term exam schedule management by officer of the Controller of Examinations. Final term exam, result data of Question Papers, compilation and declaration of final result by office of the Controller of Examinations.

8. **Requirements for term examination system of affiliated institutions**

     i.   Entry of names of affiliated colleges academic session code wise, program wise,

     ii.   Entry updation of scheme of studies session wise of each program offered at each affiliated college.

     iii.   Number of seats alloted for admission in each program to each affiliated college.

     iv.   Entry updation of scheme of studies session wise of each program offered at each affiliated college.

     v.   Faculty data; teachers detail of each department, course wise and semester wise regarding allotment of courses to each teacher

vi.   Course enrollment of each student in each term, course wise, teacher wise, department wise.

vii.   Uploading o f course title by each teacher in each semester for guidance of students and exam management.

viii.   Providing submission of detail of students who are being taught course by each teacher attendance, quizzes, presentation etc. Midterm result along with question papers, sessional marks. Final term exam schedule to be issued by Controller of Examinations. Final term exam, result data of Question Papers, compilation of final result by Controller of Examinations and declaration of result.

ix.   Entry of students in 1st term and allotment of Roll No.

x.   Smart teacher bio data

xi.   Attendance feeding on weekly basis

xii.   Feeding of Midterm date sheet, Uploading of question papers, Feeding of mid term exam mark/result and sessional marks of affiliated colleges.

xiii.   Final term exam schedule to be issued by the office of the Controller of Examinations, conduct of exams, marking of issues. Preparation and declaration of result (feeding of result data)

xiv.   Double entry accrual based accounting

xv.   Create various reports for each module, modification in reports, adding new report, report of statistics of relevant module.

xvi.   Diary dispatch management, inventory / stock management

9.   Requirements for conduct branch.

i.   Access to city wise candidature figure of each examination after the closing of submission of admission form date through user account in order to establish examination centres.

ii.   Development of online application for the academicians/ staff members who will be willing to perform the duty of external examinations of this office and also give them access to fill and upload their requisite information as per designed Proforma

iii.   Creation of attendance link for the students and supervisory staff along with Invigilation staff during the conduct of examination.

iv.   To link the attendance of students and supervisory staff with mainstream user link to cross check the attendance record as and when required.

v.   Attendance of Distributing Inspector at respective bank and making entry of handed over question paper envelops to the supervisory staff on user account.

vi.   Establishment of user account to bound the supervisory staff to make entry of subject/ LK wise question papers received from the bank on paper day and after the completion of examination enter the subject wise solved bundles of answer books deposited at the respective bank.

vii.   Designing and printing of Roll Part & Award Part of the answer book

viii.   Question papers received from the confidential press in sealed form and after sorting of these question paper envelops these envelops are sent to respective banks through official vehicles.

ix.   keeping in view the strength of students going to appear throughout the examination demand of each centre is prepared for the delivery of unsolved bundles of answer books through official vehicles.

x.   \develop a software which give access to supervisory staff to enter the range of consumed answer books on each paper day For example range 134400-134500 or 14400-14450 (as consumed)

xi.   access to system to concerned official for the maintenance of record of unsolved bundles of answer books at the centres and making entry thereof in system after received the unused answer books from centre.

xii.   access to supervisory staff through software to give detail of answer books consumed throughout the examination and remaining balance enabling the office to receive the unsolved bundles/ sheets of answer books as per detail entered by the supervisory staff after the completion of examination .

xiii.   Access to supervisory staff to report stray cases having proper information like Fictitious number, subject, part, examination (annual/ supply)

xiv.   Access to Resident Inspector/ Principal of respective buildings to give their consent for the grant of examination centre to conduct The examination as per designed

xv.   Access to supervisory staff, Resident & Distributing Inspectors to upload their tax paid status

xvi.   (filer/ non filer) on user account for the reason that their tax may be deducted accordingly.

xvii.   Access through user account/ email to send letter for the smooth and peaceful conduct of examination to Deputy Commissioner & DPO of respective region by uploading date sheet and building Notice.

xviii.   Access through user account/ email to send letter to the Bank Manager regarding the safe custody of question paper envelops under double lock system.

10. **Requirements for Annual examinations of affiliated institutions and external candidates**

i.   User Management System: user roles at branch and department level and keep track of their log. Any module can add or remove from user login or its access etc.

ii.   Feeding and updation of scheme of study of each programme offered at Main Campus of the University before start of each academic session.

iii.   Examination Schedule Management: Online intimation to affiliated Colleges and other concerned, uploading of admission schedule on UOS website for general information.

iv.   Registered Students Management: Online Connected with Registration Branch for regular students, Generation of Registration Numbers of Private Students.

v.   Roll No Allotment Management: Define ranges (Regular and Private), Male and Female, City wise

vi.   Admission Forms Management: Received Forms status, Category / Parts wise Status, Male and Female Status, City Wise, Tehsil and Town etc status

vii. Tabulation User Management: Access to view Admission Forms, Access to view / change student password/ID, Access to check eligibility of Admission Forms, Access to check subject Combinations, Access to send objection to The Principals/ Private students for missing documents, Access to change subject on the request of students (As per policy), Confirmation of Admission Forms (if admission form is completed)

viii. Cut List and Previous Exams Appearance Management: Access to check previous appearance of Students, Access to Check Student Exam Chances/Auto

ix. Roll No Slip Management: Access to view Roll No slips, Access to make correction in roll no slips if required, Access to withhold objectionable Roll No Slips, Access to Uploading / Dispatching of roll No slips, Access to manage/settlement of different queries online, Access to maintain record of uploading of roll No slips

x. Result Preparation Management: Access to online proof read of feeded awards (Theory and Practical), Access to preview of Bio data Result Sheets, Access to make correction in Bio data sheets if any, Access to withhold objectionable Student's result (RLP etc), Access to view result gazette

xi. Routine Dak / letters Management: Received letters / applications record, Dispatch letters / application record, Different Notifications / Orders record

xii. Rules management dynamically

xiii. OCR/OMR scanning of roll part, award, evaluation data at award from award part.

xiv. Feeding award online from examiner

xv. Comparing at of both result data before compilation of reports, absentee, ROC etc

xvi. Compilation of results

xvii. Result reports

11. Requirements degree cell.

i. User management System

ii. SMS/Email Service be provided to update status of degree issuance / verification to the applicants

iii. Already established online degree/verification application portal (i.e; degreecell.su.edu.pk:88) be linked with Campus Automation / Campus Management System. Moreover, login be created for students.

iv. Integrated link of entire databases of controller office i.e; computer cell, semester branch and term branch be provided on Campus Automation / Campus Management System for degree issuance and verification of the degree.

v. One link degree printing and verification system be provided for printing of degrees of entire branches of the controller office.

vi. Strong checks be added in the database to avoid duplication of the degrees.

vii. Degree dispatch system be provided in the degree and verification portal

viii. Link with Registration Branch be provided to verify registration number

ix. API system be established between degree / verification portal and HBL for online verification of Fee.

x. Mechanism / infrastructure and equipment be provided for scanning of degrees for record keeping of degrees in soft form.

xi.   Computers and printers be upgraded as per system requirement

12. Requirements for Secrecy Branch

    i.   A portal will be generated in which all data of panels will be fed.
    ii.   The approved paper setter will make the paper within the 7 days after receiving of the letter from secrecy branch
    iii.   Paper setter will load/send the set paper on the online confidential portal
    iv.   The portal access will be only in the hand of Deputy Controller of the examination (confidential press)
    v.   Deputy controller of examination (confidential Press) will able to check the portal and on just one click he can send the reminder email or a garneted text message on given mobile number in software/portal of the paper setter
    vi.   Further, software must have the possibility to develop **questions banks** of different papers and subjects and creation of the paper for future.
    vii.   Telephone number will also feed in the software, which automatically sends the text to those paper setters who have failed to submit the questions in the software question/paper bank within the stipulated time.
    viii.   Branch has already one database on MS Excel. This database consists of personal records of all teachers, examiners and paper setters. In which name, CNIC, and cell no. Which is used in the process of dispatch and billing.
    ix.   If any software like the present database and all records transfer from excel to software, which is used for the purpose of dispatch and billing.
    x.   For the purpose of Billing Treasure office has already software but our branch has limited access if Treasure office give accesses then data already save on this software and we can save our time
    xi.   An online portal must be made in future, in which the paper checker fed the online results and then submit it to the portal and than that, result will, saved directly in computer cell record. The manual award will be submitted in the secrecy branch.
    xii.   Rechecking form, which is received in secrecy through the tabulation branch? In the secrecy branch, a database is made in MS Excel for rechecking forms, in which the details of every candidate have to be entered.
    xiii.   If a rechecking link is created on the site of university so the candidates fill the rechecking form and the print with challan form has to be sent to the tabulation branch.
    xiv.   Secrecy would have online data in soft form so the feeding process could be ended and the rechecking process could be done timely.
    xv.   After the online rechecking, tabulation / computer cell would give the limited access of roll numbers to secrecy and time would be saved if rechecking cases would be linked directly to secrecy.

13. Requirements for Confidential press.
14. Requirement for Complaint management system

FINANCIAL MANAGEMENT SYSTEM OF TREASURER OFFICE MAY INCLUDE BUT NOT LIMITED TO: -

1. **Double Entry Accrual-based Accounting**

a. Double entry of every transaction (debit and credit) into ledger from the chart of accounts
b. Tracking and Monitoring of every transaction
c. Generating log of every transaction
d. Every transaction should be performed by predefined rules and criteria
e. Any other module(s) if required

2. Full general Ledger processing and reporting

3. Assets and Equities

a. Cash and cash equivalents
b. Treasury bills
c. Certificates of deposit
d. Any other module(s) if required

4. Accounts Receivable

a. Manage All type of Accounts receivables
b. Any other module(s) if required

5. Accounts Payable

a. Manage all type of Accounts payable
b. Any other module(s) if required

6. Charts of Accounts

a. Assets
b. Liabilities
c. Revenue / Income
d. Expenses
e. Any other module(s) if required

7. Budget and Receipts

a. Prepare Budget according to the requirements of every office, department etc.
b. Maintain Budget record of every head
c. Allocation and Re-Allocation of Budget
d. Re-Appropriation of Budget
e. Forecasting of Budget
f. Any other module(s) if required

8. Payments

a. Manage / track every type of payments
b. Any other module(s) if required

9. Payroll and Pension

    a. Entry of salary and pension for specific month

    b. Detail of allowances

    c. Details of deductions

    d. Posting Salary and Pension to the Bank

    e. Manage and maintain salary record

    f. Employee record management

    g. Any other module(s) if required

10. Scholarship and Financial Aid to Students

    a. Manage All type of Scholarships provided to students

    b. Issuing Check to Student

    c. Manage Student Record for Scholarships with collaboration of other offices

    d. Any other module(s) if required

11. Fee Payment and Installments of student fee

    a. Fee voucher / bills of student or any other type of fee bill

    b. Bar coded Fee voucher

    c. Student fee installment and concession

    d. Maintain student record of every department, college, campus etc.

    e. Availability of student data from their respective teaching department

    f. Any other module(s) if required

12. Reconciliation Management System (with collaboration of Bank)

    a. Reconciliation of Cash Book with collaboration of Bank

    b. Reconciliation of Student fee in real time with Bank

    c. Reconciliation of every transaction

    d. Any other module(s) if required

13. Dairy and dispatch

    a. Track of every file received and dispatched

    b. Any other module(s) if required

14. Audit (Internal and external) Management

    a. Maintain record of audit files

    b. Track record of Audit objection

    c. Manage Audit of every office and department

    d. Manage Audit report with collaboration of Auditor General of Punjab government)

    e. Any other module(s) if required

15. Audit Branch

    a.   Audit of every receipt (bill, voucher) according to the rules and regulations

    b.   Maintain record of every receipt

    c.   Any other module(s) if required

16. Tax management System

    a.   Maintain Tax and Tax Statement with Collaboration of Bank

    b.   Maintain Cash Book and balance

    c.   Any other module(s) if required

17. Reporting System

    a.   Report for every module and entity as per requirement

    b.   Any other module(s) if required

18. Automation of Purchase Office

    a.   Dairy and Dispatch

    b.   Store Management

    c.   Maintain purchase Record Maintain Assets and equities

    d.   Manage Tenders

    e.   Any other module(s) if required

19. File Tracking System

    a.   Manual File Tagging and Track with barcode

    b.   Any other module(s) if required

20. Store Management

    a.   Maintain assets record moveable or immovable

    b.   Track of every item issued or received

    c.   Status of Store record

    d.   Add, update store items

    e.   Any other module(s) if required

21. Attendance and leave management

    a.   Employee Daily Attendance for every office and branch

    b.   Every type of Leave and leave balance for every office and branch

    c.   Any other module(s) if required

22. SMS and E-mail Service

    a.   Salary and Pension

    b.   Expenditure

    c.   Student Fee, due date, issuing fee vouchers, application status, concessions, installment etc. Check

    d.   Any other module(s) if required

23. Every required information may be available and able to be shared within and outside Software in required format, as per admin or user's groups (for example, every e ntity (office, department. assets, employee, parties record and information may be available for the purpose of issuance of Salary, Pension, Payment, Bill, Audit, etc.)

24. USER AND GROUP MANAGEMENT

    a. Create, Update, Remove users and groups

    b. Assign Roles to specific user and groups

    c. Track and monitor user and groups activity

    d. Any other module(s) if required

25. Any other module(s) if required

OFFICE OF THE REGISTRAR (Affiliation Branch)

Affiliation Management System

    a. Online application submission and processing to seek affiliation

    b. Affiliation Committee / Members Management

    c. Schedules and Inspection of Institutes for affiliation

    d. List of Affiliated Institutes along with Programs, degrees, sessions, and No of allocated seats

    e. Management of Teaching and non-teaching staff, Laboratory, Library and other resources data of affiliated institutes

    f. Affiliation Funds

    g. Faculty details as per attached Performa of HEC (Copy Attached)

    h. Access to Affiliation Branch to update the lists of affiliated colleges programs, degrees, sessions, and No of allocated seats etc. on university website.

    i. Diary/dispatch system

OFFICE OF THE REGISTRAR (ESTABLISHMENT I)

The Establishment Branch-l, office of the Registrar. University of Sargodha has reviewed the following fundamental modules and system component based on the systems already in practice through manual machamisms.

    1. Employees profile and personal record

At present Admin branch (E-I) is maintaining personal files manually without any back up in soft form. Employees' record is updated in Excel sheets for quick retrieval of information; however, this is inadequate to meet the needs of brunch. The information needs of E-I branch are as under:

- Generating discipline wise lists of faculty.
- Generating discipline wise lists of PhD and Non-PhD faculty.
- Generating qualification wise lists of PhD and Non-PhD faculty,
- Generating discipline wise lists of regular & contractual faculty
- Overall discipline wise lists regarding status of Faculty who persuing higher studies / on leave / on deputation.
- Generating the gender wise (Male & Female) list of all the disciplines
- Generating the report of issuance of NOC for seeking admission in PhD studies.

- Generating the report of issuance of NOC for applying in other Universities.
- Generating the report of teachers who are bonded to serve this University after completing higher studies. Remaining bond period should be mentioned.
- ❖ **Generating Profile of Faculty Member Including**
- His / her basic particulars (Name, Father name D.O.B)address CNIC. Initial appointment, Date of Joining. Date of Retirement, Date of expiry of Contract (in case of contractual appointed.
- His / her current posting / history of previous, posting/transfer
- Detail of additional assignments including appointment as inquiry officer or member of various committees.
- ❖ History of availing admissible facilities (Housing, medical etc.)
- ❖ Generating Leave Sanction list including casual leaves (This needs to be linked with Accounts Office (Salary Section) to get updated information about leave record of faculty member.
- ❖ Employees Nomination Record for Training. Workshops. Conferences.

2. Proposed Steps for automation

In order to automate work flow at E-I branch, following steps are proposed:

- Scanning of manual files / creating back up manual files in soft form.
- Data entry with regard to employee particulars in the database.
- User friendly interface to update status of each application note: Order into the database.

3. Diary /Dispatch Module
   - User friendly software lo enter incoming outgoing mails
   - Option to retrieve information using a variety of filters. (Subject. Key word, applicant name, date etc.

OFFICE OF THE REGISTRAR (ESTABLISHMENT II)

   a. Non-Teaching staff Index System
   b. Approved posts and vacancies record
   c. Leave management
   d. Seniority list generation and management of promotion
   e. Employees transfer management
   f. Employees appraisals
   g. Nothing & drafting system for approval from competent Authority
   h. Dairy & Dispatch system

OFFICE OF THE REGISTRAR (REGISTRATION BRANCH)

Registration Management System (RMS)

At present the Registration Branch receive & process Registration Returns from affiliated colleges & all departments of Main Campus and Sub-Campus manually. This process may be automated. In this regard the following outline of the online process is proposed:

1. Student Registration Record Management of Affiliated Colleges (Public & Private) Main Campus/Sub-Campus/Constituent Colleges/School/Institutes.

I.   Each college / sub-campus/department should be able to create and maintain its account for submission of Registration Return online.

II.   Program wise & session wise submission of the particulars of students online.

III.   Online generation of challan form for submission of Registration dues.

IV.   Online submission of Registration Return

V.   Online generation of Registration Return as per the prescribed Registration Return Performa.

The process of calculation & receipt of university share is presently being performed manually. The same may also be automated. In this view the following outline is proposed:

I.   The college at the start of every semester / session shall submit a fresh list of students promoted to the next semester and the challan for the submission of annual/semester University share shall be generated online.

II.   The college shall at the start of every semester submit list of drop out students.

III.   The college shall have an option to initiate request for Re-instatement of the Registration number upon readmission in the prescribed session/semester.

2. **Issuance of Registration Cards.**

- At present the Registration Cards are prepared manually. The following outline of online process is proposed to automate the system of preparation of Registration Cards:

  I.   The branch officials should be able to view the particulars of the Registration Returns online and approve the admission of candidates admitted after scrutiny. Further, an option should be available to put objection on entry of any student, which shall be communicated to the concerned college/department for reddressal.

  II.   Automatic allotment of Registration number as per the format.

  III.   Generating PDF of Registration Return as per registration proforma along with Registration numbers.

  IV.   Generating/printing Registration Cards as per prescribed format.

  V.   The college shall have the option to initiate the request for correction in Registration Card or issuance of duplicated Registration Card.

- Provision for individual students to initiate request for issuance of Duplicate/Correction of Registration Card.

  I.   The student shall submit the online application for issuance of correction / duplicate NOC

  II.   The challan for submission of fee shall be generated online

  III.   The dealing official, after scrutiny, shall approve the request.

  IV.   The Registration Card shall be generated / printed online as per the particulars submitted by the applicant.

3. Issuance of NOC/Migration Certificate

   At present, NOC/Migration applications are received manually. That the process of receiving applications, generation of challan forms and issuance of NOC may also be automated. In this view, the following is proposed:

I. NOC to Ex-Students of Main campus/sub-campuses/affiliated colleges/private candidates after completing/leaving degree to seek admission in other university & duplicate NOC.

    a. The student shall submit an online application for issuance of NOC

    b. A PDF of the application shall be generated/printed

    c. The student shall submit the hard copy of application along with requisite documents.

    d. The dealing official after due scrutiny of the case shall approve the case for issuance of NOC

    e. After approval of request NOC shall be printed automatically.

II. The following NOC/Migration certificates are issued during study after the approval of the Vice-Chancellor a)

    a) NOC for migration from affiliated college of the university to another affiliated college of the university.

    b) NOC for migration from other Institute/College University to University of Sargodha, Main Campus

    c) NOC for migration from University of Sargodha, Main Campus/affiliated college/sub-campus to other Institute/College/University.

The following online process is proposed for mentioned above at sr.no. (ii) NOC/Migration Certificate.

    a. The student shall submit an online application for issuance of NOC
    b. A PDF of the application shall be generated/printed
    c. The student shall submit the hard copy of application along with requisite documents.
    d. The dealing official shall after due scrutiny of the case initiate the note for approval of the Vice Chancellor.
    e. After the approval of the Vice Chancellor NOC/Migration Certificate shall be issued.

4. Online Registration of Private Students to appear in the examination

The office of the Controller of Examinations deal with the registration of private candidates and issues the Registration Number. However, the NOC after completing degree or after dropping out is issued by Registration Branch as per record / gazette provided by the office of the Controller of Examinations. The same may also be automated.

5. Any other module(s) as required.

    a. Overall discipline wise financial statement of all admitted students of all affiliated
    b. colleges/institutions.
    c. Discipline wise financial statement of all admitted students of all affiliated colleges/institutions.
    d. Generating the gender wise (Male and Female) list of overall admitted students in all disciplines Generating the gender wise (Male and female) list of all affiliated colleges institutions.

e. Generating the report of Issuance of Migration /NOC cases. . Generating the financial report of Migration /NOC cases

Requirement for Office Management Module

Office management module of QEC manages intra departmental activities of QEC. It includes following functionalities:

Dashboard:

Director Dashboard:

1. Monitor the progress of all undergoing activities of the department (Evaluations, SAR, IPE etc.).
2. Director could monitor and allocate a task to an employee.
3. View the leave record of all employees.

Employee Dashboard:

1. Monitor the progress of their relevant assigned tasks.
2. View their relevant leave record.

Record Maintenance:

Using this functionality, QEC personnel could upload and access the letters, and pictures/ videos of official events.

Asset management:

An online stock register of all assets

Attendance:

The attendance system maintains the record of attendance and leaves for each employee.

Performance Indicator:

A performance indicator which indicates the overall and individual performance according to work assigned to an individual.

Requirements for SAR Module

Development of Self Assessment Report (SAR) is one of the important functions of QEC as directed by HEC. In order to make modules of SAR, following will be the users and their details are discussed below.:

Chairperson/ PT Manager Account:

Chairperson on login could:

1. Access all its faculty list by clicking the faculty button.

2. A faculty member from the list could be made a Program team (PT) member by clicking the "Add to PT" button in front of it.
3. Create, view, update, delete the program team members by clicking the "Program team" button.
4. Monitor either PT has submitted the document and is accepted by QEC officials.
5. Could view/Review the uploaded file by PT.

Program Team Account:

Program team members on login could:

1. View the submit report button on the dashboard.
2. View a window afterwards from which they could download the template file that is to be filled.
3. After completing the file they could upload it.

Assessment Team(AT) Account:

Assessment team members on login could:

1. View and submit Rubric evaluation form
2. Submit the At finding document for each department.
3. Could monitor for which department AT finding document has been submitted and for which department it is left.
4. Could monitor for which department Rubric evaluation form has been submitted and for which department it is left.

QEC officials Account:

Qec official upon login could:

1. View and manage PT members of all departments.
2. View and manage the AT members.
3. Set a last date to submit PT reports by each department.
4. Set a last date to submit AT findings.
5. Monitor PT of which department has submitted the report and which department is remaining.
6. Monitor AT has submitted the AT finding report of which department and which department is remaining.
7. QEC official can view the document submitted by PT and AT.
8. QEC can approve the PT document. In case if an update is required in the document, then a non approval notification will be sent to both chairperson of the department and PT account. And the accepted button gets red for that department.
9. Could insert the finding for follow up after the exit meeting.
10. Monitor what findings are fulfilled. And what is pending.

Requirements for Evaluations Module

The evaluations that QEC conducts could comprise qualitative, quantitative, or both quantitative and qualitative responses. When an entity that has to conduct a survey (Student, teacher, alumni, or employer) login to its account could see the respective evaluations. On clicking the start button of the evaluations, the questions of respective evaluations appear in front of him. From there he should select the correct choice of answers (0=Unsatisfactory, 1=Satisfactory, 2=Fair, 3=Good, 4=Excellent) or provide details in the text box accordingly.

Following are the evaluations that are needed to be conducted by QEC:

1. Student course Evaluations (Filled by each student in each semester)
2. Faculty course Review (Filled by every teacher at the time of course completion)
3. Survey of graduating students (Filled by students a year before their graduation)
4. Research student progress review (Filled by Masters, MPhil, and Ph.d Research students)
5. Faculty survey (Submitted annually by each faculty member)
6. Survey of department offering Phd programs (Filled by every department offering Ph.D program)
7. Alumni Survey (Filled by alumni after graduation)
8. Employer Survey (Filled by employer of alumni)
9. Faculty Resume (Each faculty member could view and update their resume when logged into the QEC website)
10. Teaching Learning Process Survey (Filled by each student in each semester)

For conducting evaluations/surveys, following are the users of QEC software.

1. Students: Entity that Perform the surveys(Teaching, course, graduating)
2. QEC Officials: Entity that conducts and monitors evaluations as well as generates and communicates reports.
3. Focal Person: Entity that is representative of a department and inserts courses, teachers and students data to the system (In case the system is not centralized). And also monitor and enforce students/teachers to conduct evaluations.
4. Teachers: Entity that performs faculty course evaluation, faculty survey, view and update its resume.
5. Chairperson: Entity that could monitor the evaluations progress of his department when login to his QEC account
6. Alumni: Entity that previously was students and after completing degree becomes alumni and when login to its system, performs an alumni survey.

QEC Officials:

Upon login to the QEC portal, QEC official could:

1. View the dashboard on which progress of each evaluation could be seen in graphical form.

2. manage users of QEC website (Students, FocalPersons of department, Teachers, Chairpersons, HEC personals, and alumnis)
3. Create, view, delete, update campuses of the university.
4. Create, view, delete, update departments of the university.
5. upon clicking any department, could access its discipline.
6. upon clicking any department, could access its classes.
7. upon clicking any department, could access its teachers.
8. could generate the report of a specific teacher on the basis of teaching evaluations by students of all courses that it teaches. Students quantitatively evaluate a teacher and a course. The formula to calculate scores of teachers and courses are as follow:
   - Each row represents the question of the teaching evaluation survey. and each cell represents the total count of unsatisfactory, satisfactory, fair, good, and excellent.

Question no.	unsatisfactory	satisfactory	fair	Good	Excellent
1	1	3	4	10	2
2	0	2	5	9	5
3	4	0	8	5	4
4	0	0	0	0	21
5	5	4	3	5	1

unsatisfactory	satisfactory	fair	Good	Excellent
10	9	20	29	33

   - After calculating the sum, the system generates the teaching evaluation score by using the formula.
   - Sum of unsatisfactory multiply with 0 + Sum of satisfactory multiply with 1 + Sum of fair multiply with 2 + sum of good multiply with 3 + sum of excellent multiply with 4
   - The system generates the score for the teacher out of 4 and generates a report according to the below mentioned scoring criterion.
   - 0>=1 unsatisfactory, 1>=2 satisfactory, 2>=3 fair, 3>=4 good, 4 excellent
9. Other than the teaching report defined above a graphical report for teachers should also be generated so that they should know on which criterion he needs to work. On this

graphical report he could see all the questions filled by his students and the ratio of students graded him with unsatisfactory, satisfactory, fair, good,excellent for each question.

10. Same two reports should be generated for the courses as well for specific departments.
11. Sharing the reports on emails and teachers panel when allowed by QEC officials.
12. Generating complete department teaching evaluation report
13. Generating complete department course evaluation report
14. upon clicking any department, could access/ generate its reports for all other different evaluations.
15. Activate the evaluations by providing the department, last date, and evaluation semester (e.g spring2021, fall 2020 etc.).
16. Restrict students to submit evaluation responses after the last date and twice.
17. During evaluations generate the list of courses/teachers evaluations that are below 80% in the whole university, for effective monitoring.
18. Edit the last date and evaluation semester to accommodate flexibility.
19. Could view for each course of class that what students performed its evaluation, what students are remaining and device IP, location, time at the time of submission to ensure data integrity.
20. Create, view, delete, update the focal persons of each department.
21. view students of the university
22. view alumnus of the university
23. view teachers of the university
24. Monitor the stats of evaluations in the form of charts(percentage of evaluations completed and remaining)
    a. Teaching, course evaluations by students of the university.
    b. Graduating surveys by students of the university.
    c. Research Student progress review by Masters,MPhil, and Ph.D students
    d. Faculty survey and Faculty course review by teachers
    e. Alumni survey by alumnus.
25. This monitoring should be done collectively (as described above). or individually when any of the departments is selected(for that specific department).
26. Could edit, and delete the evaluations of the university.
27. could add,edit,delete questions for the evaluation.

Departmental Focal Person:

Upon login to the QEC portal, Focal Person could:

1. View all disciplines of his department.
2. Create, view, delete, update all classes of his department.
3. Create, view, delete, update the students of his department. Upon adding a student, a user with role 'student' is created, with username: his roll number and password: his cnic.
4. Adding students in bulk functionality. Where a list is uploaded and students are added to the class.

5. Edit password of students of his departments.
6. Create, view, delete, update the courses of his department or the specific class.
7. Create, view, delete, update the teacher of his department.
8. Assign the course of a class to the teacher. Upon adding teacher, a user with role 'teacher' is created, with username: his email and password: his cnic.
9. Create, view, delete, update the Assignments of courses and teachers.
10. View all the assignments of courses and teachers of a particular class and whole department as well.
11. Promote a class (by which semester is incremented and status of courses assigned in previous semester gets completed so that evaluations of new courses of the new semester could be conducted.)
12. De-promote a class if the "Promote class" button is clicked by mistake.
13. Assist specialised courses of the class where a subset of the students within a class are taking the course. And percentage of evaluation of that course is calculated by the number of students that are allowed/ taking the course.
14. If a student is not allowed to take a specialised course the evaluation could not be seen when he login to his account.
15. Delete evaluation of a student if he is not taking the specialised course and evaluated mistakenly.
16. Create, view, delete, update alumn is of his department.
17. Monitor the stats of evaluations in the form of charts(percentage of evaluations completed and remaining)
    f. Teaching, course evaluations by students.
    g. Graduating surveys by students.
    h. Research Student progress review by Masters,MPhil, and Ph.D students
    i. Faculty survey and Faculty course review by teachers
    j. Alumni survey by alumnus.
18. Individual monitoring of students within a class who have not performed evaluations of specific courses or specific teachers.
19. Individual monitoring of graduating students of his department who have conducted and who are remaining to perform a graduating survey.
20. Individual monitoring of Teachers who have conducted and who are remaining to perform faculty survey and faculty course review.
21. Individual monitoring of Research students of his department who have conducted and who are remaining to perform research students progress review.
22. Individual monitoring of alumni of his department who have conducted and who are remaining to perform alumni surveys.
23. Get the details of courses whose evaluations are below the threshold set for the evaluations. e.g the threshold set for teaching course evaluations is 80%. So the list should be generated that enlist all such courses whose evaluations are yet to meet the threshold.

Students:
Upon login to the QEC portal, students could:

1. View and conduct evaluations.
2. Modify their passwords.
3. Insert their suggestions and complaints.

Alumni:
Upon login to the QEC portal, Alumni could:

1. View and conduct evaluations.
2. Change their passwords.
4. Update their information.
5. Provide their employer details as well (their contact number and email etc.).

Teachers:
Upon login to the QEC portal, Alumni could:

3. View and conduct evaluations.
4. Change their passwords.
6. Update their resume.
7. Insert their suggestions and complaints.
8. View his reports/score on the basis of teacher evaluations conducted by students.

Chairperson:
Upon login to the QEC portal, Chairperson could:

1. Monitor the stats of evaluations in the form of charts(percentage of evaluations completed and remaining)
    k. Teaching, course evaluations by students.
    l. Graduating surveys by students.
    m. Research Student progress review by Masters,MPhil, and Ph.D students
    n. Faculty survey and Faculty course review by teachers
    o. Alumni survey by alumnus.
2. View the reports/scores of teachers, courses of his department separately for each semester spring, fall etc.
3. View the report on the basis of graduating survey of his department
4. View the report on the basis of faculty survey of his department
5. View the report on the basis of alumn is survey of his department
6. Insert their suggestions and complaints.

HEC:
Upon login to the QEC portal, HEC official could:

1. view all departments of the university
2. view teaching evaluation report of specific department
3. view course evaluation report of specific department
4. view graduating survey outcomes of specific department
5. view outcomes of alumni surveys of the department.
6. view faculty survey report outcomes of specific department

Requirements for MS/MPhil and PhD Program Review

The MS/MPhil and PhD program review that QEC conducts could comprise all information of each program from launch to the current status of that program. The office of QEC takes initiative by providing HEC program review pro-formas/templates to the departments and the department provides data in the given pro-formas with required documents in the form of annexures. The QEC officials review the departmental data and create a review report of each program after visiting all departments.

Following are the MS/MPhil and PhD program review pro-formas provided by HEC:

(All these pro-formas will be filled by the HoD/ Departmental Focal Person)

  Form 1: Program Summary

  Form 2: Program Detailed Information

  Form 3(A): Program Faculty Information (For MS)

  Form 4(B): Program Faculty Information (For PhD)

  Form 5(C): Student Information (MS equivalent)

  Form 6(C1): Student Information (PhD)

  Form 6(D): Graduated Student Information (MS)

  Form 6(E): Graduated Student Information (PhD)

For conducting MS/MPhil and PhD program review, following are the users of QEC software.

1. **QEC Officials**: Entity that conducts and monitors program review as well as generates review reports of each program.
2. **Departmental Focal Person**: Entity that is representative of a department and fills all the relevant data in the online given pro-formas to the system.
3. **Chairperson:** Entity that could fill and monitor the review information of his/her department when login to his/her QEC account.

QEC Officials:

Upon login to the QEC portal, QEC official could:

1. View the dashboard on which filled review pro-formas of each program could be seen in HEC given format.
2. Manage users of QEC website (Focal Persons of department, Chairpersons,)
3. Create, view, delete, and update information given by the departments.
4. Upon clicking any department, could access its discipline.
5. Could generate the report of each program individually or combine.

6. After filling of departmental data by the focal person, the system generates the review report of each program in the below format.

Review Report of MS/M.Phil Program								
S.No.	Program Title	Degree	Students	Faculty		Date of Launch	NOC Obtained (Y/N) For Programs launched after 7th Nov 2013	Status
				Ph.D	MS/M.Phil			

Departmental Focal Person:

Upon login to the QEC portal, Focal Person could:

1. View all disciplines of his department.
2. Create, view, delete, and update all the relevant inform in the given per-formas.
3. Attach relevant documents with performas in the form of annexures.

Chairperson:

Upon login to the QEC portal, Chairperson could:

1. Edit, delete and monitor the status of filling information in the pro-formas filled by the departmental focal person.
2. Attach and view the required documents in the form of annexures.
3. Insert their suggestions and complaints.

Requirements for IPE Module

Focal person:
Focal person of each department, when login, could:

1. View the 7 proforma to be filled.
2. They can download the template file on which information is filled.
3. The file after information insertion, could be uploaded back.
4. When the file is submitted, the graph of completion gets updated.

QEC official account:

QEC official upon login could:

1. View which department has submitted the IPE performa.

2. Could accept a performa if it is correct or could click the "request update" button by which departmental focal person gets to know which of the seven files are accepted, and which required modification.
3. UPR report gets updated whenever any of the departmental IPE performa is accepted.
4. All university summary documents are created when all IPE reports are accepted.
5. Could assign the questions of the standards to other users of IPE modules. The users will be Director Acad, all departments head, Registrar office, P&D, Director works, Treasurer office, ORIC, Admission Committee, Chief Library, CDC.
6. All these users, when login, could see questions that are needed to be filled by them only. They could submit the answers in the form of .doc file.
7. QEC could monitor which of the user has submitted all answers, and which of the user answers are left behind.
8. After getting answers, they could be merged in IPE/UPR document.
9. QEC officials, and the director could view the finalised file and download it and process it further.

Chairperson account:

1. Chairperson could also monitor and view the list that is uploaded by its focal person.

Requirements for Accreditation Module

Department focal person:

Focal person of each department upon login:

1. Could view the programs.
2. For each program he could submit the letters.
3. And select if the program is accredited or not.

QEC official:

1. QEC official could monitor each department. And what of the courses are accredited and what are left behind to be accredited.

Chairperson account:

2. Chairperson could also monitor and view the list that is uploaded by its focal person.

MANAGER / INCHARGE FACILIATEION CENTER

User Guidance & Support Management
   a. Searchable support for multiple users
   b. Troubleshooting requests and online support
   c. Providing online support / assistance
   d. List of Frequently asked questions
   e. Complaint and feedback management
   f. Any other module(s) as required

CHAIRPERSON HALL COUNCIL

Hostel Management System

   a. Online Admission for Hostel Accommodation
   b. Create & Manage Merit Lists of Applicants
   c. Allotment of Room to Student
   d. Manage Hostel Buildings of Rooms & Halls
   e. Biometric In & Out of Students
   f. Manage Staff deputed at specific Hostel
   g. Manage Inventory / Assets / Stock
   h. Manage Services / Facilities
   i. Mess Management
   j. Manage Parent / Guardian information for each student
   k. Any other module(s) as required

TRANSPORT OFFICE

Transport Management System

   a. Transportation management of vehicles details like registration number, driver name
   b. Devise vehicle routes and allocate students
   c. Readily print out route sheets with all details like driver name, vehicle number, students name, route name, bus stop details, etc.
   d. Transport module is integrated with fee module for alert notification
   e. Options for integration with GPS tracking
   f. Configure different routes & stops
   g. Vehicle Service / Fuel / Repair & Maintenance
   h. Usage of Vehicle Information
   i. Vehicle Reservation Management
   j. Sales and depreciation
   k. Requisition of Vehicle for Official / Private use
   l. Any other module(s) as required

INCHARGE CAREER DEVELOPMENT CENTER (CDC)

Career Portal / Internships / Alumni / House Job Management

   a. Handling of any training/internship/house job management system
   b. Alumni Registration Management
   c. Alumni Meeting Management
   d. Any other module(s) as required

OFFICE OF THE RESIDENT OFFICER (RO)

Resident Management System (RMS)

   a. Automatic generation of seniority lists regarding house allotments.

   b. Automatic generation of category wise detail of total residences.

   c. Executive Guest House and STC Guest Rooms allocation management system.

d. Payment details of auction of contracts regarding Canteens, Stores, Book Shops, Cafeteria and cabins etc of Main Campus and Constituents Colleges.

e. Portal for complaints of sales regarding excess rates and quality of items.

f. Data of all Departments regarding offices, class rooms and labs etc along with time tables.

g. Automatic generation of Estate Lands of Main Campus and its Constituent Colleges.

h. Automatic generation of Daak In & out Record Management System.

Security Management System (SMS)

a. Faculty/ Staff/Students and visitor's Car/Bike/Cycles record management system.

b. Tracks Information about Visitor's In & Out logs of visiting place and purpose.

c. Security Staff/Guards record Management System.

d. Automatic generation of Duty Roster as per the format of Security Guards/Security Officials.

e. Ammunition Record Management System.

f. Automatic generation of Daak In & out Record Management System.

g. Entry / Walk pass process is proposed.

h. The applicant shall submit an online application for issuance of walk/entry pass.

i. After approval of request Walk/Entry Pass shall be printed automatically.

Estate Management System (ESM)

a. Estate Assets Management System.

b. Sanitary Worker Attendance management System along with working place.

Horticulture Management System (HMS)

a. Plantation and Beautification of Campus Management System.

b. Automatic generation regarding record of Trees of Main Campus and its Constituent Colleges.

c. Mali/Baildar attendance record Management System.

Any other module(s) as required.

a. Overall Category Wise generate list of Allotments.

b. Generate the reports of vacant residences.

c. Online generate challan for submission of Auction amount regarding awarding of contracts and open auction i.e. used Answer Sheets, Used Mobil Oil, Used Batteries, Used Tyres, Dried Trees, Used Computer and Accessories and obsolete items.

d. Generating the Scale wise list of overall staff of Office of the Resident Officer and its staff of all wins.

e. Generating overall contract wise financial statement of Canteens, Store, Café, Shops, Cycle Stand and cabins etc.

f. Generating overall group wise financial statement of open auction.

g. Generating report of issuance of Walk/Entry Pass.

h. Generating the financial report of STC Guest Rooms reservation.

i. Generating the outstanding amount of Contracts.

OFFICE OF THE DIRECTOR SPORTS

1. **Conduction of Trials of Admission on Sports Quota:**
   I. Candidates apply online for admission on 2% Sports Quota reserved for outstanding Sports Person.
   II. Trials through Directorate of Sports conduct by University Sports Admission Trials Committee constituted by the Competent Authority and on the recommendation of the Committee admission of outstanding sports persons are made in undergraduate and graduate programs.

2. **Annual University Inter Departments Sports Gala**
   I. Annual University Inter Departments Sports Gala is conducted / organized by Directorate of Sports, in which one team of each University Teaching Department participate in each game included in the event on the recommendation of University Teaching Departments Sports Committee.

3. **Participation of University of Sargodha teams in Intervarsity Sports Championships**
   I. Directorate of Sports prepares University of Sargodha (Men & Women) teams to participate in Intervarsity Sports Championships as per schedule announced by Higher Education Commission.
   II. Directorate of Sports University of Sargodha also conducts / organizes the Intervarsity Sports Championships allocated / allotted by HEC, at University of Sargodha.

4. **Fee exemption and incentives of outstanding sports person:**
   I. Directorate of Sports prepares list on the recommendation of University Sports Admission Trials Committee for fee exemption of outstanding sports persons, as per University policy.
   II. Directorate of Sports prepares list of the outstanding sports persons to grant them incentive / stipends on their achievements in sports on the recommendation of University sports admission trials committee as per University Policy.

With Best Regards,

OFFICE OF THE PROJECT DIRECTOR (BUILDINGS AND WORKS)

Project Director Works Management System
   a. Procurement
   b. Contracting
   c. Tendering Management
   d. Bid / Quotations Management
   e. Expense Management
   f. Accounts & Finance
   g. Repair & Maintenance
   h. Store / Stock Management

     i.   Repair Task & Analysis
    j.   PD Works Services
    k.   Any other module(s) as required

Telephone Exchange Management
    a.   Telephone Exchange Management System using Latest I.T tools
    b.   Any other module(s) as required

OFFICE OF THE DIRECTOR PLANNING AND DEVELOPMENT (P&D)

As per discussion with concerned stake holder.

MANAGER / INCHARAGE EVENT MANAGEMENT

Meeting Management System
    a.   Scheduling of Meeting / Events
    b.   Minutes of Meeting
    c.   Any other module(s) as required

INCHARGE RIAZ SHAD COCURRICULAR FORUM

Events / Co-Curricular Activities Management System
    a.   Handling of University / Department events.
    b.   Any other module(s) as required

INCHARGE DAY CARE CENTER

As per discussion with concerned stake holder.

GENERAL MANAGER SCIENTIFIC RESEARCH UNIT / KHUSHAAB WATER UNIT

Sale Points & Customers.

Khush-Aab water is selling at following points such as.

    i.   UMC-RC

    ii.   UOS Hostels Canteens/Hostels.

    iii.   University General Store.

    iv.   Canteens.

    v.   Offices/Departments.

    vi.   Whole Residential area of University.

    Stock Module for Store

The store goods/items i.e empty bottles of 600 Ml, 19 liter, 1.5 liter, caps and plant machines parts.

Accounts System

The account system is being processed manually needs to be automated for submission of bills amount , preparation of customers bills / invoices, Vouchers, payment challan record.

INCHARGE DIRECTORATE OF PUBLIC RELATIONS AND PUBLICATIONS

    1- Office Management Dashboard
        For submission and dissemination of official correspondence, diary and dispatch system, and duty charts of the employees.
    2- Record Maintenance

For record-keeping, there should be an online uploading section of official letters, Press clipping, video packages and raw materials like pictures, videos of university events etc.

3- Asset Management

There should be an online stock register of all assets.

4- Attendance Record

There should be an online attendance system that maintains the record and also allows submission of leave as well.

5- Event Coverage Management Dashboard

    a. For smooth handling of event coverage, this dashboard will facilitate all the two-way correspondence relevant to events:

    b. Intimation about events from the department organizing event.

    c. Submission of event coverage proforma by the departments mentioning event details, services and nature of coverage required (print media, electronic media, photo coverage).

    d. Share and Submit data by the departments for press releases.

    e. Dissemination of News clippings, video packages and pictures with the concerned departments and offices.

6- Advertisement Dashboard

    a. For the submission of advertisements with approvals from the departments and further correspondence will also be done there regarding the advertisement publication as per rules.

    b. Correspondence with DGPR and PPRA

    c. To upload copies of all advertisements (when they will be published in Newspapers or PPRA websites) there so the relevant offices may get it when they needed.

7- Newsletter Dashboard

    a. To collect data (textual and visual) for the University's Official newsletter from the departments and administrative offices

    b. For the dissemination of the newsletter to all the departments and stakeholders.

8- Photo Gallery and Video Library

The portal for uploading photographs and video packages to maintain the picture gallery and video library digitally.

9- Performance indicator

There should a performance indicator which may indicate overall and individual performance according to the work done by said office and individual assignments

MULTIMEDIA DEVELOPMENT CENTER /

As per discussion with concerned stake holder.

MULTIMEDIA INFORMATION CENTER

Office Management System

- Dock maintenance
- Project/Thesis record of students
- Equipment issuance/management record
- Equipment inventory record

Student Management System

- Online attendance record

- Lecturer recording
- Student fee record
- Student examinations record

CAMPUS RADIO VOV

As per discussion with concerned stake holder.

Directorate of Student

1. Online submission of complaints by students.
2. Initiation of Discipline violation cases
3. Initiation of Smoking cases
4. Transfer of cases to concerned departmental DDSA/CSA

OFFICE OF RESEARCH , INNOVATION & COMMERCIALIZATION (ORIC)

1. Details related to research publication incentive module
   a. Faculty profile
   b. Article Detail
2. Annual research progress detail department wise.
   a. Trainings / Workshops / Seminars / Conferences /Exhibitions / Showcasing Events /Industry Linkages Fair / Seminars / Industry or IP & Licensing Stimulus
   b. Trainings / Workshops / Seminars / Conferences Arranged on Research, Innovation & Commercialization Ecosystem etc. - by ORIC
3. Management of MOUS. Add/Update/Delete MOU Detail
4. Management of research funded projects. Add/Update/Delete research funded project
5. Management of ORIC related events. Add/edit/delete event
6. Submission of research thesis for plagiarism checking. Add student data
7. Development of MS/MPhil/PhD thesis directory
8. ORIC Human Resource Development
9. Any other module(s) as per requirement (time to time).